CHANGING PRACTICE: PREVENTIVE CARE FOR CHRONIC DISEASE HEALTH RISK BEHAVIOURS IN COMMUNITY MENTAL HEALTH SERVICES

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BPsyc (Hons)

Submitted for the Degree of Doctor of Philosophy

School of Psychology
Faculty of Science & IT
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August, 2015
**Statement of Originality**

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August 2015
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LIST OF PUBLICATIONS INCLUDED AS PART OF THESIS


CO-AUTHOR STATEMENT

I attest that Research Higher Degree candidate Kate Bartlem has contributed to the following publications for which I am a co-author. Kate has:

- Contributed to the development of research questions
- Contributed to research design and methodology
- Contributed to the development and modification of data collection tools
- Participated in data collection
- Contributed to intervention design
- Contributed to, and overseen intervention implementation
- Cleaned the data
- Led the data analysis for chapters 2, 3, 4 and 5
- Led the writing of each manuscript

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CHANGING PRACTICE: PREVENTIVE CARE FOR CHRONIC DISEASE HEALTH RISK BEHAVIOURS IN COMMUNITY MENTAL HEALTH SERVICES
People who have a mental illness have significantly greater mortality rates and a reduced life expectancy when compared to the general population, with a large proportion of excess mortality attributable to a higher prevalence of preventable chronic diseases. One contributor to the greater chronic disease burden is an increased prevalence of modifiable health risk behaviours, when compared to the general population, in particular, tobacco smoking, harmful alcohol consumption, inadequate nutrition, and inadequate physical activity. The provision of preventive care in mental health services is one approach to addressing such health risk behaviours among people with a mental illness, with community mental health services identified as a particularly appropriate setting for such care delivery. Despite this, there are evident gaps in the literature regarding the prevalence of health risk behaviours among people with a mental illness, the prevalence of preventive care provision in community mental health services, and the approaches required to increase the provision of such care in community mental health services. To address these evidence gaps, the broad aims of this thesis were to:

1. Identify the prevalence of, and client characteristics associated with, four chronic disease health risk behaviours (tobacco smoking, harmful alcohol consumption, inadequate fruit and/or vegetable consumption, and inadequate physical activity) among clients of community mental health services;

2. Determine the prevalence of preventive care provision (assessment, brief advice, and referral) in community mental health services for these four health risk behaviours;
3 Explore factors that may be associated with the provision of preventive care for these four health risk behaviours;

4 Determine the effectiveness of a clinical practice change intervention in increasing community mental health clinicians’ provision of preventive care for these four health risk behaviours across a network of community mental health services.

These four aims have been addressed through a series of studies, undertaken within a network of 19 community mental health services in a single local health district in New South Wales, Australia. These studies include: a cross-sectional survey of 558 clients of community mental health services; a cross-sectional survey of 151 community mental health service clinicians; and a multiple baseline intervention trial involving 19 community mental health services, evaluated through weekly surveys of clients of community mental health services over a three year period.

The work encompassed in this thesis has contributed to advancing research in this field in a number of ways. Firstly, the findings include evidence among people with a broad range of mental disorders, of a high prevalence of risk for all four health risk behaviours (tobacco smoking, harmful alcohol consumption, inadequate fruit and/or vegetable consumption, and inadequate physical activity), high interest in improving these behaviours, and high acceptability towards receiving preventive care to address them. Despite the high prevalence of health risk behaviours and high client interest, it was found that the provision of preventive care for these behaviours within community mental health services was sub-optimal, and a number of factors that may be
associated with the provision of such care were identified. Finally, the clinical practice change intervention that was undertaken to increase the routine provision of preventive care in community mental health services was found to have limited effectiveness.

Overall, this thesis has identified a need to increase the provision of preventive care to address the high prevalence of health risk behaviours among people with a mental illness, and has trialled a novel approach to increasing the provision of such care in community mental health services. Despite the limited effectiveness of the clinical practice change intervention, the findings of this thesis have provided important insight for future interventions. It is suggested that future research consider barriers identified throughout this thesis to better tailor an intervention to the specific context of community mental health services; consider utilising advances in the science of clinical practice change design; and explore alternative models of preventive care provision.
INTRODUCTION: CHRONIC DISEASE, HEALTH RISK BEHAVIOURS AND PREVENTIVE CARE FOR PEOPLE WITH A MENTAL ILLNESS
CHAPTER PURPOSE AND STRUCTURE

This chapter outlines the evidence related to the burden of chronic disease among people with a mental illness, and the contribution of health risk behaviours to this burden. The chapter focuses on the contribution of four major health risk behaviours: tobacco smoking, harmful alcohol consumption, inadequate nutrition, and inadequate physical activity, and provides an overview of the knowledge regarding the prevalence of these risk behaviours among people with a mental illness. The remainder of the chapter presents evidence in support of an approach to address these behaviours in this population; namely, the provision of preventive care to clients attending community mental health services, including the current provision of such care, and factors associated with preventive care in this setting. The chapter highlights the need for clinical practice change intervention research to identify how the provision of preventive care can be increased within community mental health services, and concludes with the thesis aims and an outline of its structure.

MENTAL ILLNESS

Mental illness has been defined broadly as:

“A syndrome characterised by clinically significant disturbance in an individual’s cognition, emotion regulation, or behaviour that reflects a dysfunction in the psychological, biological, or developmental processes underlying mental functioning. Mental disorders are usually associated with significant distress or disability in social, occupational, or other important activities”.

1
Mental illness comprises a broad range of disorders including psychotic, mood, anxiety, eating, substance related, neurodevelopmental and personality disorders, and is typically experienced as a long-lasting condition, with most disorders controlled by treatment but not cured.\(^1\)

**PREVALENCE AND BURDEN OF MENTAL ILLNESS**

**Internationally**

Mental illness is common worldwide.\(^2\) The World Health Organisation’s World Mental Health Survey examined the prevalence of common mental disorders according to the Diagnostic and Statistical Manual of mental disorders\(^1\) using standardised surveys in 28 countries.\(^2\) The surveys, conducted between 2001 and 2003, estimated that the lifetime prevalence of a person experiencing any mental illness ranged from 12.0% (Nigeria) to 47.4% (United States). The most commonly reported mental disorders were anxiety disorders (lifetime prevalence 14.3%; 12-month prevalence 8.3%) and mood disorders (lifetime prevalence 10.6%; 12-month prevalence 5.1%).\(^2\) Some mental disorders, referred to as ‘serious’ or ‘severe mental illness’, are less prevalent but result in severe functional impairments.\(^2\)\(^-\)\(^5\) These include disorders such as schizophrenia and other psychotic illnesses, and bipolar disorder.\(^3\)\(^,\)\(^4\) The World Health Organization’s World Mental Health Survey 12-month prevalence estimate for such disorders ranged from 0.8% to 6.8%.\(^2\)

In 2010, mental illness was the leading contributor to the non-fatal disease burden globally, accounting for 22.9% of all Years Lived with Disabilities (YLDs),\(^6\) and 7.4% of total Disability Adjusted Life Years (DALYs) lost.\(^6\) Depressive disorders, anxiety disorders and drug use disorders were the predominant contributors to the total disease burden (40.5%, 14.6%, 10.9% of total mental illness DALYs respectively) and
to the non-fatal burden of disease (42.5%, 15.3%, 9.4% of mental illness YLDs respectively). Between 1990 and 2010 the total global burden of mental and substance use disorders increased by 37.6% and is expected to steadily increase in the future. This increase is primarily due to population growth and changing age distributions, with the prevalence of most mental disorders remaining stable.

In Australia

In Australia, similar patterns in the prevalence of mental illness are apparent. In 2007, a national household survey of residents aged 18-85 years was conducted by the Australian Bureau of Statistics, using the World Mental Health Survey Initiative’s version of the Composite International Diagnostic Interview. The survey indicated almost half of the population (45.5%) had experienced a mental illness at any stage in their lifetime, and 20% of the population had experienced such an illness within the 12 months prior to the survey. Similar to international data from the World Health Organization’s World Mental Health Survey, of those experiencing a mental disorder within the last 12 months, anxiety disorders were the most common (14.4%), followed by mood disorders (6.2%), and substance use disorders (5.1%). However, the prevalence of severe mental illness was lower (2-3%), compared to the 12-month prevalence estimate reported in the World Health Organization’s World Mental Health Survey.

In Australia, similarly reflecting the global burden of disease, mental illness was the leading contributor to the non-fatal disease burden, and is responsible for 24.2% of all YLDs. The total disease burden attributable to mental illness was higher in Australia than globally, with 13.3% of Australia’s total DALYs attributable to mental illness. The burden of disease attributable to mental illness in Australia is expected to remain
relatively stable for at least the next decade.\textsuperscript{13,14} Similar to the global burden, in 2010, major depression, drug use disorders and anxiety disorders were the largest contributors to total DALYs, ranked fourth, eleventh, and twelfth respectively.\textsuperscript{7}

The prevalence and burden of mental illness in Australia is reflected in the utilisation of a range of services for mental health care, with over 1.9 million Australians (approximately 9\% of the population) receiving public or private mental health services in 2010-11.\textsuperscript{15} [Table 1.1] General practitioners were the most frequently utilised health service for people seeking help for a mental illness; whilst community mental health services were the most frequently utilised services providing specialised mental health care.\textsuperscript{15} Almost $6.9 billion was expended on mental health-related services during 2010-2011.\textsuperscript{15}
CHAPTER 1: Introduction: Chronic disease, health risk behaviours and preventive care for people with a mental illness

TABLE 1.1: Mental health related service use in Australia, 2010-2011\(^1\)

<table>
<thead>
<tr>
<th>Service</th>
<th>Service contacts in 2010-2011</th>
<th>Individual clients in 2010-2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>General practitioners(^a)</td>
<td>15,000,000</td>
<td>1,200,000</td>
</tr>
<tr>
<td>Medicare-subsidised mental health-related services(^b)</td>
<td>7,900,000</td>
<td>1,600,000</td>
</tr>
<tr>
<td>Community mental health care services</td>
<td>7,100,000</td>
<td>350,000</td>
</tr>
<tr>
<td>Hospital emergency departments</td>
<td>243,444</td>
<td>n/a</td>
</tr>
<tr>
<td>Psychiatric admitted patient care</td>
<td>223,261</td>
<td>n/a</td>
</tr>
<tr>
<td>Residential mental health care</td>
<td>4,200</td>
<td>3,200</td>
</tr>
<tr>
<td>Psychiatric disability support services</td>
<td>n/a</td>
<td>87,800</td>
</tr>
<tr>
<td>Specialist homelessness services</td>
<td>n/a</td>
<td>40,405</td>
</tr>
<tr>
<td>Personal helpers and mentors</td>
<td>n/a</td>
<td>13,200</td>
</tr>
</tbody>
</table>

\(^a\) Includes both Medicare-subsidised (2.2 million services contacts to 1.2 million clients) and general surgery consultations;
\(^b\) Includes care provided by psychiatrists, general practitioners, psychologists and other allied health professionals. The largest proportion of such care was provided by psychologists (44%). Figures presented are not mutually exclusive from general practitioner figures above (includes contacts provided by general practitioners in footnote a: 2.2 million service contacts to 1.2 million clients);
n/a: Not available

MORTALITY AND LIFE EXPECTANCY OF PEOPLE WITH A MENTAL ILLNESS

Internationally

Internationally, the all-cause mortality rates for people with a mental illness have been reported to be 1.3 to 4.3 times that of the general population,\(^16-20\) with a life expectancy gap estimated to be between 10 to 24 years,\(^16,17,21\) dependent upon study setting, psychiatric diagnosis and severity of illness. Although the majority of the available literature focuses upon people with a severe mental illness,\(^16-18,22\) similar life expectancy and mortality inequalities are evident among people with less severe mental illness diagnoses.\(^20,21\) For instance, in an investigation of life expectancy for people with mental illness in the United Kingdom, having any mental disorder was associated with a reduced life expectancy when compared to the general population, of
between 8.0 to 14.6 years of life lost for men, and 7.2 to 17.5 years of life lost for women.\textsuperscript{21} The largest reductions in life expectancy were found for those with severe mental illness (14.6 and 17.5 years for men with schizophrenia and women with schizoaffective disorders respectively).\textsuperscript{21} Large reductions in life expectancy were also found for less severe disorders (ranging from 7.2 years for females with a depressive disorder to 14.8 years for females with a substance use disorder).\textsuperscript{21}

Similarly, a meta-analysis of 203 studies of all-cause mortality among people with a mental illness from 29 countries found that although those diagnosed with a severe mental illness had the highest all-cause mortality, those with less severe mental illnesses also had substantially higher mortality rates than the general population.\textsuperscript{20} All-cause mortality (expressed as the relative risk [RR] of mortality compared to the general population) was highest for those with psychosis (RR=2.5), mood disorders (RR=2.1), and bipolar disorder (RR=2.0); followed by depression (RR=1.7) and anxiety disorders (RR=1.4).\textsuperscript{20} All-cause mortality was found to vary by sample setting, and was highest for those recruited from inpatient psychiatric settings (RR=2.4), followed by outpatient psychiatric settings (RR=2.1), and those recruited from community samples (RR=1.9).\textsuperscript{20} Trend data suggests that the all-cause mortality for people with a mental illness has increased over time relative to the general population.\textsuperscript{22} A systematic review of all-cause mortality studies in 25 countries identified that compared to the general population, median standardised mortality rates for people with schizophrenia had increased from 1.84 during the 1970’s to 3.20 during the 1990’s.\textsuperscript{22}
In Australia

In Australia, mortality and life expectancy patterns for people with a mental illness are similar to those reported in other countries. Data collected in 2010 indicated that the overall all-cause mortality for people with a psychotic illness aged between 18 and 64 years was 5.5 times that of the general population.23 In 2005, the life expectancy gap between those with a mental illness who had received care from a mental health service and the general population was reported to be 15.9 years for males and 12.0 years for females.24 Similar to international data, differences in life expectancy were apparent by diagnosis, with a life expectancy gap ranging from 9.3 years for females with stress or adjustment reaction, to 22.7 years for males with psychoses other than schizophrenia or affective psychosis.24 A reduced life expectancy relative to the general population was evident for all mental illness diagnosis categories.24 The gap in life expectancy between people with a mental illness and those in the general population is widening in Australia. Between 1985 to 2005 the life expectancy gap for people with a mental illness widened by 2.4 years for males and 1.6 years for females, mostly attributed to an increased life expectancy for the general population that has not been matched among people with a mental illness.24

CONTRIBUTION OF CHRONIC PHYSICAL DISEASE TO THE MORTALITY EXPERIENCED BY PEOPLE WITH A MENTAL ILLNESS

A minority of the excess mortality among people with a mental illness is due to deaths often referred to as 'unnatural', such as suicide, injury, and accidental death.18-20,24,25 Estimates of the proportion of excess deaths attributable to such causes range from 5%19 to 25%,24 with most studies estimating the attribution to be approximately 17%.18,20,25 In the meta-analysis of 203 studies of all-cause mortality among people with a mental illness from 29 countries described above, 17.5% of deaths were due to such
causes.\textsuperscript{20} In contrast, the majority of excess deaths have been found to be attributable to natural causes (e.g. acute and chronic illness),\textsuperscript{20,25} with chronic physical diseases such as cardiovascular and respiratory conditions responsible for the greatest proportion.\textsuperscript{18,25}

**Internationally**

Reviews of the literature consistently report a greater prevalence of chronic physical diseases among people with a mental illness compared to that of the general population, including cardiovascular disease, stroke, diabetes, metabolic syndrome, and respiratory conditions.\textsuperscript{26-31} For instance, a selective review of physical illness among people with a mental illness internationally indicated that diabetes and cardiovascular diseases are 2.0 to 3.6 times more prevalent among people with schizophrenia or bipolar disorder, and 1.2 to 4.5 times more prevalent among those with depression.\textsuperscript{31} The increased prevalence of such chronic diseases among people with a mental illness is reflected in greater mortality from such diseases when compared to the general population.\textsuperscript{17-19,32}

In a 2011 study in the United States, the most common causes of excess mortality among people with a range of mental disorders (including psychotic, affective and substance use disorders) were cardiovascular diseases (34%), cancers (21%), and cardiopulmonary disease (14%).\textsuperscript{19} In the United Kingdom, among people with a diagnosis of schizophrenia, the standardised mortality rates for circulatory diseases and respiratory disease have been estimated to be 2.6 and 4.9 times that of the general population respectively,\textsuperscript{18} whilst in the United States the standardised mortality rates for all tobacco linked diseases for people with a mental illness ranged from 1.6 to 2.5 times higher than the general population between 1990 and 2005.\textsuperscript{32} Similarly, the
mortality rates in Nordic countries for diseases of the circulatory system have been estimated to be 1.8 to 2.9 times higher than the general population for those with a diagnosis of schizophrenia, and 1.7 to 2.2 times higher for those with a diagnosis of bipolar disorder.\(^{17}\)

**In Australia**

In Australia, people with a mental illness also experience increased mortality from chronic disease when compared to the general population.\(^{24,33}\) Between 1985 and 2005, 77.7% of excess deaths among people with a mental illness were attributed to physical health conditions.\(^{24}\) Cardiovascular diseases were responsible for the largest proportion of this excess mortality, with 26.2% and 35.3% of excess mortality being attributable to such causes for males and females respectively, followed by cancers (13.6% and 13.3% of excess mortality in males and females respectively).\(^{24}\)

**MODIFIABLE HEALTH RISK BEHAVIOURS AND THEIR PREVALENCE AMONG PEOPLE WITH A MENTAL ILLNESS**

Explanations for the greater morbidity and mortality from chronic diseases among people with a mental illness are suggested to be multiple and complex,\(^{31,34,35}\) including the side effects of psychotropic medications on biomedical risks, such as metabolic syndrome;\(^{36-39}\) socio-economic factors;\(^{34}\) limitations in access to and quality of health care;\(^{31,35,40}\) and a greater prevalence of health risk behaviours.\(^{32,41,42}\)

Health risk behaviours are modifiable risks which influence health,\(^{43}\) or are associated with the development of a disease or injury.\(^{44,45}\) Such behavioural risks include engaging in harmful behaviours, such as tobacco smoking and alcohol consumption; or not engaging in healthy or protective behaviours, such as engaging in inadequate
CHAPTER 1: *Introduction: Chronic disease, health risk behaviours and preventive care for people with a mental illness*

Physical activity, consuming an inadequate diet, or not attending medical screening.\(^{43}\) When ranked in terms of their contribution to the total global burden of disease, measured as DALYs, 10 of the top 20 risks were modifiable health risk behaviours.\(^{45}\) Tobacco smoking, harmful alcohol consumption, inadequate nutrition and inadequate physical activity comprised the top four behavioural risks, with dietary risk factors and physical inactivity collectively accounting for 10% of the global DALYs, tobacco smoking and second hand smoke accounting for 6.3%, and alcohol misuse 3.9%.\(^{45}\) As these four health risk behaviours are the major health behaviour contributors to the burden of chronic disease,\(^{45}\) the following section, and the remainder of the thesis focuses on these health risk behaviours.

A higher prevalence of modifiable health risk behaviours among people with a mental illness compared to the general population is suggested to contribute substantially to the greater chronic disease burden experienced by this population group.\(^{32,41,42}\) Estimates of the prevalence of risk for these behaviours among people with a mental illness have been variously obtained through studies in inpatient or residential psychiatric settings; outpatient, community based mental health, or general health settings; or population based community surveys. The sections on prevalence that follow focus on research undertaken in outpatient, community based mental health, or general health settings; or population based community surveys, and the participants in such research are referred to as ‘community dwelling’. Tables 1.2 to 1.5 identify studies in the last 10 years reporting the prevalence of tobacco smoking, harmful alcohol consumption, inadequate nutrition, and inadequate physical activity among community dwelling people with a mental illness\(^{46-63}\) and where methodology allows, include comparisons with the prevalence of these risks in the general population using a within
study comparison group, or drawing on national or state-wide statistics.\textsuperscript{64-73} The following section summarises the prevalence findings reported in Tables 1.2 to 1.5, noting particularly those studies that do allow for general population comparison.

**SMOKING**

**Internationally**

The smoking prevalence among people with a mental illness is consistently reported to be at least double that of the general population.\textsuperscript{51,53,74} The prevalence of smoking is suggested to vary by diagnostic category and study setting,\textsuperscript{46-58, 74-78} with smoking rates higher among those with a psychotic or substance use disorder.\textsuperscript{47,49-51,74,75} [Table 1.2] In population surveys in the United States and England, the prevalence of smoking among community dwelling people with a mental illness has been estimated to be 40\% (compared to 21\% in the United States general population),\textsuperscript{51} and 33\% (compared to 22\% in the English general population)\textsuperscript{47} respectively. The prevalence of smoking has been reported to be as high as 68\% for those with schizophrenia attending outpatient mental health services in the United States.\textsuperscript{48} In studies not limited to those with schizophrenia or other severe mental disorders in the United States and the United Kingdom, smoking prevalence has been reported to range from 20\% to 69\%.\textsuperscript{46,47,49-53}

**In Australia**

The prevalence of smoking among people with a mental illness is substantially higher than the latest estimates of smoking prevalence among the Australian general population (12.8\% prevalence).\textsuperscript{66} [Table 1.2] In a population based survey of people with a mental illness across Australia, the prevalence of smoking among people with anxiety, affective and substance use disorders was 36\%.\textsuperscript{51} The prevalence of smoking among people with a psychotic disorder accessing mental health services in the
community has been found to range from 59% to 70%, dependent on diagnosis.\textsuperscript{55,57,58} In two studies examining the prevalence of smoking among people with a variety of mental illness diagnoses accessing community mental health services, the prevalence was 62\%\textsuperscript{54} to 63\%.\textsuperscript{56} Neither study reported smoking prevalence separately for different mental disorders.
TABLE 1.2: Prevalence of smoking among people with a mental illness internationally and in Australia in community dwelling samples and comparison to general population figures where available

<table>
<thead>
<tr>
<th>Study</th>
<th>Country</th>
<th>Sample</th>
<th>Definition of risk</th>
<th>% at risk (by diagnosis where reported)</th>
<th>% at risk (general population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smith 2007</td>
<td>UK</td>
<td>956 outpatients with severe mental illness recruited from seven mental health trusts. Specific diagnostic information for participants not provided.</td>
<td>Current smoker</td>
<td>Overall: 50.0%</td>
<td>18.7%&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>McManus 2010</td>
<td>UK</td>
<td>1,690 people with a range of mental disorders (see ‘% at risk’ column) sampled from a population survey.</td>
<td>Regular smoker</td>
<td>Overall: 33.0%</td>
<td>22.0%&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

Depressive episode: 37%
Phobias: 37%
Generalised anxiety disorder: 36%
Obsessive compulsive disorder: 34%
Panic disorder: 31%
Mixed anxiety and depression: 29%
Illicit drug dependence: 69%
Alcohol problem: 30%
Alcohol dependence: 46%
Probable psychosis: 40%
PTSD: 37%
ADHD 31%
Eating disorder: 20%
Attempted suicide 57%
<table>
<thead>
<tr>
<th>Study</th>
<th>Country</th>
<th>Sample Description</th>
<th>Definition of risk</th>
<th>% at risk (by diagnosis where reported)</th>
<th>% at risk (general population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goff 2005</td>
<td>US</td>
<td>689 outpatients with schizophrenia recruited from community clinics, academic centres, Veterans Affairs clinics and managed care organisations.</td>
<td>5 or more cigarettes daily over the previous week</td>
<td>Overall: 68.0%</td>
<td>35.0%b</td>
</tr>
<tr>
<td>Morris 2006</td>
<td>US</td>
<td>111,984 clients of public mental health services with a range of mental disorders (see % at risk column)</td>
<td>Current smoker</td>
<td>Overall: 38.7%</td>
<td>17.8%65a</td>
</tr>
<tr>
<td>Kilbourne 2009</td>
<td>US</td>
<td>131,211 clients of Veterans Affairs services diagnosed with schizophrenia, bipolar disorder, other psychotic disorders, major depressive disorder or other depression diagnosis.</td>
<td>Current smoker</td>
<td>Schizophrenia: 49.2%</td>
<td>23.2%b</td>
</tr>
<tr>
<td>Lawrence 2009</td>
<td>US</td>
<td>5,692 people with an anxiety disorder, affective disorder or substance use disorder sampled from a population survey</td>
<td>Current smoker</td>
<td>Overall: 40.1%</td>
<td>21.3%b</td>
</tr>
<tr>
<td>Study</td>
<td>Country</td>
<td>Sample</td>
<td>Definition of risk</td>
<td>% at risk (by diagnosis where reported)</td>
<td>% at risk (general population)</td>
</tr>
<tr>
<td>------------------------</td>
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<td>------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
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<td>-----------------------------</td>
</tr>
<tr>
<td>Dickerson 201352</td>
<td>US</td>
<td>291 clients of psychiatric rehabilitation clinics with schizophrenia, bipolar disorder, major depression or ‘other’ psychiatric diagnosis.</td>
<td>Smoked within the last year</td>
<td>Overall: 44.0%</td>
<td>17.8%65a</td>
</tr>
<tr>
<td>Cook 201553</td>
<td>US</td>
<td>457 clients of community mental health services with schizophrenia, bipolar disorder, depression, anxiety disorder, personality disorder, or ‘other’ psychiatric diagnosis.</td>
<td>Current smoker</td>
<td>Overall: 44.0%</td>
<td>12.8%66a</td>
</tr>
</tbody>
</table>

**AUSTRALIAN STUDIES**

<table>
<thead>
<tr>
<th>Study</th>
<th>Country</th>
<th>Sample</th>
<th>Definition of risk</th>
<th>% at risk (by diagnosis where reported)</th>
<th>% at risk (general population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moeller-Saxone 200854</td>
<td>Australia</td>
<td>281 clients of a Psychiatric Disability Rehabilitation and Support Service. Specific diagnostic information for participants not provided.</td>
<td>Current smoker</td>
<td>Overall: 62.0%</td>
<td>12.8%66a</td>
</tr>
<tr>
<td>Lawrence 200951</td>
<td>Australia</td>
<td>5,692 persons with an anxiety disorder, affective disorder or substance use disorder sampled from a population survey.</td>
<td>Current smoker</td>
<td>Overall: 36.2%</td>
<td>18.8%66b</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Any anxiety disorder: 33.4%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Any affective disorder: 43.4%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Any substance use disorder: 53.6%</td>
<td></td>
</tr>
<tr>
<td>Study</td>
<td>Country</td>
<td>Sample</td>
<td>Definition of risk</td>
<td>% at risk (by diagnosis where reported)</td>
<td>% at risk (general population)</td>
</tr>
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<td>------------------------------------------------------------------------</td>
<td>-------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>Cooper 2012</td>
<td>Australia</td>
<td><strong>1,812 clients</strong> of public mental health services with psychosis.</td>
<td>Smoked in previous 4 weeks</td>
<td>Overall: 67.0% Schizophrenia/schizoaffective: 70% Bipolar disorder: 61% Depression with psychosis: 58% Other disorders: 62%</td>
<td>12.8%66a</td>
</tr>
<tr>
<td>Happell 2014</td>
<td>Australia</td>
<td><strong>21 clients</strong> of a community mental health service. Diagnostic information of participants not provided.</td>
<td>Current smoker</td>
<td>Males: 61.5% Females: 62.5%</td>
<td>12.8%66a</td>
</tr>
<tr>
<td>Morgan 2014</td>
<td>Australia</td>
<td><strong>1,642 people</strong> with a psychotic disorder accessing public mental health services.</td>
<td>Smoked in Previous 4 weeks</td>
<td>Overall: 65.9%</td>
<td>12.8%66a</td>
</tr>
<tr>
<td>Hahn 2014</td>
<td>Australia</td>
<td><strong>1,286 people</strong> with psychosis accessing public mental health services.</td>
<td>Smoked in Previous 4 weeks</td>
<td>Overall: 64.0%</td>
<td>12.8%66a</td>
</tr>
</tbody>
</table>

* Comparison obtained from current population surveys
* Study utilised a general population comparison group
HARMFUL ALCOHOL CONSUMPTION

Internationally

Limited literature regarding the prevalence of harmful alcohol consumption suggests a similar risk prevalence among people with a mental illness compared to the general population for short-term risk (or binge) alcohol consumption, and a higher prevalence for long-term risk (or alcohol abuse or dependence). [Table 1.3] In a large 2009 United States mail survey of over 130,000 Veterans Affairs clients (77% above 50 years of age) with schizophrenia or other psychosis, bipolar disorder and depression, the prevalence of short-term risk alcohol consumption ranged between 21.4% to 25.2% (depending on psychiatric diagnosis) and was slightly less than the prevalence of 29.2% among veterans without a mental illness. A recent study (2015) of 457 clients of mental health services across four states in the United States found a higher proportion of people with a mental illness were at risk for alcohol abuse or dependence (17%) compared to the general population (7%).

In Australia

Limited research suggests a high prevalence of harmful alcohol consumption among community dwelling participants with a mental illness in Australia. [Table 1.3] However, comparison of the findings of the three identified studies to general population statistics is constrained by differences in measurement and risk classification methods. In a small sample (n=21) of Australian community mental health clients, 11.1% of females and 30.8% of males were classified as being at risk of hazardous alcohol consumption. Two studies have examined the prevalence of harmful alcohol consumption among community dwelling participants with psychotic disorders. A study of 1,642 people living with psychosis reported 30% to be at risk based on engaging in binge alcohol consumption over the previous year.
comparison, 2013 data indicated 26.0% of the general population were classified as at risk for single occasion or binge consumption, while 18.2% were at lifetime or chronic risk,66 as defined by the Australia national guidelines.79
### TABLE 1.3: Prevalence of harmful alcohol use among people with a mental illness internationally and in Australia in community dwelling samples and comparison to general population figures where available

<table>
<thead>
<tr>
<th>Study</th>
<th>Country</th>
<th>Sample</th>
<th>Definition of risk</th>
<th>% at risk (by diagnosis where reported)</th>
<th>% at risk (general population)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INTERNATIONAL STUDIES</strong></td>
<td></td>
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</tr>
</tbody>
</table>
| Kilbourne 200950 | US      | **131,211 clients** of Veterans Affairs services diagnosed with schizophrenia, bipolar disorder, other psychotic disorders, major depressive disorder or other depression diagnosis. | ‘Binge’ consumption: Assessed using a single hazardous/binge drinking question from the AUDIT tool | Schizophrenia: 22.2%  
Bipolar disorder: 21.4%  
Other psychosis: 20.2%  
Major depressive disorder: 23.6%  
Other depression: 25.2% | 29.2%a |
| Cook 201553     | US      | **457 clients** of community mental health services with schizophrenia, bipolar disorder, depression, anxiety disorder, personality disorder, or ‘other’ psychiatric diagnosis. | Alcohol abuse / dependence: Calculated by the AUDIT_C tool | Overall: 17.0% | 7.0%b |
| Smith 200746    | UK      | **956 outpatients** with severe mental illness recruited from seven mental health trusts. Specific diagnostic information for participants not provided. | Risk alcohol consumption: >21 units of alcohol per week | Overall: 11.0% | No equivalent  
[Closest Comparable date:  
23% men  
>21 units per week  
18% women  
>14 units per week]48c,d |
<table>
<thead>
<tr>
<th>Study</th>
<th>Country</th>
<th>Sample</th>
<th>Definition of risk</th>
<th>% at risk (by diagnosis where reported)</th>
<th>% at risk (general population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Happell 2014&lt;sup&gt;56&lt;/sup&gt;</td>
<td>Australia</td>
<td>21 clients of a community mental health service. Diagnostic information of participants not provided.</td>
<td>Hazardous alcohol consumption: Assessed by the AUDIT tool (AUDIT score ≥8)</td>
<td>Males: 30.8%</td>
<td>No equivalent [Closest Comparable date: 18.2% chronic risk {2+ standard drinks per day} 26% 'binge' risk {&gt;4 standard drinks on one occasion}]&lt;sup&gt;66c,d&lt;/sup&gt;</td>
</tr>
<tr>
<td>Morgan 2014&lt;sup&gt;57&lt;/sup&gt;</td>
<td>Australia</td>
<td>1,642 people with a psychotic disorder accessing public mental health services.</td>
<td>Risk alcohol consumption: Assessed by the AUDIT tool (4 or more standard drinks per day)</td>
<td>Overall: 29.9%</td>
<td>No equivalent [Closest Comparable date: 18.2% chronic risk {2+ standard drinks per day} 26% 'binge' risk {&gt;4 standard drinks on one occasion}]&lt;sup&gt;66c,d&lt;/sup&gt;</td>
</tr>
<tr>
<td>Study</td>
<td>Country</td>
<td>Sample</td>
<td>Definition of risk</td>
<td>% at risk (by diagnosis where reported)</td>
<td>% at risk (general population)</td>
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</tr>
<tr>
<td>Hahn 2014</td>
<td>Australia</td>
<td>1,286 people with psychosis accessing public mental health services.</td>
<td>Risk alcohol consumption: Assessed by the AUDIT tool (4 or more standard drinks per day)</td>
<td>Overall: 32.0%</td>
<td>No equivalent</td>
</tr>
</tbody>
</table>

a Study utilised a general population comparison group
b General population comparisons reported in relevant study
c Comparison obtained from current population surveys
d General population statistic not directly comparable due to different definitions of risk

[Closest Comparable date:
18.2% chronic risk
{2+ standard drinks per day}
26% ‘binge’ risk
{>4 standard drinks on one occasion}]
INTRODUCTION

INTERNATIONAL

A systematic review of 31 studies of dietary patterns among people with schizophrenia (without information not provided regarding the countries the studies were conducted in) concluded that compared to the general population, people with schizophrenia had diets richer in saturated fats, and poorer in fibre and fruits. A number of studies conducted in single countries also suggest poor dietary habits among people with a mental illness, but such studies do not allow for a general population comparison. In England and Wales, a study of 956 clients of community mental health services reported 32% of clients to have an ‘unhealthy diet’. In a survey of 159 people with schizophrenia attending outpatient mental health service consultations in Spain, 78% of participants were classified as having an unhealthy diet, and 91.1% of participants were classified as at risk for inadequate fruit and vegetable consumption.

IN AUSTRALIA

A limited amount of research suggests poorer dietary habits among people with a mental illness compared to the general population in Australia, with three studies allowing for comparison to general population statistics. In one study of a small sample (n=21) of community dwelling mental health clients, female participants reported consuming a mean of 1.25 serves of fruit and 1.3 serves of vegetables daily, whilst males reported a mean 1.1 serves of fruit and 0.8 serves of vegetables daily; considerably less than the average 1.6 serves of fruit and 2.4 serves of vegetables consumed by the general population. In a further study examining mean intake of fruit and vegetables by 43 people with psychosis recruited from General Practitioners and mental health services, a lower average consumption of fruit and vegetables was found when compared to the general population (0.8 and 1.2 serves respectively). In the
previously described study of 1,286 people living with psychosis, participants were less likely than the general population to consume fruits and vegetables.58 Using the World Health Organisation’s definition of risk (less than four daily servings of fruit and/or vegetables), 74% of participants were at risk for inadequate fruit and vegetable consumption, with 25% not consuming any fruit (compared to 6% in the general population), and 8% not consuming any vegetables (compared to 0.8% in the general population).58
TABLE 1.4: Prevalence of inadequate nutrition among people with a mental illness internationally and in Australia in community dwelling samples and comparison to general population figures where available

<table>
<thead>
<tr>
<th>Study</th>
<th>Country</th>
<th>Sample</th>
<th>Definition of risk</th>
<th>% at risk (by diagnosis where reported)</th>
<th>% at risk (general population)</th>
</tr>
</thead>
</table>
| Smith 2007<sup>46</sup> | UK      | 956 outpatients with severe mental illness recruited from seven mental health trusts. Specific diagnostic information for participants not provided. | ‘Unhealthy’ or ‘moderate’ diet: a nurse rated participants’ diets based on how they described the foods and fluids consumed in the last few days, based on eating pattern, food choice and cooking method (unhealthy, moderate, or healthy diet).  
‘Unhealthy diet’ described as: “irregular eating pattern, poor nutritional content, excess of sweets and crisps, and many high fat foods (fast food). These diets would consist often of predominant meals not cooked at home but high-fat ‘fast food’ and an absence of fresh fruit and vegetables.”  
‘Moderate diet’ described as: “higher in fat, regular meals but most likely overeating, probably over eating fats and sugars and under eating fruits and vegetables.” | Overall: 84.0%  
Unhealthy: 32.0%  
Moderate: 52.0% | No equivalent |
### Study: Simonelli-Munoz 2012

<table>
<thead>
<tr>
<th>Study</th>
<th>Country</th>
<th>Sample</th>
<th>Definition of risk</th>
<th>% at risk (by diagnosis where reported)</th>
<th>% at risk (general population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simonelli-Munoz 2012&lt;sup&gt;59&lt;/sup&gt;</td>
<td>Spain</td>
<td>159 outpatients with schizophrenia attending a mental health service consultation.</td>
<td>Unhealthy diet: score &lt;31 (17-item questionnaire used to assess the quality of dietary habits. Possible score ranges from 0 to 51 points with a higher score indicating healthier dietary habits).</td>
<td>Overall: Unhealthy diet: 78.0%</td>
<td>No equivalent</td>
</tr>
</tbody>
</table>

#### Definitions of unhealthy/moderate habits:
- Number of meals day: ≤3
- Breakfast foods: <2 foods
- Eating between meals: sometimes/every day
- Time spent eating: 15-30 mins
- Fruit and veg servings daily: <4
- Legume servings daily: ≤2
- Cereal, bread, potatoes servings daily: ≤6
- Servings rice/pasta daily: <3
- Servings milk/milk containing food daily: <4
- Servings fish weekly: <4
- Servings eggs weekly: 0-3 or >5
- Spoonful’s sugar daily: 0-5 or >8
- Water daily: ≤1.5L

Mean nutrition score: 27.3

Unhealthy/moderate habits:
- Number of meals day: 44.6%
- Breakfast foods: 45.2%
- Eating between meals: 66.9%
- Time spent eating: 92.4%
- Fruit and veg servings daily: 9.1%
- Legume servings daily: 75.2%
- Cereal, bread, potatoes servings daily: 96.2%
- Servings rice/pasta daily: 83.4%
- Servings milk/milk containing food daily: 88.5%
- Servings fish weekly: 98.1%
- Servings eggs weekly: 98.1%
- Spoonful’s sugar daily: 91.7%
- Water daily: 56.7%
### Study Details

<table>
<thead>
<tr>
<th>Study</th>
<th>Country</th>
<th>Sample Description</th>
<th>Definition of Risk</th>
<th>% at Risk (by diagnosis where reported)</th>
<th>% at Risk (general population)</th>
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<tbody>
<tr>
<td>Dipasquale</td>
<td>Review</td>
<td>Systematic review of 31 studies concerning the dietary patterns and their effects on metabolic parameters in patients with schizophrenia between 1950 and 2011</td>
<td>No ‘risk’ classification. Studies focused on intake of saturated fat, fibre and fruit. The majority of studies used dietary questionnaires to assess dietary patterns. The majority of studies did not provide estimates of the prevalence of risk for inadequate nutrition, and provided either descriptive information only, or association between dietary patterns and metabolic parameters.</td>
<td>No ‘risk’ classification.</td>
<td>No equivalent.</td>
</tr>
<tr>
<td>AUSTRALIAN STUDIES</td>
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<tr>
<td>Filia</td>
<td>Australia</td>
<td>43 people with psychosis who smoke, recruited from general practitioners, community mental health services and psychiatric rehabilitation services.</td>
<td>No ‘risk’ classification. Recall over past 24 hours of servings of: fruit, vegetables, meat/fish/eggs, bread/cereals, dairy, extra foods.</td>
<td>No ‘risk’ classification.</td>
<td>Mean daily fruit consumption (servings): 1.6</td>
</tr>
</tbody>
</table>

### Australian Studies Details

<table>
<thead>
<tr>
<th>Study</th>
<th>Country</th>
<th>Sample</th>
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<th>% at Risk (by diagnosis where reported)</th>
<th>% at Risk (general population)</th>
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<tbody>
<tr>
<td>Filia</td>
<td>Australia</td>
<td>43 people with psychosis who smoke, recruited from general practitioners, community mental health services and psychiatric rehabilitation services.</td>
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<td>Mean daily fruit consumption (servings): 1.6</td>
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<td>Study</td>
<td>Country</td>
<td>Sample</td>
<td>Definition of risk</td>
<td>% at risk (by diagnosis where reported)</td>
<td>% at risk (general population)</td>
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<tr>
<td>Happell 2014&lt;sup&gt;56&lt;/sup&gt;</td>
<td>Australia</td>
<td>21 clients of a community mental health service. Diagnostic information of participants not provided.</td>
<td>No ‘risk’ classification. Mean daily servings of fruit and vegetables.</td>
<td>Mean daily fruit consumption (servings): Males: 1.1; Females: 1.25</td>
<td>Mean daily fruit consumption (servings): 1.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mean daily vegetable consumption (servings): Males: 0.8; Females: 1.3</td>
<td>Mean daily vegetable consumption (servings): 2.4&lt;sup&gt;69a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Hahn 2014&lt;sup&gt;58&lt;/sup&gt;</td>
<td>Australia</td>
<td>1,286 people with psychosis accessing public mental health services.</td>
<td>Fruit and vegetable under-consumption: &lt;4 serves of fruit and/or vegetables (based on the World Health Organisation definition). Also examined % eating zero fruits and zero vegetables daily.</td>
<td>Fruit and vegetable consumption: 74%</td>
<td>Zero fruit servings: 25%</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td>Zero vegetable servings: 8%</td>
<td>Zero vegetable servings: 0.8%&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Study</td>
<td>Country</td>
<td>Sample</td>
<td>Definition of risk</td>
<td>% at risk (by diagnosis where reported)</td>
<td>% at risk (general population)</td>
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</tr>
<tr>
<td>Morgan</td>
<td>Australia</td>
<td>1,642 people with a psychotic disorder accessing public mental health services.</td>
<td>Fruit and vegetable under-consumption: 1 or less servings of fruit and vegetables daily.</td>
<td>Fruit: 70.6% Vegetables: 48.1%</td>
<td>No equivalent</td>
</tr>
</tbody>
</table>

[Closest comparable data: Fruit: 51.7% (<2 servings daily); Vegetables: 91.7% (<5 servings daily)]\(^{ab,c}\)

\(^a\) Comparison obtained from current population surveys  
\(^b\) General population comparisons reported in relevant study  
\(^c\) General population statistic not directly comparable due to different definitions of risk
INADEQUATE PHYSICAL ACTIVITY

Internationally

The majority of research suggests a high level of risk for inadequate physical activity among people with a mental illness, and three United States studies demonstrate a higher level of risk when compared to the general population.\cite{50,62,63} [Table 1.5] In the United States, a survey of over 100,000 Veterans Affairs clients with a range of mental illnesses found 44% to 58% (depending on diagnosis) were at risk according to the United States physical activity guidelines, compared to 39% among veterans without a mental illness.\cite{50} Sixty outpatient clinic clients with bipolar disorder in the United States were compared with matched national samples of participants from the National Health and Nutrition Examination Survey, including people from the general population, and users of mental health services (whose diagnoses were not specified).\cite{62} Clients with bipolar disorder, and users of mental health services were both found to be less active than those from the general population sample.\cite{62} Also in the United States, among a sample of 44 clients of Veterans Affairs day treatment program clients with schizophrenia or schizoaffective disorder, 53% were reported to be at risk for not meeting the United States physical activity guidelines,\cite{63} compared to 50.6% of the general population.\cite{72}

In Australia

A limited number of studies suggest a higher prevalence of inadequate physical activity among those with a mental illness compared to the general population in Australia. [Table 1.5] In a small sample of 21 community mental health clients, 66.7% did not meet sufficient physical activity levels of 150 minutes per week\cite{56} as recommended by national physical activity guidelines, compared to 57% in a general population sample.\cite{73} In the two studies reporting results from people living with psychosis, a
greater proportion reported either sedentary or low levels of physical activity (96.0% and 97.0%) when compared to the proportion of the Australian population aged 15 years or older (66.9%).
### TABLE 1.5: Prevalence of inadequate physical activity among people with a mental illness internationally and in Australia in community dwelling samples and comparison to general population figures where available

<table>
<thead>
<tr>
<th>Study</th>
<th>Country</th>
<th>Sample Description</th>
<th>Definition of risk</th>
<th>% at risk (by diagnosis where reported)</th>
<th>% at risk (general population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kilbourne 2009&lt;sup&gt;60&lt;/sup&gt;</td>
<td>US</td>
<td>131,121 clients of Veterans Affairs services diagnosed with schizophrenia, bipolar disorder, other psychotic disorders, major depressive disorder or other depression diagnosis.</td>
<td>Inadequate physical activity: &lt;3 times per week.</td>
<td>Schizophrenia: 45.6% Bipolar disorder: 44.0% Other psychosis: 58.0% Major depressive disorder: 48.9% Other depression: 49.4%</td>
<td>38.7%</td>
</tr>
<tr>
<td>Snethen 2014&lt;sup&gt;63&lt;/sup&gt;</td>
<td>US</td>
<td>44 outpatients with schizophrenia and schizoaffective disorder recruited from a day treatment program at a Veteran’s Administration Hospital and a local public hospital.</td>
<td>Inadequate physical activity: &lt;150 minutes per week.</td>
<td>Overall: 53.0%</td>
<td>50.6%&lt;sup&gt;72b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Study</td>
<td>Country</td>
<td>Sample</td>
<td>Definition of risk</td>
<td>% at risk (by diagnosis where reported)</td>
<td>% at risk (general population)</td>
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<tr>
<td>Janney 2014</td>
<td>US</td>
<td>60 clients with bipolar receiving treatment at a University Psychiatric Clinic. Mental health service (MHS) user comparison groups: 60 mental health service users (diagnoses and characteristics unknown) who participated in the National Health and Nutrition Examination Survey.</td>
<td>No ‘risk’ classification. Physical activity measured by minutes per day to calculate: total activity per day, minutes spent engaging in moderate/vigorous activity, minutes spent engaging in light activity, minutes spend sedentary.</td>
<td>Mean minutes: Total activity per day: Bipolar group: 229 MHS users: 328</td>
<td>Mean minutes: Total activity per day: 379</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sedentary per day: Bipolar group: 812 MHS users: 639</td>
<td>Sedentary per day: 539</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Light activity per day: Bipolar group: 215 MHS users: 310</td>
<td>Light activity per day: 356</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Moderate/vigorous activity per day: Bipolar group: 14 MHS users: 19</td>
<td>Moderate/vigorous activity per day: 23&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Smith 2007</td>
<td>UK</td>
<td>956 outpatients with severe mental illness recruited from seven mental health trusts. Specific diagnostic information for participants not provided.</td>
<td>Inadequate physical activity: No regular exercise. Also reported total duration of physical activity per week.</td>
<td>Overall: 84.0% Mean physical activity per week (minutes): 57</td>
<td>No equivalent [Closest comparable data: Mean physical activity per day: men 31 minutes; women 24 minutes]&lt;sup&gt;b,c&lt;/sup&gt;</td>
</tr>
<tr>
<td>Study</td>
<td>Country</td>
<td>Sample</td>
<td>Definition of risk</td>
<td>% at risk (by diagnosis where reported)</td>
<td>% at risk (general population)</td>
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</tr>
<tr>
<td>Simonelli-Munoz 2012</td>
<td>Spain</td>
<td>159 outpatients with schizophrenia attending a mental health service consultation.</td>
<td>Inadequate physical activity: 0 hours per day.</td>
<td>Overall: 38.2%</td>
<td>No equivalent</td>
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<tr>
<td>AUSTRALIAN STUDIES</td>
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<tr>
<td>Happell 2014</td>
<td>Australia</td>
<td>21 clients of a community mental health service. Diagnostic information of participants not provided.</td>
<td>Inadequate physical activity: &lt;150 minutes per week</td>
<td>Overall: 66.7%</td>
<td>57.0%&lt;sup&gt;73b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Morgan 2014</td>
<td>Australia</td>
<td>1,642 people with a psychotic disorder accessing public mental health services.</td>
<td>Inadequate physical activity: sedentary or low activity levels as identified with the International Physical Activity Questionnaire.</td>
<td>Overall: 96.0%</td>
<td>Overall: 66.9%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sedentary: 32.4%</td>
<td>Sedentary: 35.4%</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Low: 63.6%</td>
<td>Low: 31.5%</td>
</tr>
<tr>
<td>Hahn 2014</td>
<td>Australia</td>
<td>1,286 people with psychosis accessing public mental health services.</td>
<td>Inadequate physical activity: sedentary or low activity levels as identified with the International Physical Activity Questionnaire.</td>
<td>Overall: 97.0%</td>
<td>Overall: 66.9%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sedentary: 33.0%</td>
<td>Sedentary: 35.4%</td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td>Low: 64.0%</td>
<td>Low: 31.5%</td>
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</tbody>
</table>
### Study | Country | Sample | Definition of risk | % at risk (by diagnosis where reported) | % at risk (general population) |
--- | --- | --- | --- | --- | --- |
Filia 2011 | Australia | 43 people with psychosis who smoke, recruited from general practitioners, community mental health services and psychiatric rehabilitation services. | No ‘risk’ classification. Number of times per week participants engaged in 20 minutes of vigorous physical activity or 30 minutes of moderate physical activity. | No ‘risk’ classification. Mean number of times per week participants engaged in vigorous or moderate physical activity: Overall: 3.3 Vigorous: 0.8 Moderate: 2.4 | No equivalent |

---

| Study | Country | Sample | Definition of risk | % at risk (by diagnosis where reported) | % at risk (general population) |
--- | --- | --- | --- | --- | --- |
Filia 2011 | Australia | 43 people with psychosis who smoke, recruited from general practitioners, community mental health services and psychiatric rehabilitation services. | No ‘risk’ classification. Number of times per week participants engaged in 20 minutes of vigorous physical activity or 30 minutes of moderate physical activity. | No ‘risk’ classification. Mean number of times per week participants engaged in vigorous or moderate physical activity: Overall: 3.3 Vigorous: 0.8 Moderate: 2.4 | No equivalent |

---

1 Study utilised a general population comparison group
2 Comparison obtained from current national population surveys
3 General population statistic not directly comparable due to different definitions of risk
LIMITATIONS OF EVIDENCE REGARDING THE PREVALENCE OF HEALTH RISK BEHAVIOURS AMONG COMMUNITY DWELLING PEOPLE WITH A MENTAL ILLNESS

The research findings summarised in Tables 1.2 to 1.5 and the preceding sections suggest a consistently high prevalence of tobacco smoking, harmful alcohol consumption, inadequate nutrition, and inadequate physical activity among people with a mental illness. When a comparison to general population statistics was possible, people with a mental illness generally had higher levels of risk across all behaviours, both internationally and in Australia, although comparisons were constrained due to classification of risk or descriptions of health behaviour habits which do not conform to evidence based guidelines or standardised national survey data.46,56-61

The majority of studies have focused on smoking,46-58 with less research on the prevalence of risk for harmful alcohol consumption,46,50,53,56-58 inadequate nutrition,46,56-61 and inadequate physical activity.46,50,56-59,61-63 Further, the majority of studies focused on people with severe mental disorders, such as schizophrenia, other psychotic disorders or bipolar disorder,46,55,57-63 did not specify the diagnoses of participants,46,56 or did not report risk information separately for different diagnoses,52-54 thereby limiting the generalisability of prevalence estimates to the broader population of people with a mental illness. In particular, the majority of Australian studies have focused on specific sub-groups of people with a mental illness, predominantly those with psychotic disorders.55,57,58,61
Given such limitations, further research is required to confirm the suggested prevalence of chronic disease health risk behaviours in a community dwelling sample of people reflecting a broad range of mental illnesses, using classifications of risk that would allow for comparison with general population statistics.

HEALTH CARE SERVICES AS SETTINGS FOR REDUCING CHRONIC DISEASE HEALTH RISK BEHAVIOURS: ‘PREVENTIVE CARE’

Approaches to addressing modifiable health risk behaviours for both the general population and particular subgroups are diverse. Population level strategies to reduce the prevalence of tobacco smoking and at risk alcohol consumption have focused on reducing the supply of and demand for such products through such strategies as minimum purchase age legislation; regulation of the production and sale of products; price and tax measures; enforcement of smoke-free and alcohol free areas; packaging and labelling of products; regulation of advertising, promotion and sponsorship; and regulation of product content. Similar population level strategies have been applied or recommended to address inadequate nutrition and inadequate physical activity, such as price interventions to increase the price of unhealthy food content and to reduce the cost of healthy foods; and regulatory measures to improve nutritional food labelling, and to restrict marketing of unhealthy foods. In addition, various strategies to improve knowledge and awareness of the harms of risk behaviours, and the benefits of their modification, such as mass media and health promotion campaigns in schools and workplaces have been implemented.
Health care services have also been recognised to have an important role, such that policies and guidelines recommend that health care services and professionals routinely provide care for all clients that seeks to encourage and facilitate modification of health risk behaviours to prevent the onset or progression of chronic disease; that is, ‘preventive care’. Client contact with mental health services represents a key opportunity for health care professionals to address the high prevalence of health risk behaviours among people with a mental illness.

EFFECTIVENESS AND MODELS OF PREVENTIVE CARE

The effectiveness of clinician provision of preventive care is well established across a range of health services providing care to the general population. For example, Cochrane review evidence supports the effectiveness of such care provision by health professionals generally in improving health risk behaviours, including increasing smoking cessation, reducing alcohol consumption, increasing physical activity and improving dietary practices. Evidence has demonstrated that interventions of greater intensity (duration and frequency of contact) are more likely to be effective, and the behaviour change benefits resulting from such interventions are more likely to be maintained.

There is an increasing evidence base for the effectiveness of preventive care for people with a mental illness specifically. Systematic review evidence demonstrates that lifestyle interventions including health promotion programs, psychoeducation and behavioural interventions are effective in improving health risk behaviours for people with a mental illness. For instance, a systematic review of 42 health behaviour intervention studies for people with a mental illness in
community mental health and psychiatric inpatient settings across the United States, United Kingdom and Australia demonstrated positive changes across all of the targeted health behaviours, including tobacco smoking, alcohol consumption, inadequate nutrition and physical inactivity.\textsuperscript{135} Evidence also supports the effectiveness of less intensive preventive care interventions among people with a mental illness.\textsuperscript{139,141} For instance, compared to a control group, the provision of a brief preventive care intervention across six community mental health services in the United States resulted in significant increases in seven day smoking abstinence rates and significant decreases in the total number of cigarettes smoked weekly.\textsuperscript{139} In an Australian study, the provision of either a brief motivational interview or an educational package resulted in significant decreases in alcohol consumption among 120 psychiatric inpatients at six month follow-up.\textsuperscript{141} Further, the evidence regarding the effectiveness of preventive care for people with a mental illness has demonstrated that it is effective in both group and individual formats,\textsuperscript{135,137,138,142} and when delivery is either face to face\textsuperscript{135-142} or via the telephone.\textsuperscript{143-149}

A widely recommended model of clinician provision of preventive care is the ‘5As’ framework;\textsuperscript{134,150-155} a framework that guides clinician risk screening and provision of risk reduction interventions,\textsuperscript{134,152} and one that allows for multiple services or providers to be involved in such care delivery.\textsuperscript{134} Originally developed to guide the provision of smoking cessation interventions in primary care,\textsuperscript{151,152} the 5As model of preventive care has been refined over time\textsuperscript{151} and has been successfully applied to other behaviours, such as diet and harmful alcohol consumption.\textsuperscript{156,157} Following the 5As model, clinicians provide care in five steps: ask (systematically identify behavioural risks), advise (provide brief, tailored advice on the need to improve one or more behaviours), assess
(understand willingness to change, health literacy, and agree on a plan), assist (provide behaviour change techniques, medication if appropriate), and arrange (refer to specialist behaviour change supports for ongoing support and maintenance, and/or arrange for follow-up at a later stage). The 5As model of preventive care has been reported to be effective in reducing patient health risk behaviours.

Due to clinician time restrictions and competing priorities within consultations, a reduced model of the 5As framework, ‘2As and R’, has been proposed, one in which clinicians ask or assess clients about their behavioural risks (A), and for clients identified to be at risk, provide brief advice to change their behaviour(s) (A), and then refer the client to specialist behaviour change services (R). By implementing the reduced model, all elements of the 5As model can be delivered, but not necessarily by a single clinician or service, thereby providing an avenue for clients to be connected with ongoing behaviour change support from specialist programs. Such programs can include group or individual services, services provided by government or non-government organisations and specialist health care professionals (e.g. dietitians, exercise physiologists), and can be delivered on a face-to-face basis or via the internet or telephone.

GUIDELINES RECOMMENDING PREVENTIVE CARE PROVISION IN GENERAL AND MENTAL HEALTH CARE SETTINGS

Recommendations for the routine provision of preventive care in all health care encounters have been made by international healthcare organisations including the World Health Organisation, the National Institute for Health and Care Excellence, and the United States Preventive Services Task Force. In Australia, similar recommendations have been made by national healthcare bodies and at the state
and health service level. Such evidence-based guidelines and policies recommend that preventive care be provided by clinicians as a component of all client visits, regardless of the age or presenting condition of the client.

Recent international recommendations have similarly emphasised the need to enhance the focus of mental health services on addressing the physical health needs of people with a mental illness. Some recommendations have had a specific focus on metabolic monitoring and response, whilst others have addressed modifiable health risk behaviours specifically. For instance, a report by the Scottish Government recommended that all mental health services review their clients’ smoking, alcohol and drug use, diet, and physical activity; and offer relevant health behaviour change advice and interventions. The United Kingdom’s National Institute for Health and Care Excellence guidelines for the management of psychosis and schizophrenia, and bipolar disorder, similarly recommend all clients receive a comprehensive physical health assessment, including the provision of a healthy eating and physical activity programme, and smoking cessation care. In the United States, a report by the Institute for Healthcare Improvement recommends physical health assessment and preventive screening at all mental health service contacts, ongoing monitoring of physical health, and referrals to other health services when required.

In Australia, one of the ten National Mental Health Commission’s (2013) national targets for mental health reform is to address the physical health and life expectancy of people with a mental illness, primarily through increasing physical and dental health screening and intervention, and decreasing smoking rates. Australian state and territory government policies reinforce the importance of mental health services
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providing physical health care to mental health clients.\textsuperscript{109-112} For example, the New South Wales Mental Health Commission (2014) recommended that all healthcare services accessed by people with a mental illness assume responsibility for facilitating physical health assessment, and the monitoring and provision of treatment for clients’ physical health needs.\textsuperscript{164} Similarly, a New South Wales Health policy directive (2009) requires all mental health services to provide physical health care, including access to health promotion, screening and preventive activities.\textsuperscript{111} The policy directive further recommends that all public mental health services, including mental health inpatient services, psychiatric emergency care centres and community mental health services, routinely monitor and provide interventions regarding smoking cessation, weight control (including dietary and lifestyle advice), regular exercise, and alcohol abuse.\textsuperscript{111}

COMMUNITY MENTAL HEALTH SERVICES: AN OPPORTUNITY FOR THE PROVISION OF PREVENTIVE CARE

The World Health Organisation defines community mental health services as those that provide various forms of mental health care on an ambulatory non-inpatient basis, such as community-based rehabilitation and treatment, crisis intervention, education and training, diagnosis and treatment, and home help and support.\textsuperscript{165} While presentation to any mental health service provides an opportunity for the provision of preventive care to people with a mental illness, community mental health services present a particularly appropriate setting for a number of reasons. First, such services provide care to a greater number of clients than inpatient psychiatric services and other mental health related services.\textsuperscript{165-169} Second, community mental health services are highly accessible for clients and are seen as less stigmatising than inpatient mental health services.\textsuperscript{170} Third, they include a wide range of staff with skills and expertise relevant to preventive
care, and provide care on a multidisciplinary team basis, including psychiatrists, psychiatric nurses, psychologists, social workers and occupational therapists.\textsuperscript{165}

In Australia, community mental health services are primarily government-operated, and provide specialised mental health care on a non-residential, non-inpatient ambulatory basis.\textsuperscript{15} Australian community mental health services provided seven million service contacts in 2010-11, \textsuperscript{[Table 1.1]} and provided care to approximately 350,000 individual clients.\textsuperscript{15} Community mental health services represent 75\% of the total 1,450 specialist mental health services Australia wide; services that include public and private psychiatric hospitals, psychiatric units or wards in public and private acute hospitals, community mental health care services, and residential mental health services.\textsuperscript{15}

\textbf{PREVALENCE OF PREVENTIVE CARE IN COMMUNITY MENTAL HEALTH SERVICES}

Reviews of the provision of physical health care (e.g. metabolic monitoring, cardiovascular disease screening and surgical interventions, diabetes care, dental examination, and cancer care) to people with a mental illness consistently demonstrate low levels and poor quality of care provision.\textsuperscript{26,31,171-173} No reviews reporting the provision of preventive care addressing the health risk behaviours of people with a mental illness specifically, in any health care setting were found. However, a number of individual studies have reported the prevalence of such care in community mental health services: six internationally\textsuperscript{174-179} and five within Australia.\textsuperscript{180-184} The following section describes the findings of these studies regarding the provision of three elements of preventive care according to the 2As and R model (assessment, advice, referral), for the four modifiable health risk behaviours of smoking, harmful alcohol consumption, inadequate nutrition and inadequate physical activity.
Assessment

**Internationally**

In a United Kingdom audit of 63 case notes from a community mental health service (1998-2003), few case notes were found to have included the recorded assessment of client smoking status (16%), dietary habits (19%) or physical activity (5%). The two other studies of risk behaviour assessment have focused on assessment of tobacco smoking status only. A 2009 survey of 282 Canadian community mental health service staff attitudes and practices towards smoking cessation care, found less than one third (30.5%) reported that they ‘often or always’ assessed client smoking status. Higher assessment rates were identified in a United States study of community based psychiatrist appointments, where the smoking status of the client was assessed in 75.7% of over 8,000 psychiatrist visits. No studies were identified that reported the prevalence of risk assessment regarding alcohol consumption.

**In Australia**

One study was identified and was limited to the measurement of the assessment of client smoking status. In a 2009 survey of the service managers of all community mental health services in New South Wales, only half (56%) reported that their service recorded smoking status for ‘most’ (60% or more) clients.

**Advice**

Given differences in definitions between studies, for the purposes of this section ‘advice’ is considered broadly to include advice, counselling or support.

**Internationally**

In the Canadian study of 282 community mental health care providers described above, 19.9% of providers reported ‘often’ or ‘always’ delivering individual smoking
cessation counselling to their clients who were smokers, with 46.8% reporting ‘never’ or ‘rarely’ doing so. In a United States study of 100 community mental health service clients with schizophrenia and diabetes, 62% of clients who smoked reported receiving smoking cessation counselling. In the study of United States community based psychiatrist appointments described above, psychiatrists reported providing smoking cessation counselling in 12.4% of appointments, and diet and exercise counselling in 6% and 4% of patient appointments respectively. Also in the United States, an online survey of 154 multi-disciplinary community mental health clinicians from one urban community mental health service identified variable levels of counselling for cardiovascular risk factors. While 55% and 60% of clinicians reported providing counselling to at least half of their clients for nutrition and physical activity respectively, only 34% reported doing so for smoking, and 27% for all three risk factors. Finally, in a study of 585 mental health nurses in the United Kingdom (70% inpatient nurses; 30% community mental health nurses), the proportion of nurses who reported ‘very often’ or ‘always’ providing advice was lowest for smoking cessation (50%), with the majority providing advice for exercise (80%) and healthy eating (87%).

In Australia
One study was identified which addressed smoking cessation care only. In the 2009 survey of New South Wales community mental health service managers described previously, less than half of participants reported that their service provided the following smoking cessation care to ‘most’ of their clients: brief advice (47%), education about the risks of smoking (37%), and recommending the use of nicotine replacement therapy (26%).
Four additional studies were identified that included estimates of clinician provision of advice or support for health risk behaviours other than smoking.\textsuperscript{180,182-184} Two of the studies involved surveys of mental health clinicians.\textsuperscript{182,184} In the first study, of 643 mental health nurses across multiple service types including community mental health, most reported often or more frequently providing advice regarding stopping smoking (75%), stopping or reducing alcohol consumption (87%), a healthy diet (89%), and physical activity (91%).\textsuperscript{182} In the second study, of 373 community mental health clinicians and managers, the majority of respondents reported providing clients with ‘support’ for smoking cessation (69%), alcohol consumption (66%), diet (75%), and exercise (81%).\textsuperscript{184} Both studies were limited by a low response rate (22% and 25% respectively),\textsuperscript{182,184} and the use of clinician self-report of care provision.\textsuperscript{185} In addition, the first study did not report estimates of care provision separately for community mental health services\textsuperscript{182} and the second did not define what constituted ‘support’.\textsuperscript{184}

A further two studies identified lower estimates of clinician advice based on medical record audit and client reported receipt of advice.\textsuperscript{180,183} First, an audit of inpatient and community mental health services within one health district in the state of Victoria identified 23% of clients were provided with diet and exercise advice.\textsuperscript{180} Second, in a study of 21 clients recruited from a regional community mental health service in the state of Queensland, less than half reported having received advice for smoking cessation (47.6%), alcohol consumption and/or illicit drug use (33.3%), diet (42.9%) or physical activity (33.3%) from any health professional.\textsuperscript{183}
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Referral

**Internationally**

No international studies were identified that reported the provision of referral by community mental health services for any of the four health risk behaviours.

**In Australia**

One study was identified that provided estimates of the provision of referral for smoking cessation care only.\(^{181}\) In the 2009 survey of New South Wales community mental health service managers described previously, low levels of referral provision were found, with 14% of managers reporting that their service provided 'most' smokers with referral to a free government funded telephone cessation service, and 15% reporting referring 'most' clients to another referral source.\(^{181}\) One additional study was identified that included estimates of clinician referral for health risk behaviours other than smoking.\(^{180}\) In the audit of inpatient and community mental health services described above, 6% of clients were recorded as having been referred to a dietician, and 60% were referred to, or advised to attend their general practitioner, although the reason for such referral was not stated.\(^{180}\)

**LIMITATIONS OF EVIDENCE REGARDING THE PREVALENCE OF PREVENTIVE CARE IN COMMUNITY MENTAL HEALTH SERVICES**

Based on the findings above, the extent to which community mental health services adhere to guidelines regarding the provision of preventive care addressing chronic disease health risk behaviours appears sub-optimal. However, a number of features of the identified research limit the ability to draw a firm conclusion regarding the prevalence of preventive care provision.
First, in overall terms, very few studies have been reported regarding the prevalence of preventive care provision by community mental health services, both internationally and in Australia. Second, the majority of research has focused on the provision of smoking cessation care, with less research reporting the provision of preventive care for other health risk behaviours. Third, most have reported the provision of one or two elements of preventive care only, primarily assessment and advice, with no identified study reporting the prevalence of all such care elements in a single sample, and only two studies reporting prevalence estimates of referral to ongoing support. Fourth, the majority of the identified studies were limited by the use of either staff-reported or medical record audit estimates of care provision. Staff-reported estimates may over-estimate care provided, whilst medical record estimates may be underestimates of care provision. Given these limitations, further research is required to obtain a better understanding of the prevalence and characteristics of preventive care provision in Australian community mental health services.

**FACTORS INFLUENCING PREVENTIVE CARE PROVISION IN COMMUNITY MENTAL HEALTH SERVICES**

Clinical practice change literature suggests that in order to improve patient care, barriers at both the clinician level (such as clinician attitudes and beliefs) and those within the system in which clinicians work (such as equipment, resources and logistic processes) must be addressed. The following section summarises research that has quantitatively examined the association between clinician and system level factors, and the provision of preventive care in community mental health services. Given the limited amount of such research, the subsequent section also summarises the findings of
descriptive studies of clinician-reported barriers to the provision of preventive care and physical health care more broadly.

STUDIES QUANTITATIVELY INVESTIGATING THE ASSOCIATION BETWEEN CLINICIAN AND SYSTEM LEVEL FACTORS AND THE PROVISION OF PREVENTIVE CARE

Three studies were identified that have examined clinician factors associated with the delivery of preventive care: a 2006 survey of 282 Canadian community mental health care workers in regards to smoking cessation;\(^{174}\) a 2012 United Kingdom study of 585 mental health nurses across both inpatient (70%) and community (30%) mental health services;\(^{177}\) and a 2014 survey of 643 Australian mental health nurses working across a number of settings, including community mental health services.\(^{187}\) All three studies identified an increased likelihood of preventive care provision where clinicians believed it was part of their role.\(^{174,177,187}\) The United Kingdom and Canadian studies also reported that clinician confidence was positively associated with preventive care provision.\(^{177}\) The Canadian and Australian studies both identified clinician beliefs regarding a lack of time to provide care to be associated with reduced likelihood of care provision,\(^{174,187}\) whilst the Australian study found that clinicians who believed client physical health concerns were a symptom of their mental illness were less likely to provide preventive care.\(^{187}\) Lastly, the Canadian study identified that clinicians who believed that clients were interested in stopping smoking were more likely to provide such care.\(^{174}\)

Four studies were identified that have examined the association between system factors and the delivery of preventive care in community mental health services. In the first, a 2009 survey of 79 Australian community mental health service managers examined the association between the provision of smoking cessation care
(assessment, brief advice and/or referral to at least 60% of clients) and a number of system factors: training, risk assessment forms, routine auditing and feedback of smoking care delivery, smoking related care guidelines, and protocols or support systems for care.\textsuperscript{181} The study found that when risk assessment forms were available to assess/record smoking status, services were almost six times more likely to provide smoking cessation care than services without such forms. However, no association was found between the provision of smoking cessation care and any other system factors.\textsuperscript{181}

In contrast, two studies have found a positive association between clinician training and preventive care provision.\textsuperscript{176,177} In addition to the clinician factors associated with preventive care delivery in the 2012 United Kingdom study described previously,\textsuperscript{177} the receipt of physical health care training in the previous five years was positively associated with preventive care delivery by mental health nurses.\textsuperscript{177} Similarly, a 2013 United States study of 154 community mental health clinicians identified a positive association between the provision of counselling for smoking, diet and exercise, and the previous receipt of formal training in the provision of such care.\textsuperscript{176} Clinicians who had received training in the provision of counselling for all three behaviours were more than twice as likely to provide counselling for any of the behaviours.\textsuperscript{176} In addition to a positive association with the availability of risk assessment forms and training, the Australian study of 643 mental health nurses described above found a positive association between preventive care delivery and three additional system factors: the inclusion of physical health discussions in team meetings, clearly defined responsibilities regarding the provision of physical health care, and the presence of lifestyle programs for clients.\textsuperscript{187}
DESCRIPTIVE STUDIES OF CLINICIAN-REPORTED BARRIERS TO THE PROVISION OF PREVENTIVE CARE IN COMMUNITY MENTAL HEALTH SERVICES

A number of quantitative and qualitative studies from Canada,\textsuperscript{174} the United States,\textsuperscript{176,188} the United Kingdom,\textsuperscript{177} New Zealand,\textsuperscript{189} and Australia,\textsuperscript{180,184,190-193} and an international systematic review\textsuperscript{194} have described mental health clinicians’ reported barriers to the provision of preventive care. Clinician-reported perceptions and attitudes that impede the provision of preventive care include a lack of knowledge regarding both the need for and how to provide preventive care,\textsuperscript{194} and a lack of confidence in providing such care.\textsuperscript{174,188} Clinician perceptions of client factors are suggested to also have an impact, including clinician perception of client lack of interest in behaviour change,\textsuperscript{176,177,188,190,191} lack of client receptivity to receiving preventive care,\textsuperscript{188,192} and clinician beliefs that the management of their clients’ presenting mental illness is a greater priority.\textsuperscript{176,184} Such clinician perceptions regarding client factors have also been reported in Australian studies.\textsuperscript{184,190-192}

Some inconsistencies between studies regarding clinician-reported barriers to preventive care delivery are evident. For example, although four studies conducted in the United Kingdom and Australia found that mental health clinicians held the view that it was part of their role to provide care for behavioural health risks\textsuperscript{177,192} and physical health more broadly,\textsuperscript{180,191} other studies in Australia and New Zealand have identified a belief that addressing clients’ physical health was not part of the role of mental health services,\textsuperscript{189} and an ambivalence towards providing such care.\textsuperscript{190,193} Further, while one Australian study reported optimism among mental health clinicians regarding their ability to improve their clients’ health behaviours,\textsuperscript{191} another Australian study\textsuperscript{192} and two
in the United States\textsuperscript{176,188} reported clinician beliefs that the provision of preventive care would be of little value or not result in successful behaviour change.\textsuperscript{176,188,192}

Research in the United States,\textsuperscript{176,188} the United Kingdom,\textsuperscript{177,195} New Zealand\textsuperscript{189} and Australia,\textsuperscript{180,181,191,193,196,197} and three review papers\textsuperscript{161,194,198} indicate that even when clinicians have reported positive attitudes towards the provision of preventive care, they are impeded in such care provision by system level factors. An international review acknowledged a lack of clear and consistent guidelines regarding the provision of preventive care for people with a mental illness contributed to ambiguity in the role of mental health care providers in providing such care.\textsuperscript{198} Whilst mental health clinicians report the importance of receiving training in the provision of physical health care,\textsuperscript{195-197} a lack of such training has been reported by clinicians to hamper their delivery of such care.\textsuperscript{176,195} A lack of resource availability has similarly been reported by clinicians to inhibit the provision of preventive care in the United States, New Zealand and Australia, including a lack of time,\textsuperscript{180,193} a lack of systematic approaches to recording and providing such care,\textsuperscript{188,189} and a lack of prompts or reminders to facilitate its provision.\textsuperscript{181,193} A general lack of integration between physical and mental health care services, with poor relationships and communication between such services, has also been reported to contribute to the inability of mental health services to adequately address the physical health needs of people with a mental illness.\textsuperscript{180,188,189,191,194} This lack of integration has been reported to contribute to the sub-optimal provision of preventive care in Australia\textsuperscript{180,191,194} and elsewhere,\textsuperscript{188,189} particularly with regard to the provision of follow-up care and referral.\textsuperscript{188,189,194}
LIMITATIONS OF EVIDENCE REGARDING CLINICIAN AND SYSTEM FACTORS THAT INFLUENCE PREVENTIVE CARE PROVISION

Five studies have quantitatively examined the association between potential barriers and actual care delivery, finding support for the association of both clinician and system level factors. In descriptive and qualitative research a number of additional potential barriers were identified; however these studies primarily focused upon physical health care broadly, and a number focused upon nurses only or smoking cessation care only. Given the limited evidence regarding the factors associated with the provision of preventive care in community mental health services, and as the determinants of such care provision may be driven in part by policies, practices, funding and professional factors defined at the jurisdictional level, further research of such factors in Australian community mental health services is required if existing levels of care delivery are to be increased.

INTERVENTIONS TO IMPROVE PREVENTIVE CARE DELIVERY

GENERAL HEALTH CARE SETTINGS

Within health settings generally, Cochrane and other systematic reviews suggest that a number of clinical practice change strategies may improve the quality of health care and clinician adherence to clinical guidelines. Similarly, a multi-strategic intervention approach, addressing both clinician and system level factors has been recommended as the approach most likely to improve professional practice and adherence to guidelines. The practice change strategies supported by Cochrane review evidence for improving professional practice across a broad range of areas of care, including the provision of preventive care, include: local opinion leaders, audit and feedback, reminders and clinical decision support.
systems, training and education; educational outreach or academic detailing; and the dissemination of educational materials including the development and dissemination of clinical practice guidelines.

Such strategies have been found to be effective in increasing preventive care provision within general hospital and primary care settings for a range of health risk behaviours. For instance, a systematic review of six intervention trials in the United States, United Kingdom, Australia and the Netherlands examined the effectiveness of such strategies in increasing preventive care delivery by nurses and allied health clinicians in primary care settings for smoking cessation, harmful alcohol consumption, inadequate nutrition and inadequate physical activity. The trials involved multiple practice change strategies including audit and feedback, educational outreach and academic detailing, educational meetings and materials, reminders, patient mediated intervention and resources, and local consensus processes to increase the provision of care for one or more of the four health risk behaviours. Five of the six trials demonstrated significant increases in at least one element of preventive care, most commonly for smoking and for risk assessment or advice. The remaining study did not conduct significance testing.

In the Australian general community health setting specifically, a two-group non-randomised trial examined the effectiveness of an intervention in increasing the provision of preventive care by nurses and allied health professionals for four health risk behaviours (smoking, harmful alcohol consumption, inadequate nutrition and inadequate physical activity) across 17 community health services. The 12 month practice change intervention involved the following practice change strategies:
leadership and consensus processes; information systems modifications; educational meetings and outreach; practice change resources and support; and performance monitoring and feedback. Significant increases in preventive care delivery in the intervention compared to the control group were found for: assessment of fruit and vegetable consumption (23.8% vs -1.5% change in preventive care delivery), physical activity (11.1% vs -0.3%) and all four risks (16.9% vs -1.0%); and advice for inadequate fruit and vegetable consumption (19.3% vs -2.0%), alcohol overconsumption (14.5% vs -8.9%) and all four risks (14.3% vs 2.2%).

COMMUNITY MENTAL HEALTH CARE SETTINGS

In a review of the literature, just one study was identified that reported the effectiveness of an intervention in increasing the provision of preventive care in community mental health services. A single-group pre-post study was undertaken in two United States community mental health services to evaluate a six month intervention that included the following practice change strategies: staff education, the introduction of an electronic screening tool, and a standard communication letter to the clients’ primary care provider. Study outcomes, measured through audit of a random sample of clients’ medical records pre (n=129) and immediately post (n=117) the intervention period, were clinician screening for behavioural and non-behavioural cardiovascular disease risks including: smoking, waist circumference, cholesterol, and blood pressure; as well as the delivery of a communication letter to the client’s primary care provider. The percentage of clients screened for tobacco smoking by psychiatrists, mental health nurses and case managers increased from 76.2% to 88.6% pre to post intervention, whilst the proportion of clients for whom communication was sent to their primary care provider increased from 19.2% to 32.3%. Screening for all non-behavioural risks also
increased following the intervention, including waist circumference (3.8% to 56.9%), total cholesterol (31.5% to 62.3%), and blood pressure (52.3% to 82.3%).

Although the above study demonstrated an increase in screening for tobacco smoking and non-behavioural health risks following a six month intervention, it is unknown whether such an intervention approach would be effective in increasing either the screening of or the delivery of other elements of preventive care for other health risk behaviours. Further, as the study utilised a single-group pre-post design, the ability to attribute the increases found to the intervention is limited. Given this, there is a need for additional implementation research to evaluate the effectiveness of interventions in community mental health services to increase the provision of preventive care for chronic disease health risk behaviours.

THESIS AIMS AND STRUCTURE
In brief, this chapter highlights a number of limitations of the existing research on the prevalence of health risk behaviours among people with a mental illness, the provision of preventive care in community mental health services, the factors that may influence such care, and the strategies that may be effective in increasing preventive care.

In light of the gaps highlighted by this introductory chapter, the aims of this thesis are to:

1. Identify the prevalence of, and client characteristics associated with, four chronic disease health risk behaviours (tobacco smoking, harmful alcohol consumption, inadequate fruit and/or vegetable consumption, and
inadequate physical activity) among clients of community mental health services;

2 Determine the prevalence of preventive care provision (assessment, brief advice, and referral) in community mental health services for these four health risk behaviours, utilising both client and clinician self-report;

3 Explore factors that may be associated with the provision of preventive care for these four health risk behaviours, including clinician attitudes and system factors;

4 Determine the effectiveness of a clinical practice change intervention in increasing community mental health clinicians’ provision of preventive care (including assessment, brief advice and referral) for these four health risk behaviours across a network of community mental health services.

To address these aims, this thesis comprises seven chapters in addition to this introduction. Six of these chapters have been published or submitted for publication, in accordance with the University of Newcastle rules regarding thesis submission by publication. [Appendix 1] Of these six chapters, four have been published in peer-reviewed journals (Chapters 2, 3, 5, and 6). Chapters 4 and 7 have been submitted, and are currently under review in peer-reviewed journals. The eighth and final chapter presents a brief summary of the first seven chapters, and a discussion of implications for future extension of this research. The series of papers that address the thesis aims are as follows:
CHAPTER 2:
A cross-sectional survey investigating the prevalence of four health risk behaviours (tobacco smoking, harmful alcohol consumption, inadequate fruit and/or vegetable consumption, and inadequate physical activity) among adults receiving care from community mental health services (as according to the Australian national guidelines for reducing health risks) (Aim 1).

CHAPTER 3:
A cross-sectional survey investigating the self-reported provision of preventive care for the four health risk behaviours by community mental health clinicians, and the system factors associated with care delivery (Aims 2 and 3).

CHAPTER 4:
A cross-sectional survey of community mental health clinicians’ attitudes towards the provision of preventive care for the four health risk behaviours, and the association of these attitudes with preventive care delivery (Aim 3).

CHAPTER 5:
A cross-sectional survey investigating the client-reported receipt and acceptability of preventive care for the four health risk behaviours during community mental health service appointments (Aim 2).

CHAPTER 6:
A protocol describing the methods for a multiple baseline intervention trial to determine the effectiveness of a practice change intervention in increasing preventive care provision for the four health risk behaviours in community mental health services (Aim 4).
CHAPTER 7:
Study outcomes for the multiple baseline intervention trial described in Chapter 6 (Aim 4).

CHAPTER 8:
A brief summary and synthesis of the findings of the first seven chapters, and implications for future research.
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CHAPTER 2

CHRONIC DISEASE HEALTH RISK BEHAVIOURS AMONGST PEOPLE WITH A MENTAL ILLNESS

Chapter 2 is a published paper:
BACKGROUND

People with a mental illness experience higher rates of morbidity and mortality associated with chronic diseases than the general population, and a substantially lower life expectancy accordingly.\textsuperscript{1,2} For example, review evidence indicates an increased likelihood of obesity, metabolic syndrome, diabetes, cardiovascular diseases, and respiratory diseases amongst people with a mental illness.\textsuperscript{3} In the United Kingdom, the standardised mortality rates for circulatory and respiratory disease amongst people with a diagnosis of schizophrenia have been estimated at 2.6 and 4.9 times that of the general population, respectively.\textsuperscript{4} In Australia, the life expectancy gap between those with a mental illness and the general population is estimated at 15.9 years for males and 12.0 years for females, with 77.7\% of excess deaths attributed to physical health conditions.\textsuperscript{1} Four modifiable health risk behaviours are considered to contribute substantively to the greater chronic disease burden for people with a mental illness: tobacco smoking, inadequate nutrition, harmful alcohol consumption and physical inactivity.\textsuperscript{1,2} Improvements in such health risk behaviours have been found to result in substantial health benefits and reductions in mortality.\textsuperscript{5} In Australia, the prevention of chronic disease has become a priority with efforts focusing on reducing tobacco use, addressing the health and social harms caused by risky consumption of alcohol, and reducing overweight and obesity through strategies addressing nutrition and physical activity, with specific acknowledgement of the need to address such behaviours within disadvantaged populations such as those with a mental illness.\textsuperscript{6} Strategies have included various population health approaches including taxation, legislative, and marketing strategies.
Research examining the prevalence of chronic disease health risk behaviours among people with a mental illness has primarily focused on smoking\textsuperscript{7-10} with smoking rates consistently reported to be at least double that of the general population\textsuperscript{10} and in certain sub-groups as high as 80-90\%.\textsuperscript{7,9} Relatively fewer studies have examined the prevalence of other health risk behaviours among people with a mental illness, with such studies reporting that people with a mental illness are more likely to have unhealthy diets.\textsuperscript{11,12} Variable findings have been reported with respect to the prevalence of other risk behaviours, with separate studies reporting either higher or lower rates of alcohol consumption or misuse,\textsuperscript{2,7,11,13} and either higher or lower levels of physical activity relative to the general population.\textsuperscript{2,11,13}

The research that has examined the prevalence of multiple chronic disease health risk behaviours among people with a mental illness has primarily focused on patients with a specific diagnostic category,\textsuperscript{7,9,12,14,15} most often schizophrenia,\textsuperscript{9,12,14,15} or those in inpatient settings.\textsuperscript{7,9,11} Limited research has reported the prevalence of such health risk behaviours among people with other psychiatric illnesses, particularly among people with anxiety or depression, the most prevalent forms of mental illness.\textsuperscript{16} In one such study conducted in the United Kingdom (UK) of 956 community dwelling people with a range of mental illness diagnoses, 50\% of participants were smokers, with 37\% undertaking no regular physical activity and 32\% reporting poor nutrition.\textsuperscript{17} Generalisability of such findings is however limited by the inclusion of only those clients who their clinicians believed would benefit from a physical health program. No data were reported in the study regarding the prevalence of health risk behaviours by different diagnostic categories.
Contact with a mental health clinician is suggested to represent a key opportunity for addressing the chronic disease health risk behaviours of people with a mental illness.\textsuperscript{1} Despite such care being supported by clinical guidelines,\textsuperscript{18,19} its provision by mental health clinicians has been reported to be sub-optimal,\textsuperscript{20,21} due in part to the perception by mental health professionals that clients are unwilling to improve their risk behaviours.\textsuperscript{22-24} For example, in a survey of United States (US) community mental health psychiatrists, approximately one quarter (23\%) reported their clients do not want to quit smoking,\textsuperscript{22} whilst in an Australian survey of psychiatric inpatient nurse unit managers, most participants (69\%) believed that their clients were not interested in quitting.\textsuperscript{23}

In contrast to such perceptions by clinicians, research has suggested that a large proportion of people with a mental illness express a clear interest in changing their health risk behaviours, though most research has focused upon interest in quitting smoking.\textsuperscript{8,25,26} For example, in a recent Australian study of 1,043 smokers with a mental illness, 88\% reported wanting to quit smoking,\textsuperscript{26} whilst a systematic review of motivation to quit smoking amongst people with a mental illness indicated that those with a mental illness are as motivated to quit smoking as the general population, with similar proportions of smokers classified within the contemplation (38\% vs 33\%) and preparation (19\% vs 10\%) stages of change.\textsuperscript{25}

Only four studies could be identified that examined the level of interest among people with a mental illness in changing other health risk behaviours.\textsuperscript{14,27-29} One study of physical activity beliefs and preferences amongst people with a variety of mental illnesses in the UK identified that half of the participants reported a strong interest in
increasing their physical activity. A higher level of interest was reported in an Australian study of people with a psychotic illness, with most contemplating quitting smoking (93%), improving their nutrition (84%), or increasing their physical activity (79%). Similarly, in a UK study of outpatient mental health clients, including those with or without a psychotic illness a large majority indicated a desire to improve their exercise (85-97%), diet (75-90%), and stop smoking (69-86%). Lastly, in the US, substantial proportions of psychiatric inpatient smokers participating in a tobacco treatment trial reported being in the preparation stage of change for binge alcohol consumption (57%), physical inactivity (51%), fruit and vegetable under-consumption (46%) and tobacco smoking (23%). Further research is required to confirm the level of interest in changing health risk behaviours among people with a variety of types of mental illness to support the development of appropriate preventive care interventions to be delivered by mental health care professionals.

Given the limitations of the available evidence, a study was undertaken to investigate the prevalence of chronic disease health risk behaviours in people with a mental illness, and the interest of people with such an illness in changing such risks.

METHODS

DESIGN AND SETTING

A cross-sectional survey was undertaken of community mental health clients in New South Wales, Australia (December 2011 to November 2012, inclusive). Ethical approval was obtained from the Hunter New England Human Research Ethics Committee (approval No. 09/06/17/4.03) and the University of Newcastle Human Research Ethics Committee (approval No. H-2010-1116).
PARTICIPANTS AND RECRUITMENT

Community health services

All 12 community mental health services in a primarily metropolitan area were eligible for the study and invited to participate. The services provided a variety of forms of care that included general community mental health care, and care to more specialised mental health populations, including older persons, psychiatric rehabilitation, early diagnosis, comorbid substance use, eating disorders and borderline personality disorder. Such services were staffed by multi-disciplinary teams including nurses, psychologists, social workers, dieticians, occupational therapists, and psychiatrists. Clients were referred to the services through a variety of routes including a general practitioner or other health provider, following discharge from a psychiatric hospital, or self-referral. Services providing inpatient care or care solely to clients under the age of 18 were not eligible for inclusion.

Clients

Community mental health clients attending all 12 mental health services were eligible to participate if, based on electronic medical record data, they: were at least 18 years of age, had attended at least one face to face appointment with a clinical member of staff at any of the eligible services during the previous two weeks, had not previously been selected to participate (based on client identification number), and were not identified by their clinician as inappropriate to contact.

Over a period of 12 months, a weekly random sample of approximately 22 eligible clients (approximately 5% of total weekly eligible clients) was selected from the electronic medical records system using the survey select procedure in SAS V9.3. Selected clients were posted an information letter outlining the study. Clients were
contacted by phone approximately two weeks later to further determine their eligibility, specifically that they: were English speaking; not residing in an aged care facility, and were physically and mentally capable of responding to the survey items. Eligible consenting participants were administered a computer assisted telephone interview at that time, or a more suitable time for completion of the survey was arranged.

MEASURES

Demographics and clinical descriptors
Items and response options were sourced from previously reported surveys of community health clients. Participants were asked to report their: Aboriginality, highest education level attained, current employment status, current marital status, and any psychiatric diagnoses for which they had received medical attention or taken medication within the last two months (depression, bi-polar disorder, schizophrenia or other psychotic disorders, anxiety disorders, other). Age, gender, postcode, service attended, and number of community mental health appointments within the previous 12 months were attained from the electronic medical records system for consenters and non-consenters.

Risk status
Participants were asked to report their health risk behaviours during the month prior to seeing the community mental health service. Survey items and response options are based on validated items from recommended assessment tools and have been used previously in community surveys. Questions included: whether they had smoked any tobacco products; how many serves of fruit, and of vegetables they consumed on average per day; how many days per week they engaged in at least 30 minutes of physical activity; and how often they had a drink containing alcohol. Those who had consumed alcohol were further asked: how many standard drinks they consumed on a
typical drinking day and how often they consumed more than four standard drinks on one occasion. As per the Australian national guidelines, risk was defined as: any reported smoking, consuming less than two serves of fruit, or five serves of vegetables per day, consuming more than two standard alcoholic drinks on a regular drinking day (chronic alcohol risk) or more than four standard drinks on any one occasion (short term alcohol risk), or engaging in less than 30 minutes of physical activity on at least five days a week.

**Interest in modifying health risk behaviours**

With respect to each health risk behaviour that participants were classified as being at-risk for at the time of interview, participants were asked whether, over the next month, they were considering: quitting smoking, eating more vegetables and/or fruit, reducing their alcohol intake, and doing more physical activity (yes, no, don’t know). Single item measures of interest in change have been demonstrated to predict previous smoking quit attempts and to predict smoking cessation as accurately as measures containing multiple items.

**STATISTICAL ANALYSIS**

SAS analysis package (SAS, V9.3) was used to analyse the data. Condensed response categories were created for the following variables, as shown in Table 2.1: age, Aboriginality, highest education level attained, employment status, marital status, geographic location, index of disadvantage, and number of community mental health appointments in the past 12 months. Residential postcode was used to calculate each clients’ geographic remoteness and socio-economic index of disadvantage. If a participant did not know to what extent they engaged in a health behaviour, they were considered, on a conservative basis, to be at risk. If a participant did not know if they were seriously considering improving their health behaviour, they were considered, on
a conservative basis, that they were not considering such a change. Variables were created to reflect overall nutrition risk (at risk for inadequate fruit and/or vegetable consumption) and overall alcohol risk (chronic alcohol risk and/or short term alcohol risk).

Descriptive statistics were used to examine the demographic and clinical characteristics, the prevalence of each health risk behaviour and risk for multiple behaviours by diagnostic category, and interest in reducing risk by diagnostic category. Chi Square analyses were used to obtain unadjusted odds ratios for the association between each main diagnostic category and participant risk status for each health risk behaviour (smoking, overall nutrition risk, overall alcohol risk, and physical inactivity) and between each main diagnostic category and participant interest in reducing behavioural health risks. Logistic regression models were used to examine those same associations to obtain odds ratios adjusting for age, gender, employment status, marital status, education, and Aboriginality.

RESULTS

PARTICIPANTS
All 12 facilities agreed to participate in the study. Of the 1106 eligible participants selected, 903 (82%) were able to be contacted. Of those contactable, 129 (14%) were excluded due to ineligibility upon contact (primarily being mentally or physical incapable of responding to survey items, n=69). Of the remaining 774, 558 (72%) consented and completed the interview; with females being more likely to do so than males (76.2% vs 67.9%, p=.009).
The mean age of participants was 40.6 years (range 18 to 85 years), with the greatest proportion of participants in the 35-54 age category (41%). The majority of participants (95.2%) were not of Aboriginal or Torres Strait Islander origin. The most common psychiatric disorder for which participants were receiving care or taking medication was depression (62.7%). [Table 2.1]

**TABLE 2.1: Demographic description of sample (N=558)**

<table>
<thead>
<tr>
<th>Demographic</th>
<th>%</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>47.0%</td>
<td>262</td>
</tr>
<tr>
<td>Employed</td>
<td>22.6%</td>
<td>126</td>
</tr>
<tr>
<td>Aboriginal and/or Torres Strait Islander</td>
<td>4.8%</td>
<td>27</td>
</tr>
<tr>
<td>Age (Years) Range 18-85 (m=40.6, sd=15.1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-34</td>
<td>39.8%</td>
<td>222</td>
</tr>
<tr>
<td>35-54</td>
<td>41.0%</td>
<td>229</td>
</tr>
<tr>
<td>55 and over</td>
<td>19.2%</td>
<td>107</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married/living together in a relationship</td>
<td>24.7%</td>
<td>138</td>
</tr>
<tr>
<td>Previously or never married</td>
<td>75.3%</td>
<td>420</td>
</tr>
<tr>
<td>Highest education level completed(^a)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some high school, or less</td>
<td>46.2%</td>
<td>258</td>
</tr>
<tr>
<td>Completed high school or equivalent</td>
<td>18.5%</td>
<td>103</td>
</tr>
<tr>
<td>Completed technical certificate or diploma</td>
<td>24.4%</td>
<td>136</td>
</tr>
<tr>
<td>Completed University or College degree, or higher</td>
<td>10.9%</td>
<td>61</td>
</tr>
<tr>
<td>Psychiatric Diagnosis(^b,c) (N=520)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>62.7%</td>
<td>326</td>
</tr>
<tr>
<td>Bi-polar disorder</td>
<td>22.1%</td>
<td>115</td>
</tr>
<tr>
<td>Schizophrenia/other psychotic illness</td>
<td>31.4%</td>
<td>163</td>
</tr>
<tr>
<td>Anxiety disorder</td>
<td>39.4%</td>
<td>205</td>
</tr>
<tr>
<td>Other mental illness(^d)</td>
<td>2.7%</td>
<td>14</td>
</tr>
</tbody>
</table>
CHAPTER 2: Chronic disease health risk behaviours amongst people with a mental illness

<table>
<thead>
<tr>
<th>Demographic</th>
<th>%</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of CMH appointments in previous 12 months</strong>&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range=1-207 (m=15.4, sd=20.7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-2</td>
<td>27.1%</td>
<td>151</td>
</tr>
<tr>
<td>3-11</td>
<td>31.9%</td>
<td>178</td>
</tr>
<tr>
<td>12+</td>
<td>41.0%</td>
<td>229</td>
</tr>
<tr>
<td><strong>Geographic location</strong>&lt;sup&gt;f&lt;/sup&gt; (N=555)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major cities</td>
<td>75.3%</td>
<td>418</td>
</tr>
<tr>
<td>Regional/rural</td>
<td>24.7%</td>
<td>137</td>
</tr>
<tr>
<td><strong>Index of disadvantage</strong>&lt;sup&gt;f&lt;/sup&gt; (N=555)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowest tertile</td>
<td>40.0%</td>
<td>222</td>
</tr>
<tr>
<td>Middle tertile</td>
<td>56.6%</td>
<td>314</td>
</tr>
<tr>
<td>Highest tertile</td>
<td>3.4%</td>
<td>19</td>
</tr>
</tbody>
</table>

CMH: Community mental health  
<sup>a</sup> For chi-squared/regression analyses, variable dichotomised (less than high school Vs completed high school or greater)  
<sup>b</sup> Numbers in diagnostic categories do not add to total participant numbers as participants could elect multiple diagnoses  
<sup>c</sup> Data unavailable for 38 participants, due to changes to the interview script during the study period. 1 participant refused to answer, and 24 participants reported no psychiatric conditions for which they were receiving care  
<sup>d</sup> Other mental illness includes participants who responded ‘other’ to the question regarding psychiatric diagnoses, and who did not also respond to a main diagnostic category. Includes eating disorders, attention deficit disorder, personality disorders and ‘unsure’ responses  
<sup>e</sup> Variable categorised to reflect clients with occasional appointments (1-2), less than monthly (3-11 appointments), and monthly or more appointments (12+)  
<sup>f</sup> Data unavailable for 3 participants with no fixed home address

PREVALENCE OF BEHAVIOURAL HEALTH RISKS

Across the risk behaviours, participants were most likely to be at risk for inadequate vegetable consumption (78.3%) and inadequate fruit consumption (60%); and least likely to be at risk for harmful alcohol consumption (35.3% for chronic alcohol risk, 40.3% for short term alcohol risk). Approximately half of the sample were smokers (50.7%), and a similar proportion reported being physical inactive (46.8%). Ninety six percent of participants were at-risk for at least one health risk behaviour, 78.4% were at risk for two or more behaviours, and 10.2% were at risk for all four risk behaviours.

[Table 2.2]
### TABLE 2.2: Participants at risk for health risk behaviours and multiple risks by diagnosis

<table>
<thead>
<tr>
<th>BEHAVIOUR</th>
<th>TOTAL (N=558)</th>
<th>Depression (N=326)</th>
<th>Bi-polar (N=115)</th>
<th>Schizophrenia (N=163)</th>
<th>Anxiety (N=205)</th>
<th>Other (N=14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>% n</td>
<td>% n</td>
<td>% n</td>
<td>% n</td>
<td>% n</td>
<td>% n</td>
<td>% n</td>
</tr>
<tr>
<td>Smoking</td>
<td>50.7% 283</td>
<td>50.0% 163</td>
<td>55.7% 64</td>
<td>58.9% 96</td>
<td>52.2% 107</td>
<td>64.3% 9</td>
</tr>
<tr>
<td>Overall nutrition</td>
<td>86.7% 483</td>
<td>88.3% 287</td>
<td>85.2% 98</td>
<td>91.4% 149</td>
<td>86.3% 176</td>
<td>92.9% 13</td>
</tr>
<tr>
<td>Inadequate vegetable</td>
<td>78.3% 436</td>
<td>80.3% 261</td>
<td>76.5% 88</td>
<td>83.4% 136</td>
<td>75.5% 154</td>
<td>78.6% 11</td>
</tr>
<tr>
<td>Inadequate fruit</td>
<td>60.0% 334</td>
<td>61.9% 201</td>
<td>60.9% 70</td>
<td>65.0% 106</td>
<td>62.3% 127</td>
<td>64.3% 9</td>
</tr>
<tr>
<td>Overall alcohol</td>
<td>43.2% 241</td>
<td>40.5% 132</td>
<td>41.7% 48</td>
<td>43.6% 71</td>
<td>42.0% 86</td>
<td>71.4% 10</td>
</tr>
<tr>
<td>Chronic consumption</td>
<td>35.3% 197</td>
<td>33.1% 108</td>
<td>33.9% 39</td>
<td>35.0% 57</td>
<td>36.6% 75</td>
<td>71.4% 10</td>
</tr>
<tr>
<td>Binge consumption</td>
<td>40.3% 225</td>
<td>38.3% 125</td>
<td>39.1% 45</td>
<td>39.9% 65</td>
<td>40.0% 82</td>
<td>71.4% 10</td>
</tr>
<tr>
<td>Inadequate physical activity</td>
<td>46.8% 261</td>
<td>47.9% 156</td>
<td>52.2% 60</td>
<td>45.4% 74</td>
<td>47.8% 98</td>
<td>42.9% 6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NUMBER OF RISKS&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>% n</td>
</tr>
<tr>
<td>None</td>
</tr>
<tr>
<td>One</td>
</tr>
<tr>
<td>Two</td>
</tr>
<tr>
<td>Three</td>
</tr>
<tr>
<td>Four</td>
</tr>
</tbody>
</table>

<sup>a</sup> Numbers in diagnostic categories do not add to total participant numbers as participants could elect multiple diagnoses

<sup>b</sup> Total number of risks not calculated for one participant due to missing responses for nutrition risk questions. n for number of risks = 557
INTEREST IN MODIFYING HEALTH RISK BEHAVIOUR

With the exception of harmful alcohol consumption, approximately one half or more of participants, regardless of diagnosis, expressed an interest in modifying their health risk behaviours. The majority of participants at risk due to smoking, physical inactivity or inadequate fruit and/or vegetable consumption were considering modifying their health risk behaviour (65.1%, 71.1% and 53.3%, respectively). Approximately one quarter of participants at risk due to chronic and/or short term alcohol consumption expressed an interest in decreasing their alcohol consumption (27.9%). [Table 2.3]

ASSOCIATION BETWEEN PARTICIPANT DIAGNOSIS, HEALTH RISK BEHAVIOURS, AND INTEREST IN MODIFYING HEALTH RISK BEHAVIOURS

After adjusting for demographic factors, no diagnostic categories were associated with risk status for any of the health risk behaviours. [Table 2.4] Those with a diagnosis of depression were more likely than those with other diagnoses to be interested in quitting smoking (OR 1.96, p=.02) and increasing their physical activity (OR 2.24, p=.02). [Table 2.5]
TABLE 2.3: At-risk participants interested in modifying their health risk behaviours by diagnosis\textsuperscript{a}

<table>
<thead>
<tr>
<th></th>
<th>TOTAL</th>
<th>Depression</th>
<th>Bi-polar</th>
<th>Schizophrenia</th>
<th>Anxiety</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>n\textsuperscript{b}</td>
<td>%</td>
<td>n\textsuperscript{b}</td>
<td>%</td>
<td>n\textsuperscript{b}</td>
</tr>
<tr>
<td>Smoking</td>
<td>65.1%</td>
<td>164/252</td>
<td>71.0%</td>
<td>103/145</td>
<td>60.0%</td>
<td>33/55</td>
</tr>
<tr>
<td>Overall nutrition\textsuperscript{c}</td>
<td>53.3%</td>
<td>245/460</td>
<td>56.8%</td>
<td>154/271</td>
<td>54.8%</td>
<td>51/93</td>
</tr>
<tr>
<td>Inadequate vegetable</td>
<td>49.5%</td>
<td>204/412</td>
<td>54.8%</td>
<td>136/248</td>
<td>55.0%</td>
<td>44/80</td>
</tr>
<tr>
<td>Overall alcohol\textsuperscript{d}</td>
<td>44.8%</td>
<td>125/279</td>
<td>44.7%</td>
<td>72/161</td>
<td>45.2%</td>
<td>28/62</td>
</tr>
<tr>
<td>Chronic consumption</td>
<td>32.0%</td>
<td>40/125</td>
<td>37.9%</td>
<td>25/66</td>
<td>29.2%</td>
<td>7/24</td>
</tr>
<tr>
<td>Binge consumption</td>
<td>28.9%</td>
<td>41/142</td>
<td>34.7%</td>
<td>26/75</td>
<td>21.4%</td>
<td>6/28</td>
</tr>
<tr>
<td>Inadequate physical activity</td>
<td>71.1%</td>
<td>143/201</td>
<td>77.1%</td>
<td>91/118</td>
<td>60.5%</td>
<td>26/43</td>
</tr>
</tbody>
</table>

\textsuperscript{a} Numbers in diagnostic categories do not add to total participant numbers as participants could elect multiple diagnoses
\textsuperscript{b} Denominators do not equate to number of participants with each risk as questions regarding interest in reducing risk were asked to participants who were at-risk at the time of the interview
\textsuperscript{c} Includes those seriously considering improving at least one of the nutrition indicators (fruit consumption, vegetable consumption)
\textsuperscript{d} Includes those seriously considering improving at least one of the alcohol indicators (chronic consumption, binge consumption)
<table>
<thead>
<tr>
<th></th>
<th>Smoking</th>
<th>Nutrition</th>
<th>Alcohol</th>
<th>Physical Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OR (95%CI)</td>
<td>OR (95%CI)</td>
<td>OR (95%CI)</td>
<td>OR (95%CI)</td>
</tr>
<tr>
<td></td>
<td>p</td>
<td>p</td>
<td>p</td>
<td>p</td>
</tr>
<tr>
<td>Depression</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unadjusted</td>
<td>0.94 (0.66-1.34)</td>
<td>1.27 (0.75-2.15)</td>
<td>0.82 (0.57-1.17)</td>
<td>1.20 (0.84-1.72)</td>
</tr>
<tr>
<td>Adjusted</td>
<td>1.16 (0.79-1.72)</td>
<td>1.36 (0.80-2.33)</td>
<td>0.87 (0.60-1.28)</td>
<td>1.21 (0.84-1.74)</td>
</tr>
<tr>
<td>Bi-polar</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unadjusted</td>
<td>1.30 (0.86-1.97)</td>
<td>0.80 (0.44-1.44)</td>
<td>0.97 (0.64-1.48)</td>
<td>1.36 (0.90-2.07)</td>
</tr>
<tr>
<td>Adjusted</td>
<td>1.29 (0.82-2.04)</td>
<td>0.77 (0.42-1.40)</td>
<td>1.07 (0.69-1.66)</td>
<td>1.33 (0.87-2.04)</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Unadjusted</td>
<td>1.63 (1.12-2.37)</td>
<td>1.82 (0.98-3.39)</td>
<td>1.08 (0.74-1.57)</td>
<td>0.96 (0.66-1.39)</td>
</tr>
<tr>
<td>Adjusted</td>
<td>1.14 (0.75-1.73)</td>
<td>1.11 (0.84-3.09)</td>
<td>0.92 (0.61-1.39)</td>
<td>0.94 (0.63-1.40)</td>
</tr>
<tr>
<td>Anxiety</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unadjusted</td>
<td>1.11 (0.78-1.58)</td>
<td>0.86 (0.51-1.46)</td>
<td>0.99 (0.68-1.39)</td>
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<tr>
<td>Adjusted</td>
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<td>1.02 (0.70-1.49)</td>
<td>1.03 (0.72-1.48)</td>
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<tr>
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<tr>
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<td>1.72 (0.57-5.21)</td>
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<td>3.64 (1.12-11.75)</td>
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<tr>
<td>Adjusted</td>
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<td>2.65 (0.79-8.90)</td>
<td>0.82 (0.27-2.45)</td>
</tr>
</tbody>
</table>

*Adjusted odds ratios adjust for client age, gender, employment status, marital status, highest education attained, and Aboriginality.

CHAPTER 2: *Chronic disease health risk behaviours amongst people with a mental illness* 92
<table>
<thead>
<tr>
<th></th>
<th>Smoking</th>
<th>Nutrition(^a)</th>
<th>Alcohol(^b)</th>
<th>Physical Activity</th>
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<tbody>
<tr>
<td></td>
<td>OR (95%CI) (p)</td>
<td>OR (95%CI) (p)</td>
<td>OR (95%CI) (p)</td>
<td>OR (95%CI) (p)</td>
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<tr>
<td><strong>Depression</strong></td>
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<td></td>
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<tr>
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<td>1.75 (0.79-3.86)</td>
<td>2.06 (1.07-3.91)</td>
</tr>
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<td>1.96 (1.10-3.49)</td>
<td>1.52 (1.01-2.28)</td>
<td>2.26 (0.96-5.35)</td>
<td>2.24 (1.11-4.50)</td>
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<td>0.69 (0.27-1.78)</td>
<td>0.51 (0.25-1.04)</td>
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<td>0.58 (0.20-1.66)</td>
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<tr>
<td><strong>Schizophrenia</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>0.52 (0.30-0.91)</td>
<td>0.95 (0.64-1.42)</td>
<td>1.39 (0.65-2.99)</td>
<td>0.83 (0.43-1.61)</td>
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<td>0.56 (0.31-1.02)</td>
<td>0.87 (0.57-1.34)</td>
<td>1.28 (0.56-2.95)</td>
<td>0.98 (0.48-2.00)</td>
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<td></td>
</tr>
<tr>
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<td>1.47 (0.99-2.18)</td>
<td>1.35 (0.63-2.87)</td>
<td>1.71 (0.85-3.41)</td>
</tr>
<tr>
<td>Adjusted(^c)</td>
<td>1.17 (0.66-2.07)</td>
<td>1.35 (0.90-2.03)</td>
<td>1.55 (0.70-3.43)</td>
<td>1.80 (0.86-3.78)</td>
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<tr>
<td><strong>Other</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unadjusted</td>
<td>0.88 (0.21-3.79)</td>
<td>0.59 (0.19-1.90)</td>
<td>1.21 (0.11-13.75)</td>
<td>0.19 (0.03-1.04)</td>
</tr>
<tr>
<td>Adjusted(^c)</td>
<td>0.79 (0.17-3.61)</td>
<td>0.69 (0.21-2.27)</td>
<td>0.94 (0.08-11.66)</td>
<td>0.21 (0.04-1.26)</td>
</tr>
</tbody>
</table>

\(^a\) Includes interest in improving fruit and/or vegetable consumption

\(^b\) Includes interest in improving chronic and/or binge alcohol consumption

\(^c\) Adjusted odds ratios adjust for client age, gender, employment status, marital status, highest education attained, and Aboriginality
DISCUSSION

The study findings indicate a high prevalence of chronic disease health risk behaviours amongst community mental health clients, with a significant proportion of clients having multiple risks. Type of psychiatric diagnosis was not found to be associated with the likelihood of being at risk for any of the four health risk behaviours assessed. Between a half and three-quarters of at-risk participants expressed an interest in modifying their smoking, physical inactivity and inadequate fruit and vegetable consumption, and one quarter expressed an interest in modifying their at-risk alcohol consumption. Participants with depression were more likely to express an interest in changing their smoking and physical inactivity than were those with other diagnoses. Such findings demonstrate a need and an opportunity for the development of interventions to support mental health clinicians to routinely provide care to clients to reduce such health risk behaviours.

Despite an inability to make direct comparisons due to methodological differences between studies, the high prevalence of health risk behaviours is consistent with previous research with mental health clients. When compared to recent Australian data from generalist community health services using the same survey methodology and measures, the prevalence of health behaviour risks was higher in the current study, with the prevalence for smoking, at-risk alcohol consumption and physical inactivity being approximately twice as high. Although in some previous research, the prevalence of health risk behaviours has been found to vary by psychiatric diagnosis, the number of such studies is small, limiting the ability to generalise from these findings. It is possible that absence of differences in the prevalence of risk across psychiatric diagnoses may be attributable to the accuracy
limitations of self-reported diagnosis. Regardless, the finding in the present study of similarly high levels of risk across all categories of psychiatric diagnosis emphasises the importance of all mental health services addressing the health risk behaviours for all clients.

The high prevalence of multiple risks in the present study supports limited previous research suggesting a high prevalence of multiple health risk behaviours among people with a mental illness.\textsuperscript{42} When compared to a methodologically comparable study of clients attending generalist community health services (43\% with two or more risks),\textsuperscript{30} the participants in this study had a higher prevalence of multiple health risk behaviours (78\% with two or more risks). Given growing evidence of the effectiveness of multiple behavioural change interventions in general populations,\textsuperscript{43} and the markedly high prevalence of multiple health risk behaviours found in this study, research examining intervention strategies for addressing multiple risk behaviours for people with a mental illness is required.\textsuperscript{29}

The finding that apart from at-risk alcohol consumption, a significant proportion of participants across all diagnostic categories expressed an interest in improving their health risk behaviours contrasts with previously reported perceptions of mental health clinicians that clients are unwilling to address their health risk behaviours.\textsuperscript{22-24} Such findings may be conservative however, as being interested in improving a behaviour implies that one is aware of the problematic nature of that behaviour,\textsuperscript{44} and awareness was not examined in the current study. Further, although expressing an interest in change may not directly lead to a sustained change in behaviour, health behaviour theory supports the importance of intentions in predicting behaviour change.\textsuperscript{45,46} Such
findings reinforce the recommendations of clinical guidelines and policies that preventive care addressing the chronic disease risks of clients should be routinely provided by mental health clinicians to clients.\textsuperscript{18,19} Further research is required to examine client acceptability of receiving preventive care that addresses these health risk behaviours during interactions with their mental health providers.

The markedly lower level of interest in modifying at-risk alcohol consumption is consistent with previously reported lower levels of interest in reducing alcohol consumption in the general population.\textsuperscript{47} An Australian study of generalist community nursing clients identified that fewer clients expressed an interest in reducing their alcohol consumption (48\%) compared to quitting smoking (74\%), increasing their fruit and vegetable intake (59\%) and increasing their physical activity levels (84\%).\textsuperscript{47} In the general Australian population, awareness of the current alcohol consumption guidelines is low,\textsuperscript{48} particularly amongst those who consume alcohol.\textsuperscript{48} Among people with a mental illness it is possible that the observed lower level of interest is influenced by the consumption of alcohol as a form of self-medication or a coping mechanism.\textsuperscript{49} Further research is required to identify the reasons for few clients expressing an interest in modifying their at-risk alcohol consumption.

People with a diagnosis of depression were more interested than those with other psychiatric diagnoses in quitting smoking and increasing their physical activity. Such a finding is supported by a review of studies regarding motivation to quit smoking amongst people with a mental illness that also identified a greater motivation to quit amongst those with depression.\textsuperscript{25} For all at-risk participants, regardless of diagnoses,
interest in modifying at-risk alcohol consumption was markedly lower than for all other health risk behaviours.

A number of the study characteristics need to be considered when interpreting the findings. Firstly, the observed estimates of risk prevalence may be conservative due to limitations in the accuracy of client report of health behaviours.\textsuperscript{50} Secondly, as mental health diagnosis was based on client self-report, the diagnostic characteristics of the participants may be inaccurate, reflecting self-diagnosis rather than diagnosis by a health professional. However, the distribution of psychiatric diagnoses is consistent with those from larger investigations of the prevalence of mental illness in the community.\textsuperscript{16} Thirdly, as the study was undertaken within one area in Australia, the generalisability of findings to other health services within Australia and internationally is unknown.

The present study extends the limited data documenting the prevalence of health risk behaviours amongst people with a mental illness within community mental health services. The findings reinforce the need for further research to explore current levels of preventive care provision for this sub-group, and the particular need for interventions to support the provision of such care to people with a mental illness.
REFERENCE LIST


CARE PROVISION TO PREVENT CHRONIC DISEASE BY COMMUNITY BASED MENTAL HEALTH CLINICIANS

Chapter 3 is a published paper:
BACKGROUND
A greater prevalence of health risk behaviours among people with a mental illness, including smoking, inadequate nutrition, harmful alcohol consumption, and inadequate physical activity\textsuperscript{1-7} contributes to an increased burden of disease relative to the general population.\textsuperscript{8-10} Although addressing the physical health needs of mental health consumers is an increasingly recognized priority in policy,\textsuperscript{11-15} the limited evidence suggests that the provision of preventive care by mental health clinicians is suboptimal. For example, estimates of the prevalence of assessment of health risk behaviours by medical and nursing staff have ranged from 5\% to 19\%.\textsuperscript{16} With regard to the provision of brief advice, estimates have ranged from 4\% to 42\%,\textsuperscript{17-19} suggesting suboptimal care provision for these care elements. Similarly, in a recent Australian survey of service managers of all community mental health services in the state of New South Wales (NSW), Australia only 14\% reported providing “most” smokers with referral to a free government funded, telephone cessation service.\textsuperscript{20} The majority of such studies have focused on either the provision of smoking cessation care,\textsuperscript{20-26} care provision by a single type of provider,\textsuperscript{18,19,27} or the provision of single elements of preventive care (either assessment, advice or referral/follow-up),\textsuperscript{16-18,27} with no study reporting the prevalence of all such preventive care elements for multiple health risk behaviours.

Practice support strategies such as clinician training, educational resources, care delivery audit and feedback, prompts and reminders, and leadership support, are effective in addressing organizational barriers to preventive care provision in general health settings.\textsuperscript{28-32} Research examining the prevalence or association of such practice support strategies regarding preventive care delivery in mental health services is
limited. In one Australian study regarding the provision of smoking cessation care, the proportion of community mental health service managers reporting the availability of strategies to support the provision of such care ranged from 4% for the availability of processes to monitor/audit smoking cessation care, to 65% for the availability of forms to assess/record smoking status. The availability of the latter practice support strategy was positively associated with the provision of smoking cessation care. No studies have explored the availability of practice support strategies and their association with the provision of preventive care addressing multiple health risk behaviours by community mental health services.

The current study reports:

1. clinician-reported provision of three elements of preventive care (i.e., assessment, brief advice and referral/follow-up) for four behavioural health risk factors (i.e., smoking, inadequate fruit and vegetable consumption, harmful alcohol consumption and inadequate physical activity);
2. clinician-reported availability of strategies to support the provision of such preventive care; and
3. possible associations between the availability of such strategies and preventive care provision.

METHODS

DESIGN AND SETTING

A cross-sectional survey was undertaken in all public community mental health services within one local health district in NSW, Australia. The health district provides services to a population of approximately 850,000 people and covers a geographical
area of 140,000 square kilometres, including metropolitan, regional, rural and remote communities. The district has a policy requiring the provision of preventive care for behavioural health risks by all community mental health clinicians to all community mental health service clients.33

Ethical approval to conduct the study was obtained from the Hunter New England Human Research Ethics Committee (approval No. 09/06/17/4.03) and the University of Newcastle Human Research Ethics Committee (approval No. H-2010-1116). Data was collected in 2010 and analysed in 2012-2013.

PARTICIPANTS AND RECRUITMENT

All community mental health services in the local health district providing care to adult clients were included in the study (n=19). The services provide general community mental health care, older person’s community mental health care, and specialised mental health services including psychiatric rehabilitation and early diagnosis, neuropsychiatry, comorbid substance use, eating disorder and borderline personality disorder programs.

The community mental health services are staffed by multi-disciplinary teams including nurses, psychiatrists, and allied health practitioners. Clinical staff of the services were eligible to participate if they were employed for at least three months and had seen at least 10 adult clients in face to face appointments over the previous two months. All such staff were identified through an electronic records system and mailed a study information letter outlining the purpose of the study, and informing them an interviewer would contact them within the next four weeks. Contact details of study personnel were provided for further information or questions regarding the study.
DATA COLLECTION
Eligible clinicians were telephoned at their community mental health service during work hours and asked to participate in a 20-minute computer-assisted telephone interview (CATI), a method that has been previously used to assess preventive care delivery in other health settings. Clinicians were told that the purpose of the study was to obtain an estimate of the current level of preventive care delivery and inform strategies to enhance such care. The interview items were developed based on a recommended model of preventive care provision and items used in a previous survey of preventive care in community health services. The surveys were pilot tested with community health clinicians and subsequently administered by trained interviewers.

MEASURES
Clinician and service characteristics
Gender, professional discipline, Aboriginality, remoteness of service (based on postcode), and service type (eg., general community mental health, older person’s community mental health, specialised community mental health) were obtained from an electronic records system. During the computer-assisted telephone interview, participants were asked their age, years in their current discipline, and employment status.

Delivery of preventive care
The provision of preventive care by clinicians has been recommended to follow the 5A's model, with an abbreviated model of '2As and R' (ie., assess, advise, refer) being suggested to accommodate clinicians' competing priorities and time limitations. The following items were administered sequentially, in a standard order (fruit and vegetable intake, physical activity levels, smoking status and alcohol consumption),
and grouped in terms of behavioural risk (e.g. physical activity questions were grouped together across the care elements). Clinicians were instructed that they would be asked to estimate the proportion of new adult clients to whom they had provided preventive care in the previous two months.

**Assessment of client risk:**

Participants were asked to estimate the proportion (1-100%, don’t know) of all new adult clients during the past two months for whom they assessed fruit and vegetable intake, physical activity levels, smoking status and alcohol consumption. For example: “Over the past 2 months, what proportion of new adult clients did you ask about their fruit and vegetable intake?”

**Provision of brief advice:**

Participants were asked to estimate the proportion (1-100%, don’t know) of clients assessed as being at-risk during the past two months that they advised to: eat more fruit or vegetables, increase their physical activity levels, quit smoking or use nicotine replacement therapy or other medications to help them quit smoking, and reduce their alcohol consumption. For example: “Of your clients who were doing inadequate levels of physical activity, what proportion did you advise to increase their physical activity levels?”

**Provision of referral/follow-up:**

Participants were asked to estimate the proportion (1-100%, don’t know) of clients assessed as being at-risk during the past two months that they: spoke to about free telephone-based support services (Get Healthy Information and Coaching Service for inadequate nutrition and physical activity and Quitline for smoking; no equivalent service was available for reducing alcohol consumption); arranged a referral to either of
the helplines; advised they speak to their General Practitioner or Aboriginal Medical Service (AMS); or advised another form of follow-up support (e.g. dietitians, community exercise groups, drug/alcohol services). For example: “Of your clients who were doing inadequate levels of physical activity, what proportion did you speak to about the Get Healthy support service?”

Availability of practice support strategies
Finally, participants were asked to report on the availability of 16 preventive care practice support strategies in their service (yes, no, don’t know).28-32 [Table 3.3]

STATISTICAL ANALYSIS
Statistical analysis was conducted with SPSS, version 17.0. Descriptive statistics were used to examine clinician and service characteristics, provision of preventive care, and clinician-reported availability of practice support strategies. Pearson’s chi-squared analyses were used to compare participants and eligible non-consenters regarding gender, Aboriginality, discipline, remoteness of service, and service type.

Referral variables were combined to create an “any referral/follow-up” variable for each risk behaviour that included: having spoken about the telephone helpline, or arranged a referral to the telephone helpline, advised to speak to a general practitioner/Aboriginal Medical Service, or advised to use any other support.

The proportion of clinicians who reported providing assessment, brief advice, and each type of referral/follow-up for each of the risk behaviours were categorised according to the following proportions: 0% of clients, 1%-49%, 50%-79%, or 80-100% of clients. [Table 3.2] Clinicians who responded ‘don’t know’ were categorised as providing care to 0% of clients.
For each element of care (assessment, brief advice, any referral/follow-up), variables were calculated to examine “optimal” care provision, defined as providing care to 80% or more of clients for all behaviours combined.\textsuperscript{37,42} The overall number of practice support strategies available to clinicians was calculated. Clinicians who responded ‘don’t know’ were classified as not having that support available.

Pearson’s chi-squared analyses were initially conducted to examine the association between the availability of individual practice support strategies, as well as the overall number of practice support strategies available (zero to four versus five or more) and each outcome variable (optimal assessment, optimal brief advice, and optimal referral/follow-up). Variables found to be associated in such analyses at $p<0.25$\textsuperscript{43,44} were entered into logistic regression models for each outcome. A backwards stepwise process was undertaken until all variables in the model remained significant ($p<0.05$). Each logistic regression model adjusted for professional discipline, remoteness of service, years in professional discipline, age, and gender. Because of the small number of staff and the relatively high number of services, the logistic regression models did not adjust for clustering. Examination of the intraclass correlations indicated little to no between-cluster variance, with none significantly different from zero, confirming that adjustment was not necessary. [Table 3.4, footnote a]

**RESULTS**

**CLINICIAN CHARACTERISTICS**

Of the 195 clinicians employed, 170 were identified as eligible. Of these, 5 were non-contactable and 151 (89%) completed the interview. There were no significant differences in gender, Aboriginality, discipline, remoteness, or service type between
consenters and non-consenters. The majority of participants were employed on a full time basis (71.5%), were not of Aboriginal or Torres Strait Islander origin (97.4%), and had over 10 years of experience in their professional discipline (65.6%). The most frequently reported professional discipline was nursing (42.4%). [Table 3.1]

PREVENTIVE CARE DELIVERY
The proportion of clinicians providing assessment to 80% or more of clients ranged from 13.2% (inadequate fruit and vegetable consumption) to 89.4% (harmful alcohol consumption), with 8.6% providing optimal assessment (assessment for all four risk behaviours for 80% or more of clients). [Table 3.2]

The proportion of clinicians providing brief advice to 80% or more of at-risk clients ranged from 46.3% (inadequate fruit and vegetable consumption) to 80.1% (harmful alcohol consumption), with 25.2% providing optimal brief advice. [Table 3.2]

The proportion of clinicians providing any type of referral/follow-up to 80% or more of at-risk clients ranged from 22.5% (inadequate fruit and vegetable consumption) to 60.9% (harmful alcohol consumption), with 9.9% of clinicians providing referral/follow-up at an optimal level. [Table 3.2]

AVAILABILITY OF PRACTICE SUPPORT STRATEGIES
The total number of practice support strategies available to clinicians ranged from zero to 14 (mean=4.7). [Table 3.3]
ASSOCIATION BETWEEN AVAILABILITY OF PRACTICE SUPPORT STRATEGIES AND OPTIMAL PROVISION OF PREVENTIVE CARE

The availability of five or more practice support strategies was associated with both optimal assessment and optimal referral. Optimal assessment and referral were eight times (OR 8.06, \( p = 0.012 \)) and 11 times (OR 11.15, \( p = 0.004 \)) respectively, more likely to be provided when five or more support resources were available. Optimal brief advice was three times more likely to be provided when a hardcopy resource pack was available (OR 3.30, \( p = 0.010 \)). [Table 3.4]
### TABLE 3.1: Description of sample

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>%</th>
<th>n</th>
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</thead>
<tbody>
<tr>
<td>Female</td>
<td>58.3%</td>
<td>88</td>
</tr>
<tr>
<td>Full-time employment</td>
<td>71.5%</td>
<td>108</td>
</tr>
<tr>
<td>Aboriginal and/or Torres Strait Islander origin</td>
<td>2.6%</td>
<td>4</td>
</tr>
<tr>
<td>&gt;10 Years in discipline</td>
<td>65.6%</td>
<td>99</td>
</tr>
<tr>
<td>Age (Years)(^a)</td>
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</tr>
<tr>
<td>20-29</td>
<td>11.3%</td>
<td>17</td>
</tr>
<tr>
<td>30-49</td>
<td>45.3%</td>
<td>68</td>
</tr>
<tr>
<td>50 and over</td>
<td>43.3%</td>
<td>65</td>
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<td>Remoteness of service</td>
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<td>Major city</td>
<td>72.2%</td>
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<tr>
<td>Rural/remote</td>
<td>27.8%</td>
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<td>Service type</td>
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<tr>
<td>Generalist community mental health</td>
<td>57.0%</td>
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</tr>
<tr>
<td>Specialised community mental health(^b)</td>
<td>34.4%</td>
<td>52</td>
</tr>
<tr>
<td>Older persons community mental health</td>
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<td>13</td>
</tr>
<tr>
<td>Professional Discipline</td>
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<td></td>
</tr>
<tr>
<td>Nursing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mental health nurse</td>
<td>10.6%</td>
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</tr>
<tr>
<td>Nurse (generalist)</td>
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</tr>
<tr>
<td>Allied health</td>
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<tr>
<td>Psychologist</td>
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</tr>
<tr>
<td>Occupational therapist</td>
<td>7.3%</td>
<td>11</td>
</tr>
<tr>
<td>Social worker</td>
<td>8.6%</td>
<td>13</td>
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<tr>
<td>Other allied health</td>
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</tr>
<tr>
<td>Medical practitioner</td>
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</tr>
<tr>
<td>Psychiatrist</td>
<td>15.9%</td>
<td>24</td>
</tr>
<tr>
<td>Other medical practitioner</td>
<td>6.0%</td>
<td>9</td>
</tr>
</tbody>
</table>

\(^a\) 1 missing response

\(^b\) Includes rehabilitation teams \((n=24)\); early diagnosis support teams \((n=5)\); parent and infant teams \((n=3)\); neuropsychiatry teams \((n=4)\); comorbid substance use and mental health teams \((n=5)\); specialist service for eating disorders and borderline personality disorder \((n=11)\)
### TABLE 3.2: Clinician estimates of preventive care provision
(Clinicians reporting they provided preventive care to 0%, 1-49%, 50-79%, 80-100% of their clients)

<table>
<thead>
<tr>
<th>Assessment</th>
<th>0% (of clients provided to)</th>
<th>1-49% (of clients provided to)</th>
<th>50-79% (of clients provided to)</th>
<th>80-100% (of clients provided to)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td><strong>ASSESSMENT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking</td>
<td>7.9%</td>
<td>12</td>
<td>4.0%</td>
<td>6</td>
</tr>
<tr>
<td>Nutrition</td>
<td>33.8%</td>
<td>51</td>
<td>33.1%</td>
<td>50</td>
</tr>
<tr>
<td>Alcohol</td>
<td>2.0%</td>
<td>3</td>
<td>5.3%</td>
<td>8</td>
</tr>
<tr>
<td>Physical activity</td>
<td>3.3%</td>
<td>5</td>
<td>13.9%</td>
<td>21</td>
</tr>
<tr>
<td>All behaviours</td>
<td>0a</td>
<td>0</td>
<td>_b</td>
<td>_b</td>
</tr>
<tr>
<td><strong>ADVICE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking</td>
<td>31.8%</td>
<td>48</td>
<td>10.6%</td>
<td>16</td>
</tr>
<tr>
<td>Advice to use NRT</td>
<td>34.4%</td>
<td>52</td>
<td>15.2%</td>
<td>23</td>
</tr>
<tr>
<td>Advice: smoking / NRT</td>
<td>22.5%</td>
<td>34</td>
<td>_b</td>
<td>_b</td>
</tr>
<tr>
<td>Nutrition</td>
<td>39.7%</td>
<td>60</td>
<td>7.3%</td>
<td>11</td>
</tr>
<tr>
<td>Alcohol</td>
<td>13.9%</td>
<td>21</td>
<td>4.0%</td>
<td>6</td>
</tr>
<tr>
<td>Physical activity</td>
<td>9.9%</td>
<td>15</td>
<td>6.6%</td>
<td>10</td>
</tr>
<tr>
<td>All behaviours</td>
<td>2.6%a</td>
<td>4</td>
<td>_b</td>
<td>_b</td>
</tr>
</tbody>
</table>

*a, b: Comparisons were made using a post hoc Dunnett’s C test (adjusted alpha level = 0.05), indicating that the reference category for the comparisons was 0% (of clients provided to).*
### REFERRAL/FOLLOW-UP

<table>
<thead>
<tr>
<th></th>
<th>0% (of clients provided to)</th>
<th>1-49% (of clients provided to)</th>
<th>50-79% (of clients provided to)</th>
<th>80-100% (of clients provided to)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td><strong>TALK ABOUT HELPLINE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking</td>
<td>50.3%</td>
<td>76</td>
<td>21.9%</td>
<td>33</td>
</tr>
<tr>
<td>Nutrition</td>
<td>85.4%</td>
<td>129</td>
<td>6.6%</td>
<td>10</td>
</tr>
<tr>
<td>Alcohol</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Physical activity</td>
<td>83.4%</td>
<td>126</td>
<td>7.9%</td>
<td>12</td>
</tr>
<tr>
<td>All behaviours</td>
<td>45.7%&lt;sup&gt;a&lt;/sup&gt;</td>
<td>69</td>
<td>_</td>
<td>_</td>
</tr>
<tr>
<td><strong>ARRANGE WITH HELPLINE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking</td>
<td>92.7%</td>
<td>140</td>
<td>6.0%</td>
<td>9</td>
</tr>
<tr>
<td>Nutrition</td>
<td>97.4%</td>
<td>147</td>
<td>2.0%</td>
<td>3</td>
</tr>
<tr>
<td>Alcohol</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Physical activity</td>
<td>96.7%</td>
<td>146</td>
<td>1.3%</td>
<td>2</td>
</tr>
<tr>
<td>All behaviours</td>
<td>90.1%</td>
<td>136</td>
<td>_&lt;sup&gt;b&lt;/sup&gt;</td>
<td>_&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>a</sup> Percentage of clients provided to

<sup>b</sup> Indicates insufficient data
## Chapter 3: Care provision to prevent chronic disease by community based mental health clinicians

### Table 3.1: Referral/Follow-up

<table>
<thead>
<tr>
<th>Category</th>
<th>0% (of clients provided to)</th>
<th>1-49% (of clients provided to)</th>
<th>50-79% (of clients provided to)</th>
<th>80-100% (of clients provided to)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td><strong>REFERRAL/FOLLOW-UP</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advised to Talk to GP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking</td>
<td>34.4%</td>
<td>52</td>
<td>21.2%</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>17.9%</td>
<td>27</td>
<td>26.5%</td>
<td>40</td>
</tr>
<tr>
<td>Nutrition</td>
<td>68.2%</td>
<td>103</td>
<td>9.9%</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>9.3%</td>
<td>14</td>
<td>12.6%</td>
<td>19</td>
</tr>
<tr>
<td>Alcohol</td>
<td>41.1%</td>
<td>62</td>
<td>15.9%</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>15.9%</td>
<td>24</td>
<td>27.2%</td>
<td>41</td>
</tr>
<tr>
<td>Physical activity</td>
<td>55.6%</td>
<td>84</td>
<td>14.6%</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>11.9%</td>
<td>18</td>
<td>17.9%</td>
<td>27</td>
</tr>
<tr>
<td>All behaviours</td>
<td>20.5%&lt;sup&gt;a&lt;/sup&gt;</td>
<td>31</td>
<td>&lt;sup&gt;b&lt;/sup&gt;</td>
<td>&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>4.6%</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ADvised Other Referral</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking</td>
<td>43.7%</td>
<td>66</td>
<td>17.9%</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>15.9%</td>
<td>24</td>
<td>22.5%</td>
<td>34</td>
</tr>
<tr>
<td>Nutrition</td>
<td>48.3%</td>
<td>73</td>
<td>19.2%</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>16.6%</td>
<td>25</td>
<td>15.9%</td>
<td>24</td>
</tr>
<tr>
<td>Alcohol</td>
<td>17.9%</td>
<td>27</td>
<td>11.9%</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>16.6%</td>
<td>25</td>
<td>53.6%</td>
<td>81</td>
</tr>
<tr>
<td>Physical activity</td>
<td>21.2%</td>
<td>32</td>
<td>25.8%</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>23.2%</td>
<td>35</td>
<td>29.8%</td>
<td>45</td>
</tr>
<tr>
<td>All behaviours</td>
<td>4.0%&lt;sup&gt;a&lt;/sup&gt;</td>
<td>6</td>
<td>&lt;sup&gt;b&lt;/sup&gt;</td>
<td>&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>4.6%</td>
<td>7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### REFERRAL/FOLLOW-UP

<table>
<thead>
<tr>
<th>ADVISED ANY REFERRAL/FOLLOW-UP OPTIONd</th>
<th>0% (of clients provided to)</th>
<th>1-49% (of clients provided to)</th>
<th>50-79% (of clients provided to)</th>
<th>80-100% (of clients provided to)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Smoking</td>
<td>22.5%</td>
<td>34</td>
<td>_b</td>
<td>_b</td>
</tr>
<tr>
<td>Nutrition</td>
<td>44.4%</td>
<td>67</td>
<td>_b</td>
<td>_b</td>
</tr>
<tr>
<td>Alcohol</td>
<td>14.6%</td>
<td>22</td>
<td>_b</td>
<td>_b</td>
</tr>
<tr>
<td>Physical activity</td>
<td>17.2%</td>
<td>26</td>
<td>_b</td>
<td>_b</td>
</tr>
<tr>
<td>All behaviours</td>
<td>4.0%&lt;sup&gt;a&lt;/sup&gt;</td>
<td>6</td>
<td>_b</td>
<td>_b</td>
</tr>
</tbody>
</table>

<sup>a</sup> Clinician provided 0% of clients with care for all four behaviours

<sup>b</sup> Nonsensical data calculation

<sup>c</sup> Smoking variable included in the calculation of brief advice for all behaviours includes advice to quit smoking and/or advice to use nicotine replacement therapy

<sup>d</sup> Any referral/follow-up includes talking about or arranging referral to helpline, or advising to talk to their general practitioner, or advising other referral/follow-up option

GP: general practitioner; NA: not available; NRT: nicotine replacement therapy
### TABLE 3.3: Clinician reported availability of preventive care practice support strategies

<table>
<thead>
<tr>
<th>SUPPORT STRATEGY</th>
<th>AVAILABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
</tr>
<tr>
<td><strong>Leadership</strong></td>
<td></td>
</tr>
<tr>
<td>Nominated staff member to support preventive care</td>
<td>14.6%</td>
</tr>
<tr>
<td>Aware of health district’s policy</td>
<td>65.6%</td>
</tr>
<tr>
<td><strong>Training</strong></td>
<td></td>
</tr>
<tr>
<td>Preventive care training</td>
<td>23.2%</td>
</tr>
<tr>
<td><strong>Printed educational materials</strong></td>
<td></td>
</tr>
<tr>
<td>Fax referral forms</td>
<td>18.5%</td>
</tr>
<tr>
<td>Guidelines on how to comply with policy</td>
<td>24.5%</td>
</tr>
<tr>
<td>Hardcopy resource pack (of relevant forms and client handouts)</td>
<td>21.9%</td>
</tr>
<tr>
<td>Tailored client handout</td>
<td>18.5%</td>
</tr>
<tr>
<td>List of referral services</td>
<td>51.7%</td>
</tr>
<tr>
<td>Generic client handouts</td>
<td>47.7%</td>
</tr>
<tr>
<td><strong>Audit and feedback</strong></td>
<td></td>
</tr>
<tr>
<td>Feedback on level of care provided in service</td>
<td>11.9%</td>
</tr>
<tr>
<td><strong>Reminders and prompts</strong></td>
<td></td>
</tr>
<tr>
<td>Real time reminders of best practice</td>
<td>18.5%</td>
</tr>
<tr>
<td>Prompts in electronic medical records to assess</td>
<td>33.1%</td>
</tr>
<tr>
<td>Place in electronic medical records to record</td>
<td>22.5%</td>
</tr>
<tr>
<td>Screening tool in electronic medical records</td>
<td>31.8%</td>
</tr>
<tr>
<td>Automated production of referral letter to GP</td>
<td>31.8%</td>
</tr>
<tr>
<td>Paper screening tool to assess away from computer</td>
<td>34.4%</td>
</tr>
</tbody>
</table>
TABLE 3.4: Association between practice support strategies and optimal care provision for all behaviours combined

<table>
<thead>
<tr>
<th>OUTCOME</th>
<th>PREDICTOR</th>
<th>0-4</th>
<th>5-16</th>
<th>B</th>
<th>SE</th>
<th>OR</th>
<th>95% CI</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment</td>
<td>Practice support strategies available(b) ((n))</td>
<td>-</td>
<td>2.09</td>
<td>0.83</td>
<td>8.06</td>
<td>(1.57, 41.30)</td>
<td>1</td>
<td>0.012</td>
<td></td>
</tr>
<tr>
<td>Advice</td>
<td>Hardcopy resource pack availability Available</td>
<td></td>
<td>1.19</td>
<td>0.47</td>
<td>3.30</td>
<td>(1.33, 8.23)</td>
<td>1</td>
<td>0.010</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not Available</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td>Ref</td>
<td></td>
</tr>
<tr>
<td>Referral</td>
<td>Practice support strategies available(b) ((n))</td>
<td>-</td>
<td>2.41</td>
<td>0.84</td>
<td>11.15</td>
<td>(2.15, 57.76)</td>
<td>1</td>
<td>0.004</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** Boldface indicates statistical significance \((p<0.05)\)

* Logistic regression models adjusted for the following clinician characteristics: professional discipline, remoteness of service, years in professional discipline, age, gender. Logistic regression models did not adjust for clustering as intraclass correlations indicated little to no between-cluster variance: assessment 6.6x10\(-19\); advice: 0.016, 95% CI=-0.30, -0.49; referral 1.3x10\(-18\)

\(b\) Number of practice support strategies available was dichotomised: 0-4 strategies available versus 5-16 strategies available
DISCUSSION

This study is the first to examine the provision of multiple elements of preventive care for multiple key health risk behaviours by community mental health clinicians, and to assess the association between the availability of practice support strategies and the provision of such care. The study identified variable, but sub-optimal provision of preventive care across both the health risk behaviours and care elements, particularly for inadequate nutrition and for referral/follow-up care. The availability of practice support strategies is low, with a greater number of such strategies and the availability of a hardcopy resource pack being positively associated with optimal care provision for some care elements.

The finding of variable and sub-optimal provision of preventive care is consistent with previous research regarding the provision of smoking-cessation care within mental health services, and extends such a finding to the provision of care regarding inadequate nutrition, harmful alcohol consumption, and inadequate physical activity. The higher provision of some care elements for harmful alcohol consumption and smoking may reflect a greater familiarity of mental health clinicians with such care given the recognised comorbidity between substance use and mental illness, and the more established treatment guidelines for smoking and alcohol consumption.

The observed prevalence of assessment and brief advice in the current study reflects previous reports of moderate levels of assessment, brief advice or counselling in community and inpatient mental health services across the four behaviours. Similarly, the low rates of referral are consistent with previous findings regarding smoking cessation care and care for nutrition in these settings. The latter
findings contrast with the particular importance of referral and follow-up care in ensuring successful change in health risk behaviours. The low levels of referral found in this study may be related to a number of possible barriers including: difficulties for clients accessing a general practitioner or primary care physician; poor communication between mental health services, primary care, and other referral services; clinician perceptions that clients would not be responsive to behaviour change; and a perceived lack of referral options.

Despite such perceptions, evidence-based and readily accessible referral options (free government services) were available for clinician referral regarding smoking cessation (www.icanquit.com.au/further-resources/quitline) and inadequate nutrition and physical activity (www.gethealthynsw.com.au). Such telephone helplines have been demonstrated to be effective for the general population and for people with a mental illness with regards to quitting smoking. Strategies found to be successful in increasing clinician provision of referrals to such services in general healthcare settings have included financial incentives, performance feedback, clinician training, electronic prompts, and electronic referral processes. However, no research has examined whether these findings extend to increasing referrals by mental health clinicians.

The availability of practice support strategies to assist the delivery of preventive care was found to be limited in this study. The importance of such support strategies in facilitating the provision of preventive care is reinforced by the finding that the provision of optimal assessment and referral is 8 and 11 times more likely, respectively, when five or more support strategies are available. Although increasing the availability of
individual support strategies may have some impact on preventive care delivery, a multi-factorial approach that addresses multiple barriers is likely to be required to produce sustainable changes in clinician behaviour within mental health services. Research has yet to examine such an approach in mental health services. These strategies may be particularly pertinent given the historic lack of integration between care provision for physical and mental health care issues, such that physical health is generally not considered core business for mental health services. Considering this history, a significant shift in culture and work practices is likely to be required for preventive care to be optimally delivered in such settings.

LIMITATIONS
Although the study sample consisted of all community mental health clinicians from a variety of service types in metropolitan, regional and rural locations, the generalisability of study findings may be limited by the inclusion of only one district health service with a mandatory policy regarding preventive care provision. Further, the current study did not examine potential differences in estimated care provision and the reported availability of practice support strategies across professional disciplines, which may be an important avenue for future research. Finally, there was no direct observation of care or chart audits to confirm the self-reported findings.

CONCLUSIONS
Increasing the provision of preventive care that addresses the physical health risks of mental health service clients is an increasingly recognised step to redressing the chronic disease morbidity and mortality disparities experienced by such clients. In order to produce sustainable increases in the provision of such preventive care by mental health services, interventions to increase the availability of practice support strategies
may be integral to generating a change in workplace practice and culture regarding the provision of preventive care. Future research should examine the effectiveness of such an approach in increasing the delivery of preventive care in mental health services.
CHAPTER 3: Care provision to prevent chronic disease by community based mental health clinicians

REFERENCE LIST


78 Grol R. Knowledge transfer in mental health care: how do we bring evidence into

79 Dunbar L, Brandt T, Wheeler A, Harrison J. Barriers and solutions to implementing
metabolic risk assessment in a secondary mental health service. Australasian
MENTAL HEALTH
CLINICIAN ATTITUDES
TO THE PROVISION OF
PREVENTIVE CARE FOR
CHRONIC DISEASE RISK
BEHAVIOURS AND
ASSOCIATION WITH
CARE PROVISION

Chapter 4 is a paper that has been submitted for peer review:
Bartlem K, Bowman J, Ross K, Freund M, Wye P, McElwaine K,
Gillham K, Doherty E, Wolfenden L, Wiggers J. Mental health clinician
attitudes to the provision of preventive care for chronic disease risk
behaviours and association with care provision. BioMed Central
Psychiatry. [Under review]
BACKGROUND

People with a mental illness experience poorer physical health than the general population and markedly lower life expectancy as a consequence.\(^1,2\) A greater prevalence of chronic disease risk behaviours, including tobacco smoking, inadequate nutrition, harmful alcohol consumption, and physical inactivity contribute substantially to this health inequity.\(^1,2\) Although mental health services are recommended to provide care that seeks to modify such health risk behaviours,\(^3-7\) preventive care is not routinely provided.\(^8-11\) For example, in a study of 1,610 psychiatrists in the USA, 6% of clients were reported to be provided diet counselling, 4% exercise counselling, and 12.4% smoking-cessation counselling.\(^10\)

In general health services, factors suggested to impede the provision of preventive care have included attitudes that provision of such care is not an appropriate role of clinicians, perceptions that clients are not interested in changing their health risk behaviours, and a lack of clinician self-efficacy in providing preventive care (skills, knowledge, confidence and perceived effectiveness).\(^12,13\) Few studies have examined the impact of mental health clinician attitudes on the provision of care addressing client physical health risk behaviours.\(^14,15\) In one such study of the attitudes and practices of Canadian community mental health care workers towards smoking cessation care, a belief that there was sufficient time in a consultation to address tobacco use, that tobacco cessation care was a part of their role, greater confidence in providing smoking cessation care, and a perception of clients being interested in stopping smoking were positively associated with the provision of smoking cessation care.\(^14\) Similarly, a survey of United Kingdom psychiatric inpatient and community mental health nurses found that
positive attitudes towards the role of nurses in providing physical health care (including addressing health risk behaviours), and greater confidence in delivering such health care were positively associated with its delivery.\textsuperscript{15}

The prevalence of such attitudes have been reported to vary among mental health clinicians,\textsuperscript{16-20} with for example, support for the provision of smoking cessation care reported to vary between 43\% and 87\% across studies.\textsuperscript{16-18,20} Similarly variable findings (23\% and 77\%) have been reported regarding mental health clinician perception of client interest in receiving smoking cessation care.\textsuperscript{19,20} In the United States, 90\% of psychiatrists expressed confidence in their ability to advise clients of the risks of smoking, but only 34\% in referring clients to ongoing cessation care.\textsuperscript{19}

The attitudes of mental health clinicians to the provision of preventive care for behavioural risks other than smoking have been addressed in only a limited number of studies.\textsuperscript{15,21,22} Two studies in the United Kingdom have reported high levels of clinician support for providing such care regarding nutrition (78\%-92\%), physical activity (76\%-95\%), and alcohol consumption (83\%-92\%).\textsuperscript{15,21} With regard to clinician reported self-efficacy, approximately one quarter of inpatient nurses (23\%-38\%) reported a lack confidence regarding the provision of preventive care for nutrition, physical activity, and smoking.\textsuperscript{21} In a third qualitative study, Australian community mental health managers reported that their ‘core business’ was to assess and treat mental illness, with physical health related issues seen to be of ‘secondary importance’.\textsuperscript{22}
Given the limited scope and variable findings of studies regarding mental health clinician attitudes to the provision of care addressing the prevention of chronic disease risk behaviours, this study was undertaken to investigate:

i) the attitudes of a multi-disciplinary group of community mental health clinicians regarding their perceived role, perception of client interest, and perceived self-efficacy in the provision of such care,

ii) whether such attitudes differ by professional discipline, and

iii) the association between these attitudes and clinician provision of such care.

**METHODS**

**DESIGN AND SETTING**

A cross-sectional survey of clinicians working within community mental health services was undertaken across one local health district in New South Wales, Australia. The district has a population of approximately 850,000 residents across both urban and rural communities. Five months prior to the survey, the district introduced a policy requiring the provision of preventive care addressing chronic disease risk behaviours to all community mental health service clients. Ethics approval was obtained from the Hunter New England (approval No. 09/06/17/4.03) and University of Newcastle (approval No. H-2010-1116) Human Research Ethics Committees.

**SAMPLE**

Nineteen community mental health services in the district provided the following forms of care to adult clients: older person's care, psychiatric rehabilitation, early diagnosis, neuropsychiatry, comorbid substance use, eating disorders and borderline personality
disorder services. The services were staffed by multi-disciplinary teams including nurses, psychologists, psychiatrists, social workers, and occupational therapists. Care was provided to clients following either a psychiatric facility inpatient stay, a referral from a GP or other provider, or self-referral.

All clinicians in the 19 services were eligible to participate in the study if they had been employed by the service for at least three months and provided care to a minimum of 10 clients in the prior two months. Eligible clinicians were identified from an electronic administrative record system.

RECRUITMENT AND DATA COLLECTION

Eligible clinicians were mailed an information letter and subsequently telephoned during work hours to participate in a 20 minute computer assisted telephone interview. Interview items were based on the findings of previous studies of clinician reported barriers to the provision of preventive care in both general and mental health services,¹²,¹³,¹⁵-²¹ and reported preventive care provision.²⁴ The survey was pilot tested with community health clinicians and administered by trained interviewers.

MEASURES

Clinician characteristics

Information collected included: gender, age (years), Aboriginal and/or Torres Strait Islander origin, employment (full time, part time, casual, other), professional discipline (nurse, psychiatrist/other medical, psychologist, occupational therapist, social worker, other), and length of professional employment (years).
Provision of preventive care

Preventive care was assessed with respect to clinician provision of three elements of care: assessment, brief advice, and referral/arranging ongoing support\textsuperscript{25-27} regarding four health risk behaviours: smoking, inadequate nutrition, harmful alcohol consumption, and physical inactivity. Participants were asked to estimate the proportion (0-100\%, don’t know) of all new adult clients for whom they assessed smoking status; fruit and vegetable consumption; alcohol consumption; and physical activity levels in the past two months. For those patients assessed as being at-risk for each behaviour, participants were asked to estimate the proportion that they had advised to modify that risk behaviour, and the proportion to whom they provided referral/follow-up. Full details and findings of the assessment of preventive care delivery are reported in Bartlem et al (2014).\textsuperscript{11}

Clinician attitudes regarding delivery of preventive care

Five-point Likert scale items (strongly agree to strongly disagree) were used to assess clinician attitudes regarding:

\textit{Perceived role in provision of preventive care:}
level of agreement with five statements regarding mental health clinicians’ role in providing preventive care. [Table 4.1]

\textit{Perception of client interest in modifying health risk behaviours:}
level of agreement with a statement addressing perceived client interest in improving their health risk behaviours. [Table 4.1]
Self-efficacy in providing preventive care:

level of agreement with four statements addressing perceived ability to provide preventive care for each of the four health risk behaviours. [Table 4.2]

STATISTICAL ANALYSIS

Analyses were conducted with SPSS V19 and SAS analysis package (SAS, V9.3). Responses to all attitudinal items were collapsed into two categories: either strongly agree/agree or unsure/disagree/strongly disagree. For each self-efficacy item, an ‘all behaviours’ variable was calculated to reflect responses regarding perceived ability to provide care for all four of the health risk behaviours. Responses to each preventive care provision item were condensed to reflect the proportions of clinicians who provided care to 0-79% of clients (including responses of ‘don’t know’), and clinicians who provided care to 80-100% of clients. For each element of care, variables were calculated to examine care provided to 80% or more of clients for all behaviours combined ('all behaviours'). Descriptive statistics were used to examine clinician characteristics, attitudes, and the provision of preventive care.

Attitudinal differences by professional discipline

To examine whether reported attitudes differed by professional discipline (nurse [reference group]; allied health: psychologist, social work, occupational therapy; psychiatrist/other medical), separate binomial regression analyses were undertaken for each attitudinal item (10 models). For items regarding self-efficacy, regression analyses were conducted for the 'all behaviours' variable only.
Association between clinician attitudes and provision of preventive care

Chi-squared analyses were initially undertaken to examine the association between each clinician attitude (agree/strongly agree versus unsure/disagree/strongly disagree) and the provision of each form of care (0-79% versus 80-100%). Attitudinal items found to be associated with each form of care at \( p < .25^{29} \) were entered into separate logistic regression models for each care outcome, using a backwards stepwise process until all variables in the model remained significant (15 models) \( (p < .05) \). The logistic regression models controlled for the effects of clinician age, gender, length of professional employment, remoteness of service, and professional discipline.

RESULTS

CLINICIAN CHARACTERISTICS

Of 195 identified clinicians, 170 (87.2%) were eligible to participate. Of these, 151 (88.9%) completed the survey. The majority of participants were female (58.3%), aged between 20-49 years (56.7%) and not of Aboriginal or Torres Strait Islander origin (96.7%). Most participants were registered nurses (42.4%; allied health 35.8%; psychiatrist/other medical 21.9%), employed in full time work (71.5%) and reported working in their profession for over five years (87.5%).

PROVISION OF PREVENTIVE CARE

The proportion of clinicians who reported providing preventive care to 80-100% of their clients ranged from 13.2% (fruit and vegetable consumption) to 89.4% (alcohol consumption) for assessment; 46.3% (fruit and vegetable consumption) to 80.1% (alcohol) for advice, and 22.5% (fruit and vegetable consumption) to 60.9% (alcohol) for referral. The following proportions of clinicians reported providing preventive care to
80-100% of clients for all four behaviours: 8.6% (assessment), 25.2% (advice), 9.9% (referral). For full findings refer to Bartlem et al (2014).11

ATTITUDES TOWARD PROVISION OF PREVENTIVE CARE

Perceived role in providing preventive care

Over 86% of participants reported that: care was part of their role, and that providing such care would not jeopardise the client-clinician relationship. Almost all (93%) reported that clients found it acceptable to discuss their health risk behaviours. One third of participants indicated that providing such care may detract from time available for delivery of acute care. [Table 4.1] Compared to nurses, psychiatrists and other medical practitioners were less likely to report that the provision of preventive care for all risk behaviours was part of their role (OR 0.2, \( p = 0.04 \)) and that providing preventive care for all behaviours left sufficient time to provide acute care (OR 0.4, \( p = 0.03 \)).

Perception of client interest in changing health risk behaviours

Less than half (47.7%) of all participants agreed or strongly agreed that clients were interested in improving their health risk behaviours. [Table 4.1] No differences in responses were identified between professional groups in terms of perceived client interest in modifying their health risk behaviours.
TABLE 4.1: Clinician reported role congruence and client interest in preventive care for all four behavioural health risks combined: %, n (agree/strongly agree)

<table>
<thead>
<tr>
<th>Attitudinal Item</th>
<th>%</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Role congruence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 My manager believes the provision of preventive care is important.</td>
<td>87.4%</td>
<td>132</td>
</tr>
<tr>
<td>2 It is part of my role to provide preventive care to clients.</td>
<td>90.7%</td>
<td>137</td>
</tr>
<tr>
<td>3 Addressing health risk behaviours won’t jeopardise my relationship with the client.</td>
<td>86.1%</td>
<td>130</td>
</tr>
<tr>
<td>4 Providing preventive care for health risk behaviours leaves me time to provide acute care.</td>
<td>66.2%</td>
<td>100</td>
</tr>
<tr>
<td>5 Clients find it acceptable for me to talk with them about their health risk behaviours.</td>
<td>92.7%</td>
<td>140</td>
</tr>
<tr>
<td><strong>Client interest</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Clients I see are interested in changing their health risk behaviours</td>
<td>47.7%</td>
<td>72</td>
</tr>
</tbody>
</table>

**Self-efficacy**

Over 88% of all participants agreed or strongly agreed that they had the confidence, knowledge and skills to provide preventive care for all four health risk behaviours, and 76% agreed or strongly agreed that clients would change all of their behaviours in response to such care. [Table 4.2] Over 72% of participants agreed or strongly agreed that referral services were available to which they could refer clients for all behaviours, with referral services for nutrition and physical inactivity seen to be the least available. No differences were identified between professions regarding reported self-efficacy in providing preventive care for all four risk behaviours.
Association between clinician attitudes and provision of preventive care

No attitudinal items were significantly associated with the provision of assessment for any of the four behaviours. Clinicians with a positive attitude towards their role in providing preventive care were more likely to provide advice regarding smoking (OR 6.1), fruit and/or vegetable consumption (OR 5.5), and physical inactivity (OR 3.6). Those who thought clients were interested in changing their health risk behaviours were more likely to provide advice for fruit and/or vegetable consumption (OR 2.2). Clinicians who reported that clients find it acceptable to talk with them about their health risk behaviours were less likely to provide advice for smoking (OR 0.2) and all four behaviours (OR 0.2). [Table 4.3]

The only referral outcome associated with an attitudinal item was alcohol. Clinicians who thought that addressing health behaviours wouldn’t jeopardise their relationship with their clients were three times more likely to provide a referral/follow-up for alcohol consumption (OR 3.2). [Table 4.3]
### TABLE 4.2: Clinician reported self-efficacy regarding the provision of preventive care for four health behaviour risks: %, n (agree/strongly agree)

<table>
<thead>
<tr>
<th>Attitudinal Item</th>
<th>%</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. I feel confident to talk with clients about their health risk behaviours</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking</td>
<td>96.7%</td>
<td>146</td>
</tr>
<tr>
<td>Inadequate nutrition</td>
<td>96.0%</td>
<td>145</td>
</tr>
<tr>
<td>Alcohol</td>
<td>97.4%</td>
<td>147</td>
</tr>
<tr>
<td>Physical inactivity</td>
<td>98.0%</td>
<td>148</td>
</tr>
<tr>
<td>All behaviours&lt;sup&gt;a&lt;/sup&gt;</td>
<td>92.7%</td>
<td>140</td>
</tr>
<tr>
<td><strong>2. I have the knowledge and skills to provide preventive care to clients</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>regarding health risk behaviours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking</td>
<td>95.4%</td>
<td>144</td>
</tr>
<tr>
<td>Inadequate nutrition</td>
<td>90.1%</td>
<td>136</td>
</tr>
<tr>
<td>Alcohol</td>
<td>93.4%</td>
<td>141</td>
</tr>
<tr>
<td>Physical inactivity</td>
<td>95.4%</td>
<td>144</td>
</tr>
<tr>
<td>All behaviours&lt;sup&gt;a&lt;/sup&gt;</td>
<td>88.1%</td>
<td>133</td>
</tr>
<tr>
<td><strong>3. There are services to which I can refer clients to change their health risk</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>behaviours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking</td>
<td>91.4%</td>
<td>138</td>
</tr>
<tr>
<td>Inadequate nutrition</td>
<td>82.1%</td>
<td>124</td>
</tr>
<tr>
<td>Alcohol</td>
<td>92.7%</td>
<td>140</td>
</tr>
<tr>
<td>Physical inactivity</td>
<td>80.1%</td>
<td>121</td>
</tr>
<tr>
<td>All behaviours&lt;sup&gt;a&lt;/sup&gt;</td>
<td>72.2%</td>
<td>109</td>
</tr>
<tr>
<td><strong>4. Clients will change their health risk behaviours because of the care I</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>provide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking</td>
<td>86.1%</td>
<td>130</td>
</tr>
<tr>
<td>Inadequate nutrition</td>
<td>86.8%</td>
<td>131</td>
</tr>
<tr>
<td>Alcohol</td>
<td>88.1%</td>
<td>133</td>
</tr>
<tr>
<td>Physical inactivity</td>
<td>90.7%</td>
<td>137</td>
</tr>
<tr>
<td>All behaviours&lt;sup&gt;a&lt;/sup&gt;</td>
<td>76.2%</td>
<td>115</td>
</tr>
</tbody>
</table>

<sup>a</sup> All behaviours variable reflects clinicians who responded 'agree' or 'strongly agree' to the item for all four health risk behaviours.
### TABLE 4.3: Association between clinician attitudes and the provision of preventive care to 80-100% of clients\(^a,b\)

<table>
<thead>
<tr>
<th>PREDICTOR(^c)</th>
<th>B</th>
<th>SE</th>
<th>OR</th>
<th>95% CI</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Advice to 80%-100% of at-risk clients</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is part of my role to provide preventive care to clients</td>
<td>1.8</td>
<td>0.7</td>
<td>6.1</td>
<td>1.5 24.8</td>
<td>.01</td>
</tr>
<tr>
<td>Clients find it acceptable for me to talk with them about their health</td>
<td>-1.8</td>
<td>0.9</td>
<td>0.2</td>
<td>0.03 0.9</td>
<td>.03</td>
</tr>
<tr>
<td>risk behaviours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fruit and/or vegetable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is part of my role to provide preventive care to clients</td>
<td>1.7</td>
<td>0.8</td>
<td>5.5</td>
<td>1.1 26.8</td>
<td>.04</td>
</tr>
<tr>
<td>Clients find it acceptable for me to talk with them about their health</td>
<td>0.8</td>
<td>0.4</td>
<td>2.2</td>
<td>1.1 4.5</td>
<td>.03</td>
</tr>
<tr>
<td>risk behaviours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical activity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is part of my role to provide preventive care to clients</td>
<td>1.3</td>
<td>0.6</td>
<td>3.6</td>
<td>1.1 12.4</td>
<td>.04</td>
</tr>
<tr>
<td>All behaviours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is part of my role to provide preventive care to clients</td>
<td>1.3</td>
<td>0.6</td>
<td>3.6</td>
<td>1.1 12.4</td>
<td>.04</td>
</tr>
<tr>
<td>Clients find it acceptable for me to talk with them about their health</td>
<td>-1.7</td>
<td>0.7</td>
<td>0.2</td>
<td>0.04 0.7</td>
<td>.01</td>
</tr>
<tr>
<td>risk behaviours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Referral to 80%-100% of at-risk clients</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Addressing health behaviours won’t jeopardise my relationship with the client</td>
<td>1.2</td>
<td>0.5</td>
<td>3.2</td>
<td>1.2 9.0</td>
<td>.03</td>
</tr>
</tbody>
</table>

\(^a\) Logistic regression models adjust for clinician age, gender, length of professional employment, remoteness of service, and professional discipline

\(^b\) Final logistic regression models unable to be calculated for fruit and/or vegetable assessment and all behaviours assessment as there were zero observations which provided care to 80-100% of clients and who responded ‘unsure/disagree/strongly disagree’ to the attitudinal items entered

\(^c\) The following outcomes had no significant associations with attitudinal variables hence are not presented in the table: assessment: smoking, fruit and/or vegetable, alcohol, physical activity, all behaviours; advice: alcohol; referral: smoking, fruit and/or vegetable, physical activity, all behaviours
DISCUSSION

This study found a substantive majority of community mental health clinicians considered that the provision of care to prevent four chronic disease health risk behaviours was congruent with their role, and that they had sufficient knowledge, skills and resources to provide such care. Notwithstanding these positive findings, up to a third of clinicians considered that the provision of such care might negatively impact on delivery of acute care, one fifth were not aware of referral services for inadequate nutrition and physical inactivity, and more than half did not believe their clients were interested in changing their health risk behaviours. For the majority of attitudes, no differences were evident between professional disciplines. Positive associations with some forms of preventive care provision were identified where clinicians believed: providing preventive care was part of their role; that clients were interested in changing their health behaviours; and that addressing health risk behaviours would not jeopardise the client-clinician relationship. Strategies that strengthen these perceptions are required if the benefits of preventive care are to be maximised for all clients.

The finding that approximately half of participants reported that clients were not interested in changing their health risk behaviours is consistent with the findings of previous research.\textsuperscript{17,19,30} For example, Australian psychiatric inpatient nurses have reported that their decision to provide smoking cessation care is primarily influenced by perceived patient receptivity.\textsuperscript{17} Such selectivity in care provision contradicts care guidelines regarding provision of preventive care on a universal basis, and suggests additional strategies such as prompts and reminders may be required to facilitate clinician provision of preventive care to all clients.\textsuperscript{31} Other studies have indicated such views of clinicians may be unfounded, with people with a mental illness being shown to
be receptive to receiving preventive care and interested in improving their health risk behaviours.\textsuperscript{32-36} Training and the dissemination of education resources has been found to positively impact primary care nurses’ misconceptions regarding physical health care for clients with a mental illness,\textsuperscript{37} and the current clinician misperceptions suggest a need for additional strategies to address possible deficits in clinician understanding of client needs in this regard.

Nearly one quarter of clinicians surveyed reported that the provision of preventive care impacted on the time available for the delivery of acute care, a perception commonly reported in studies across health services generally\textsuperscript{12,13} and mental health services specifically.\textsuperscript{15,18,19} To address such concerns, models of preventive care provision have been developed to limit the amount of clinical consultation time required for its delivery. For example, the recommended 5A’s behavioural counselling framework\textsuperscript{38} has been reduced to include only three elements of care: ‘assess, advise, and refer’\textsuperscript{25-27} thereby reducing time demands on the clinician during the consultation.\textsuperscript{26,39} Similarly, practice aids such as prompts, decision-aids, recording and automated referral protocols have been demonstrated to be both effective in enhancing the provision of preventive care and in reducing the time required of clinicians.\textsuperscript{31,40,41}

Recommended models of preventive care provision emphasise the importance of referral and/or follow up care.\textsuperscript{25-27} In the current study, approximately one quarter of clinicians reported a lack of services to refer their clients to for behaviour change support; a finding that is reflective of previous research with psychiatrists.\textsuperscript{19} Such a finding contrasts with the ready availability of free evidence-based health risk behaviour telephone services in the study area: Quitline for smoking cessation
Despite the availability of such services and mechanisms to enable clinician referral of clients, research indicates under-referral to such services by clinicians. Clinician training may serve to increase awareness and utilisation of specialist prevention referral options.

Few differences in attitudes regarding the provision of preventive care were identified between professional disciplines. However, psychiatrists were least likely to hold positive attitudes towards such care provision. Differences between study settings may account for the contrast between these findings and those from a UK inpatient setting where no differences between medical practitioners and non-medical clinicians were identified. The current findings suggest that psychiatrists working in community mental health may benefit from training and additional evidence-based tools to support the development of more positive attitudes, given the importance of their leadership role in mental health services.

A number of attitudes were positively associated with some forms of preventive care, including the belief that providing preventive care was congruent with their role, that clients were interested in changing their health behaviours, and that addressing health risk behaviours would not jeopardise the client-clinician relationship. These results are consistent with previous research undertaken with Canadian community mental health care workers and UK psychiatric inpatient nurses, whereby attitudes regarding role congruence, confidence in care provision, and client interest were associated with the provision of preventive care. Training and educational resources have been found to
improve clinician attitudes and confidence towards providing physical health care to people with a mental illness,\textsuperscript{37,44} and the current results suggest that such strategies addressing negative attitudes may be required to increase preventive care provision.

Despite the study findings suggesting that the large majority of community mental health clinicians are positively predisposed to providing preventive care, the prevalence of such care provision has been reported to be sub-optimal.\textsuperscript{8,9,11,42} Such a contradiction suggests that a gap exists between clinician attitudes and their professional practice; a gap that requires the implementation of additional practice change strategies if the intended benefits of international, national, and health service level preventive care guidelines\textsuperscript{23,45,46} are to be realised.

Research evidence supports the use of a variety of strategies in facilitating clinical practice change, including clinical leadership and consensus, enabling systems and procedures, training and support, and monitoring and feedback.\textsuperscript{47-50} It remains to be tested whether such organisational factors can increase the provision of preventive care within the community mental health setting. The study was undertaken within just one local health district within one state in Australia. Hence, the generalisability of findings to other regions, jurisdictions or nations is unknown.

This study is among the first to examine the attitudes of multidisciplinary mental health clinicians regarding the delivery of preventive care with a focus on multiple health risk behaviours. It provides a basis for future research regarding strategies to improve negative attitudes and translate the positive attitudes to improved client care.
REFERENCE LIST


CHAPTER 4: Mental health clinician attitudes to the provision of preventive care for chronic disease risk behaviours and association with care provision


37 Hardy S. Training practice nurses to improve the physical health of patients with severe mental illness: effects on beliefs and attitudes. *International Journal of Mental Health Nursing*. 2012;21(3):259-65.


ACCEPTABILITY AND RECEIPT OF PREVENTIVE CARE FOR CHRONIC DISEASE HEALTH RISK BEHAVIOURS REPORTED BY CLIENTS OF COMMUNITY MENTAL HEALTH SERVICES

Chapter 5 is a published paper:
BACKGROUND

People with a mental illness have higher rates of chronic disease morbidity and mortality and a reduced life expectancy compared to the general population. Whilst the causes underlying such disparities are varied, a greater prevalence of modifiable health risk behaviours such as smoking, harmful alcohol consumption, inadequate nutrition, and physical inactivity is a significant contributor. Mental health care guidelines recommend the provision of preventive care to modify such client risk behaviours. Such care has been recommended to include the ‘2As and R model’ as a minimum; assessment of clients’ health risk behaviours, and for clients with risks, the provision of advice and referral to behaviour change services.

Limited research has examined the provision of preventive care for chronic disease health risk behaviours by mental health services, with such research predominantly focusing on smoking cessation care. Four identified studies within the past decade have examined the provision of care for more than one of these health risk behaviours. However, most have been limited to examining a single element of preventive care. One study was located that addressed the provision of three elements of preventive care across four behaviours (smoking, harmful alcohol consumption, inadequate nutrition, and physical inactivity). The study, which surveyed clinical staff within Australian community mental health services found that the proportion of clinicians who reported providing care to the majority (≥80%) of their clients for each of the four behaviours ranged from 13% to 89% for assessment, 46% to 80% for advice, and 23% to 61% for any type of referral. Care provision was consistently lowest for nutrition and, for all behaviours, referral or follow-up was least likely to be provided.
An important limitation of studies that have examined the provision of preventive care to address a range of health risk behaviours in mental health services over the last decade is their use of either staff report\textsuperscript{28-30} or medical record audit.\textsuperscript{27} No studies, to our knowledge, have utilised client-reported receipt of preventive care despite this being suggested as a more appropriate measure.\textsuperscript{31}

Previous research undertaken in the mental health setting has identified a number of clinical and client characteristics are associated with greater provision of preventive care including: rural as opposed to urban location,\textsuperscript{32,33} a consultation of longer duration,\textsuperscript{32} being seen by a nurse or allied health clinician as opposed to a psychiatrist,\textsuperscript{32} diagnoses of diabetes, hypertension, obesity,\textsuperscript{32,33} asthma or other respiratory disorders,\textsuperscript{24} and psychiatric diagnoses including bipolar disorder,\textsuperscript{33} and some substance use disorders.\textsuperscript{24}

A growing body of evidence suggests that mental health service clients are interested in improving their health risk behaviours,\textsuperscript{34-40} and suggests that mental health clients are receptive to smoking cessation care\textsuperscript{41} and care to increase physical activity.\textsuperscript{34} However, client acceptability towards preventive care for alcohol consumption or inadequate nutrition, or specific elements of preventive care has not been investigated. In the context of mental health clinicians perceiving that lack of client acceptability constitutes a barrier to their provision of preventive care,\textsuperscript{42-44} there is a need for more research to examine client acceptability across a broader set of risk behaviours and elements of preventive care.
A study was undertaken within a network of Australian community mental health services to examine: a) client reported acceptability of receiving assessment, brief advice and referral/follow-up from community mental health clinicians for each of four health risk behaviours; b) client reported receipt of such forms of care for each of the four behaviours; and c) associations between client diagnosis and number of clinical appointments, and reported receipt of preventive care addressing multiple chronic disease health risk behaviours.

**METHODS**

**DESIGN**

A cross-sectional survey of community mental health service clients was undertaken (December 2011 to November 2012 inclusive) in one local health district in New South Wales, Australia. Since 2010, the district has had a policy requiring community mental health clinicians to provide routine preventive care to all clients for the four behavioural risks following the 2As and R model. At the time of the study, no specific training regarding the policy had been provided to clinicians.45

Ethical approval was obtained from the Hunter New England Human Research Ethics Committee (approval No. 09/06/17/4.03) and the University of Newcastle Human Research Ethics Committee (approval No. H-2010-1116).
PARTICIPANTS AND RECRUITMENT

Community mental health services

In Australia, public community mental health services provide ambulatory care to approximately 350,000 clients each year.46 Within the study area, all 12 community-based mental health services providing care to adult clients were invited to participate. Such services receive over 7,000 new clients per annum, and provide general adult mental health care, and care to more specialised populations including older persons, psychiatric rehabilitation, early diagnosis, comorbid substance use, eating disorders and borderline personality disorder.

Community mental health clients

Clients attending any of the 12 eligible services were initially eligible if, based on electronic medical record data, they: were at least 18 years of age, had attended at least one face-to-face appointment at an eligible service during the previous two weeks, had not previously been selected to participate, and had not been identified by their clinician as inappropriate to contact.

Over 12 months, a random sample of approximately 22 such clients (approximately 5% of weekly eligible clients) was selected weekly from the electronic medical records system using the survey select procedure in SAS V9.3. Selected clients were mailed an information letter and telephoned by trained interviewers to further determine eligibility including: English speaking, not living in an aged care facility or gaol, and being physically and mentally capable of responding to the survey items. Eligible consenting clients completed a computer assisted telephone interview survey at that time or another suitable time.
MEASURES

Client descriptors
Clients reported their: Aboriginality, highest education level, employment status, marital status, and psychiatric or other medical conditions for which they had received medical attention or taken medication within the previous two months. Age, gender, postcode, service attended, and number of community mental health appointments within the last 12 months were obtained from electronic medical records for consenters and non-consenters.

Client health risk behaviours
Clients reported the following during the month prior to seeing their community mental health clinician: tobacco smoking,\(^{47}\) quantity and frequency of alcohol use,\(^{48}\) fruit and vegetable consumption,\(^{49}\) and physical activity.\(^{50}\) Survey items are based on validated items from recommended assessment tools\(^{51-54}\) and have been used previously in community surveys.\(^{55}\) Clients’ risk status was based on Australian national guidelines.\(^{47-50}\) [Table 5.1]

Acceptability of preventive care
Clients were asked to indicate the acceptability of clinician assessment for each behaviour (strongly disagree to strongly agree). For example, “it is acceptable for ‘service’ to ask you if you smoke any tobacco products”. Clients who were identified to be at-risk for one or more behaviours were asked to similarly indicate the acceptability of clinicians providing brief advice, and referral for such behaviours.
Receipt of preventive care

Client receipt of assessment, brief advice, and referral/follow-up was assessed (yes, no, don’t know).\textsuperscript{17-20} Clients were asked to report whether, during their community mental health appointments, the clinician assessed their smoking status, alcohol consumption, fruit and vegetable intake, and physical activity. Clients classified as at-risk and who reported having received assessment for that behaviour, were asked whether their clinician advised them to modify their behaviour. Clients classified as at-risk and who reported having received assessment for that behaviour, were asked whether their clinician: spoke to them about or offered to arrange referral to the NSW Quitline (for smoking; [www.icanquit.com.au/further-resources/quitline](http://www.icanquit.com.au/further-resources/quitline)), or the NSW Get Healthy Coaching and Information Service (for inadequate fruit and/or vegetable intake or physical inactivity; [www.gethealthynsw.com.au](http://www.gethealthynsw.com.au)). No equivalent free, government funded telephone helpline was available for reducing alcohol consumption. Such clients were further asked whether they were advised to see their general practitioner or Aboriginal Medical Service (AMS), or other services (e.g. dietician, support groups, Alcoholics Anonymous).

ANALYSES

Analyses were undertaken with SAS V9.3. Descriptive statistics were used to describe the sample characteristics and client acceptability of each element of care for each health risk behaviour. Residential postcode was used to calculate each client's geographic remoteness\textsuperscript{56} and socio-economic index of disadvantage.\textsuperscript{57} Condensed response categories were created for: age, marital status, highest education level, geographic remoteness, index of disadvantage, and number of appointments in the previous 12 months. [Table 5.1] Chi-squared analysis was used to compare consenters and non-consenters for age, gender, remoteness and number of appointments. For chi
square and regression analyses, variables were dichotomised (less than high school versus completed high school or greater).

For each behaviour a variable was created to reflect whether at-risk clients received any type of referral/follow-up. For clients who reported being at-risk and being assessed, a ‘complete care’ variable was created for receipt of both advice and referral/follow-up for each behaviour (yes, no).

Descriptive statistics were used to describe client receipt of assessment (yes versus no, don’t know) for each behaviour, and to describe client receipt of advice, each type of referral, and ‘complete care’ for each behaviour for which a client was at-risk and reported being assessed.

For each of the four behaviours, chi-squared analysis was used to examine the association between client diagnostic characteristics and the number of appointments in the past 12 months, with receipt of assessment and with ‘complete care’. Variables associated at $p \leq .25$ were entered into backward stepwise logistic regression models to examine their association with having received assessment, and having received ‘complete care’ for each of the four behaviours. [supplementary table: see Appendix 6]

The choice of this $p$-value follows recommendations that more traditional levels of $p < .05$ often fail to identify important and clinically relevant variables. Logistic regression models adjusted for age, gender, employment status, marital status, education, Aboriginality and remoteness, in order to examine whether care receipt was independently associated with diagnostic characteristics and the number of appointments in the past 12 months.
TABLE 5.1: Description of sample (N=558)

<table>
<thead>
<tr>
<th>Demographic</th>
<th>%</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>47%</td>
<td>262</td>
</tr>
<tr>
<td>Employed</td>
<td>23%</td>
<td>126</td>
</tr>
<tr>
<td>Aboriginal and/or Torres Strait Islander</td>
<td>5%</td>
<td>27</td>
</tr>
<tr>
<td>Age (Years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-34</td>
<td>40%</td>
<td>222</td>
</tr>
<tr>
<td>35-54</td>
<td>41%</td>
<td>229</td>
</tr>
<tr>
<td>55 and over</td>
<td>19%</td>
<td>107</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married/living together in a relationship</td>
<td>25%</td>
<td>138</td>
</tr>
<tr>
<td>Previously or never married</td>
<td>75%</td>
<td>420</td>
</tr>
<tr>
<td>Highest education level completed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some high school, or less</td>
<td>46%</td>
<td>258</td>
</tr>
<tr>
<td>Completed high school or equivalent</td>
<td>19%</td>
<td>103</td>
</tr>
<tr>
<td>Completed technical certificate or diploma</td>
<td>24%</td>
<td>136</td>
</tr>
<tr>
<td>Completed University or College degree, or higher</td>
<td>11%</td>
<td>61</td>
</tr>
<tr>
<td>Psychiatric Diagnosisb,c (N=520)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>63%</td>
<td>326</td>
</tr>
<tr>
<td>Bi-polar disorder</td>
<td>22%</td>
<td>115</td>
</tr>
<tr>
<td>Schizophrenia/other psychotic illness</td>
<td>31%</td>
<td>163</td>
</tr>
<tr>
<td>Anxiety disorder</td>
<td>39%</td>
<td>205</td>
</tr>
<tr>
<td>Other mental illnessc</td>
<td>3%</td>
<td>14</td>
</tr>
<tr>
<td>Number of CMH appointments in previous 12 monthsd</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-2</td>
<td>27%</td>
<td>151</td>
</tr>
<tr>
<td>3-11</td>
<td>32%</td>
<td>178</td>
</tr>
<tr>
<td>12+</td>
<td>41%</td>
<td>229</td>
</tr>
<tr>
<td>Geographic remotenessb,f (N=555)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major cities</td>
<td>75%</td>
<td>418</td>
</tr>
<tr>
<td>Regional/rural</td>
<td>25%</td>
<td>137</td>
</tr>
</tbody>
</table>
CHAPTER 5: Acceptability and receipt of preventive care for chronic disease health risk behaviours reported by clients of community mental health services

<table>
<thead>
<tr>
<th>Demographic</th>
<th>%</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Index of disadvantage</strong> <em>(N=555)</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowest tertile</td>
<td>40%</td>
<td>222</td>
</tr>
<tr>
<td>Middle tertile</td>
<td>57%</td>
<td>314</td>
</tr>
<tr>
<td>Highest tertile</td>
<td>3%</td>
<td>19</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Prevalence of risk</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking</td>
<td>51%</td>
<td>283</td>
</tr>
<tr>
<td>Harmful alcohol consumption</td>
<td>43%</td>
<td>241</td>
</tr>
<tr>
<td>Inadequate fruit and/or vegetable consumption</td>
<td>87%</td>
<td>483</td>
</tr>
<tr>
<td>Inadequate physical activity</td>
<td>47%</td>
<td>261</td>
</tr>
</tbody>
</table>

a Range 18-85 (m=40.6, sd=15.1)
b Numbers in diagnostic categories do not add to total participant numbers as participants could elect multiple diagnoses.
Data unavailable for 38 participants, due to changes to the interview script during the study period. 1 participant refused to answer, and 24 participants reported no psychiatric conditions for which they were receiving care.
c Other mental illness includes participants who responded 'other' to the question regarding psychiatric diagnoses, and who did not also respond to a main diagnostic category. Includes eating disorders, attention deficit disorder, personality disorders and 'unsure' responses.
d Variable categorised to reflect clients with occasional appointments (1-2), less than monthly appointments (3-11), and monthly or more appointments (12+). Range=1-207, (m=15.4, sd=20.7).
e Data unavailable for 3 participants with no fixed home address.
f Uses the Accessibility/Remoteness Index of Australia (ARIA) to measure the accessibility of a service centre (defined as an urban centre with a population equal to or greater than 5,000) from the client's residence. Major city, ARIA ≤ .2; regional or remote, ARIA > .2.56.
g Smoking any tobacco products.47
h Consuming more than two standard drinks on average per day, or more than four standard drinks on any one occasion.48
i Consuming less than two serves of fruit or five serves of vegetables per day.49
j Engaging in less than 30 minutes of physical activity on at least five days of the week.50

RESULTS

PARTICIPANTS

All 12 community mental health services participated. Of 1106 clients selected to participate, 903 (82%) were contactable, with 129 (14%) of these identified as ineligible for participation. Of the remaining 774 clients, 558 (72%) participated in the interview. Female clients were more likely to participate than males (76% vs 68%, p=.009). There were no other significant differences between consenters and non-consenters. Client descriptors are reported in Table 5.1.
ACCEPTABILITY OF PREVENTIVE CARE

Clients consistently reported that preventive care provision was highly acceptable. [Table 5.2] Acceptability of assessment ranged from 90% for fruit and/or vegetable consumption to 97% for alcohol consumption; acceptability of receiving advice ranged from 86% for smoking to 94% for physical inactivity; and acceptability of receiving referral ranged from 88% for inadequate fruit and/or vegetable consumption to 91% for harmful alcohol consumption.

RECEIPT OF PREVENTIVE CARE

Assessment

The majority of participants reported being assessed for smoking (73%) and alcohol consumption (76%). Over half were assessed for physical activity (57%), and a quarter for fruit and/or vegetable intake (26%). [Table 5.3]

Advice

Of those participants who were at-risk and reported receiving assessment, a majority received brief advice to quit smoking (79%), reduce their alcohol consumption (73%), increase their fruit and/or vegetable consumption (69%), and increase their physical activity (85%). [Table 5.3]

Referral/Follow-up

Receipt of each type of referral/follow-up was low. Being spoken to about telephone helplines ranged from 12% (physical inactivity) to 41% (smoking), whilst receiving an offer to arrange a referral to a helpline ranged from 1% (fruit and/or vegetable consumption) to 7% (smoking). Receipt of advice to speak to their general practitioner or AMS ranged from 2% (fruit and/or vegetable consumption and physical inactivity) to
13% (smoking), and being advised to use any other type of support ranged from 29% (smoking) to 41% (physical inactivity). [Table 5.3]

**Complete care**

For each of the four risk behaviours less than half of those participants who were at-risk and reported being assessed received both advice, and any referral/follow-up, ranging from 37% (harmful alcohol consumption or inadequate fruit and/or vegetable consumption) to 48% (smoking). [Table 5.3]

**ASSOCIATIONS WITH RECEIPT OF PREVENTIVE CARE**

Participants were less likely to be assessed for alcohol consumption if they had a diagnosis of schizophrenia (odds ratio [OR]=.63). Clients were more likely to be assessed for physical activity if they had more than two appointments in the past 12 months (3–11 appointments, OR=2.43; ≥12 appointments, OR=3.05). No significant associations were identified for assessment of smoking or consumption of fruits and vegetables. [Table 5.4]

If clients smoked, they were more likely to receive complete care when they had three to 11 appointments (OR=2.28) or 12 or more appointments (OR=2.88) in the past 12 months. Complete care for alcohol was more likely when a client had 12 or more appointments in the past 12 months (OR=3.19) and less likely if the client had a diagnosis of schizophrenia (OR=.21). Complete care for inadequate fruit or vegetable consumption was more likely when participants had diabetes (OR=4.22) or a respiratory condition (OR=3.32). Complete care for physical inactivity was more likely when a participant had diabetes (OR=4.59). [Table 5.4]
TABLE 5.2: Client reported acceptability of receiving preventive care, by health behaviour and element of preventive carea

<table>
<thead>
<tr>
<th>Element of Preventive Care</th>
<th>Smoking</th>
<th></th>
<th></th>
<th>Harmful Alcohol Consumption</th>
<th></th>
<th></th>
<th>Inadequate Fruit and/or Vegetable Consumption</th>
<th></th>
<th></th>
<th>Inadequate Physical Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>n</td>
<td>%</td>
<td>N</td>
<td>n</td>
<td>%</td>
<td>N</td>
<td>n</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Assessment</td>
<td>558</td>
<td>534</td>
<td>96%</td>
<td>558</td>
<td>543</td>
<td>97%</td>
<td>557</td>
<td>500</td>
<td>90%</td>
<td>558</td>
</tr>
<tr>
<td>Brief Adviceb</td>
<td>283</td>
<td>244</td>
<td>86%</td>
<td>241</td>
<td>224</td>
<td>93%</td>
<td>483</td>
<td>434</td>
<td>90%</td>
<td>261</td>
</tr>
<tr>
<td>Referralb</td>
<td>283</td>
<td>253</td>
<td>89%</td>
<td>241</td>
<td>219</td>
<td>91%</td>
<td>483</td>
<td>427</td>
<td>88%</td>
<td>261</td>
</tr>
</tbody>
</table>

a Clients agreed or strongly agreed that receipt of preventive care would be acceptable.

b Limited to clients who were classified as at risk for a behaviour
### TABLE 5.3: Proportions of clients who reported receipt of assessment for health risk behaviours, and reported receiving further care (brief advice, referral/follow-up) for behaviours for which they were at risk and assessed

<table>
<thead>
<tr>
<th>Element of Preventive Care</th>
<th>Smoking</th>
<th>Harmful Alcohol Consumption</th>
<th>Inadequate Fruit and/or Vegetable Consumption</th>
<th>Inadequate Physical Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total N</td>
<td>n</td>
<td>%</td>
<td>95% CI</td>
</tr>
<tr>
<td>Assessment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>558</td>
<td>406</td>
<td>73%</td>
<td>69.1-76.5</td>
</tr>
<tr>
<td>Brief Advice b, c</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>226</td>
<td>178</td>
<td>79%</td>
<td>73.4-84.1</td>
</tr>
<tr>
<td>Referral/Follow-up c</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spoken to about helpline</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>226</td>
<td>92</td>
<td>41%</td>
<td>34.3-47.2</td>
</tr>
<tr>
<td>Offered to arrange referral to helpline</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>226</td>
<td>16</td>
<td>7%</td>
<td>3.7-10.4</td>
</tr>
<tr>
<td>Advised to speak to general practitioner or AMS d</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>226</td>
<td>29</td>
<td>13%</td>
<td>8.4-17.2</td>
</tr>
<tr>
<td>Advised to use other support types</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>226</td>
<td>65</td>
<td>29%</td>
<td>22.8-34.7</td>
</tr>
<tr>
<td>Advised to use ANY referral/follow-up e</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>226</td>
<td>111</td>
<td>49%</td>
<td>42.0-55.7</td>
</tr>
<tr>
<td>Complete Care (advice and any referral/follow-up) b,c,e</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>226</td>
<td>108</td>
<td>48%</td>
<td>41.2-54.3</td>
</tr>
</tbody>
</table>

---

a Clients who responded ‘don’t know’ to care related items were categorised as not having received care
b Advice for smoking includes being advised to quit smoking, or being advised to use nicotine replacement therapy
c Limited to clients who were at-risk and reported being assessed
d AMS, Aboriginal Medical Service
e Any referral/follow-up includes: receiving information about a helpline, being offered a referral to a helpline, being advised to speak to a general practitioner or AMS, or being advised to use other types of support
### TABLE 5.4: Association between practice support strategies and optimal care provision for all behaviours combined

<table>
<thead>
<tr>
<th>OUTCOME AND BEHAVIOUR</th>
<th>PREDICTOR</th>
<th>B</th>
<th>SE</th>
<th>OR</th>
<th>95% CI</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assessment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking</td>
<td>None</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fruit and/or vegetable consumption</td>
<td>None</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Alcohol consumption</td>
<td>Schizophrenia&lt;sup&gt;b,c&lt;/sup&gt;</td>
<td>-0.47</td>
<td>0.24</td>
<td>0.63</td>
<td>0.40-0.99</td>
<td>.05</td>
</tr>
<tr>
<td>Physical activity</td>
<td>1-2 appointments in past 12 months (reference)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>&lt;.001</td>
</tr>
<tr>
<td></td>
<td>3-11 appointments in past 12 months</td>
<td>0.89</td>
<td>0.24</td>
<td>2.43</td>
<td>1.53-3.85</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>≥12 appointments in past 12 months</td>
<td>1.11</td>
<td>0.23</td>
<td>3.05</td>
<td>1.95-4.77</td>
<td>-</td>
</tr>
<tr>
<td><strong>Complete further care</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking</td>
<td>1-2 appointments in past 12 months (reference)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>3-11 appointments in past 12 months</td>
<td>0.82</td>
<td>0.39</td>
<td>2.28</td>
<td>1.07-4.86</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>≥12 appointments in past 12 months</td>
<td>1.06</td>
<td>0.36</td>
<td>2.88</td>
<td>1.41-5.90</td>
<td>-</td>
</tr>
<tr>
<td>Fruit and/or vegetable consumption</td>
<td>Diabetes&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1.44</td>
<td>0.63</td>
<td>4.22</td>
<td>1.23-14.43</td>
<td>.02</td>
</tr>
<tr>
<td></td>
<td>Respiratory&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1.20</td>
<td>0.57</td>
<td>3.32</td>
<td>1.08-10.18</td>
<td>.04</td>
</tr>
<tr>
<td>Alcohol consumption</td>
<td>Schizophrenia&lt;sup&gt;b,c&lt;/sup&gt;</td>
<td>-1.58</td>
<td>0.44</td>
<td>0.21</td>
<td>0.09-0.49</td>
<td>&lt;.001</td>
</tr>
<tr>
<td></td>
<td>1-2 appointments in past 12 months (reference)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>3-11 appointments in past 12 months</td>
<td>-0.35</td>
<td>0.48</td>
<td>0.70</td>
<td>0.28-1.80</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>≥12 appointments in past 12 months</td>
<td>1.16</td>
<td>0.42</td>
<td>3.19</td>
<td>1.40-7.30</td>
<td>-</td>
</tr>
<tr>
<td>Physical activity</td>
<td>Diabetes&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1.52</td>
<td>0.58</td>
<td>4.59</td>
<td>1.47-14.33</td>
<td>.009</td>
</tr>
</tbody>
</table>

<sup>a</sup> Logistic regression models adjust for client age, gender, employment status, highest education attained, Aboriginality, and remoteness
<sup>b</sup> 'Yes' versus 'no'
<sup>c</sup> Includes schizophrenia and other psychotic illness
DISCUSSION

This study is the first to examine mental health client reported acceptability and receipt of preventive care across multiple health behaviour risks. Preventive care was highly acceptable to clients across all behaviours and care elements. Receipt of preventive care was variable across behaviours and care elements, and was particularly low for inadequate fruit and/or vegetable consumption, receipt of referral/follow-up, and receipt of complete care. Factors identified as being positively associated with preventive care receipt were a greater number of appointments in the previous 12 months, a diagnosis of diabetes or a respiratory condition, and not having a diagnosis of schizophrenia.

The finding that the receipt of assessment, advice and referral for all risk behaviours was highly acceptable to clients is consistent with research regarding smoking and physical activity\(^{34,41}\) and extends previous findings to include acceptability for alcohol and nutrition, and for referral. Such findings also extend on research identifying that a significant proportion of mental health service clients are interested in changing their health risk behaviours\(^{34-40}\) suggesting that clinician beliefs regarding client non-receptivity to physical health care\(^{42,43,59}\) may be unfounded. The dissemination of training and educational resources has been reported to positively impact primary care nurses’ misconceptions regarding physical health care for clients with a mental illness\(^{60}\). The effectiveness of such strategies in reducing clinician misconceptions regarding client receptivity of preventive care and the impact on clinician provision of such care should be examined.

Despite high levels of acceptability, care receipt was low. The results are consistent with clinician reports of sub-optimal preventive care provision, where care was
particularly low for inadequate fruit and/or vegetable consumption, and referral across all behaviours.\textsuperscript{30} For each of the four behaviours, of those participants who were at-risk and reported receiving assessment, less than half were advised to use any type of referral/follow-up. Along with a perception that clients may not be receptive or interested, the low levels of referral may reflect poor communication between mental health and other health services,\textsuperscript{61,62} a perceived lack of referral options\textsuperscript{43,61,63,64} or other organisational barriers. Further research is warranted to better understand the barriers to care provision in this setting, in order to develop interventions to improve care.

For some behaviours and care elements, an association was identified between care receipt and a greater number of appointments in the previous 12 months, and a diagnosis of schizophrenia, diabetes or respiratory illness. Such findings suggest mental health clinicians are more likely to provide preventive care where they feel that time permits,\textsuperscript{28,44,61} or when it is clinically indicated.\textsuperscript{24,33} Given that people with schizophrenia are at highest risk of chronic disease morbidity and mortality\textsuperscript{65,66} and of experiencing a reduced life expectancy,\textsuperscript{1,3,67} the finding that clients with a diagnosis of schizophrenia were less likely to receive care for alcohol consumption suggests initiatives to increase the provision of such care for this client group are a particular priority. To maximise the benefits it is important to provide preventive care routinely to all clients. Approaches to care delivery which limit the time required of clinicians, including reduced models of care such as the ‘2As and R’ should be considered in the mental health setting.\textsuperscript{17-20} Further, systems changes such as information technology approaches to prompt preventive care delivery\textsuperscript{18,68} and the automation of referrals should be implemented to support clinicians.\textsuperscript{20,69}
The results should be interpreted in light of a number of limitations. Client reported receipt of preventive care in general health care settings has been acknowledged as more reliable than clinician reports. However, to the authors’ knowledge no studies have reported the validity of such measures in mental health settings specifically. The extent to which the receipt of such care in this study is either an over or under estimate of the care actually received is unknown. Participants were selected on the basis of having a community mental health appointment in the prior two weeks. As the survey questions addressed care without specification of timeframe the potential exists for some clients to have responded regarding the receipt of care over a longer timeframe. Subsequent analyses have indicated that over 80% of clients responded to this item in terms of their most recent appointments with the service. Diagnoses were self-reported by participants, hence may reflect self-diagnosis rather than health professional diagnosis. Lastly, although data were collected from a health district covering a large geographical area with metropolitan, regional, and rural communities, the ability for the findings to be generalised to other settings is unknown.

The current study has demonstrated that despite the receipt of preventive care for health behaviour risks being highly acceptable to clients, client reported receipt of such care during community mental health appointments is sub-optimal. Given the well-documented poor physical health within this population, and the high prevalence of health risk behaviours, it is imperative that mental health services provide preventive care routinely. Strategies to increase the delivery of routine preventive care within mental health services, such as information technology approaches and automated referrals, are likely required.
REFERENCE LIST


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CHAPTER 5: Acceptability and receipt of preventive care for chronic disease health risk behaviors reported by clients of community mental health services


EVALUATING THE EFFECTIVENESS OF A CLINICAL PRACTICE CHANGE INTERVENTION IN INCREASING CLINICIAN PROVISION OF PREVENTIVE CARE IN A NETWORK OF COMMUNITY-BASED MENTAL HEALTH SERVICES: A STUDY PROTOCOL OF A NON-RANDOMISED, MULTIPLE BASELINE TRIAL

Chapter 6 is a published paper:
BACKGROUND

Modifiable health risk behaviours are the largest contributor toward the burden of chronic disease morbidity and mortality in Australia and internationally.\(^1\)\(^2\) In particular, smoking, inadequate nutrition, harmful alcohol consumption, and inadequate physical activity, are the primary behavioural risks for the most common causes of preventable morbidity and mortality.\(^3\)\(^4\) While the prevalence of such health risk behaviours is reported to be high among the general population,\(^2\)\(^5\) the prevalence is generally higher still among people with a mental illness.\(^6\)\(^8\)

The provision of preventive care by health services, including mental health services, has been suggested as an important opportunity to address the burden of chronic disease.\(^9\)\(^-\)\(^1\)\(^2\) Such preventive care has been recommended to follow the 5A’s model,\(^1\)\(^3\) however, given time constraints and competing clinical priorities, an abbreviated model of ‘2As and an R’ (assessment, brief advice, and referral) has been suggested as appropriate.\(^1\)\(^4\)\(^-\)\(^1\)\(^6\) Further, the value of addressing multiple health risk behaviours concurrently has been suggested to be a cost-effective means of both implementing and adopting behaviour change strategies.\(^1\)\(^3\)\(^,\)\(^1\)\(^7\)

Though limited research has examined the provision of such care within mental health services, that which has been conducted suggests that its delivery is sub-optimal in both Australia\(^1\)\(^8\)\(^-\)\(^2\)\(^0\) and elsewhere.\(^2\)\(^1\)\(^-\)\(^2\)\(^7\) It is increasingly recognised that for clinician provision of preventive care to be enhanced, practice change interventions must address the clinical practice systems and procedures within which clinicians work.\(^2\)\(^8\)
Within health settings generally, it is suggested a number of clinical practice change strategies are effective in improving the quality of healthcare and clinician adherence to guidelines, including: local opinion leaders, audit and feedback, reminders and clinical decision support systems, printed education materials including clinical practice guidelines, and training and education. Limited research has examined the effectiveness of such interventions in increasing the delivery of preventive care in mental health settings; and that which has been conducted has occurred within the inpatient setting only, has not aimed to increase the routine provision of preventive care by clinicians, or has not involved controlled research designs.

Community-based mental health services represent an appropriate setting for the provision of preventive care to clients in a number of countries. In Australia, such services reported over 7.1 million client visits in 2010 to 2011, and provided care to a greater number of clients than did psychiatric inpatient settings. A number of the characteristics of care delivery in this setting have the potential to enhance successful health behaviour change, including: the capacity for preventive care to be provided over multiple visits due to the frequency of contact with clients, the existence of a multidisciplinary team of health professionals skilled in behavioural management, care delivery occurring in a variety of settings including a client’s home, and the opportunity to refer clients to evidence-based specialist preventive care services as required, including telephone helplines.
To the authors’ knowledge, no research has examined the effectiveness of a clinical practice change intervention in increasing preventive care provision within a community-based mental health service setting. To address this gap, a study is proposed to determine the effectiveness and acceptability of a multi-strategic clinical practice change intervention in increasing community mental health clinicians’ provision of preventive care (risk assessment, brief advice to modify behaviours, and referral to ongoing behaviour change support services) to clients for four behavioural health risk factors (smoking, inadequate fruit and vegetable consumption, harmful alcohol consumption, and inadequate physical activity) across a network of community mental health services.

**METHODS / DESIGN**

**STUDY DESIGN AND SETTING**

The study will be undertaken within community-based mental health services across one local health district in New South Wales, Australia. A two-group multiple baseline design\(^4\) will be utilised to assess the effectiveness of an intervention implemented over 12 months. [Figure 6.1] The two groups will be defined according to geographic and administrative service boundaries. The intervention will be implemented sequentially across the two groups, and involve clinical practice change strategies to increase clinician provision of three elements of care for clients (assessment, brief advice, referral) for four health risk behaviours (smoking, inadequate fruit and vegetable consumption, harmful alcohol consumption, and inadequate physical activity).
CHAPTER 6: Evaluating the effectiveness of a clinical practice change intervention in increasing clinician provision of preventive care in a network of community-based mental health services: a study protocol of a non-randomised, multiple baseline trial

FIGURE 6.1: Overview of study design

<table>
<thead>
<tr>
<th>Months 1 to 6</th>
<th>Months 7 to 12</th>
<th>Months 13 to 18</th>
<th>Months 19 to 24</th>
<th>Months 25 to 30</th>
<th>Months 31 to 36</th>
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<tbody>
<tr>
<td><strong>Group 1</strong></td>
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<td>Baseline</td>
<td>Intervention</td>
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<td>Follow-up</td>
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<td>n = 260*</td>
<td>n = 520*</td>
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<td>n = 780*</td>
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<td><strong>Group 2</strong></td>
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<td>n = 780*</td>
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<td>n = 520*</td>
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<td>n = 260*</td>
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</table>

*Expected number of completed client CATI interviews

Primary data collection will consist of repeated cross-sectional computer-assisted telephone interviews (CATIs) undertaken with clients receiving care from the community mental health services. The interviews will measure client-reported receipt of preventive care on a weekly basis for 36 months. Surveys will commence in both groups 6 months prior to the intervention implementation in the first group of services, and continue until 6 months after the 12 months of intervention in the second group of services. To supplement the client data, CATIs will be undertaken with community mental health clinicians, pre and post the 12 months of intervention in each group, to measure clinician self-reported preventive care provision. Intervention effectiveness will be demonstrated by an increase in the prevalence of clients reporting the receipt of preventive care from the community mental health services following the 12 months of intervention in each group, and an increase in clinician-reported provision of preventive care to their clients, relative to the baseline period.

PARTICIPANTS

Community mental health facilities

All community mental health facilities in the health district providing care to adult clients (19 services) will receive the clinical practice change intervention. Community mental
health care services provided by such facilities include general adult community mental health services, and specialised community mental health services, including older persons services and psychiatric rehabilitation. Types of community mental health care services excluded from participating in the study will include inpatient and intake triage services, and services providing care solely to clients under the age of 18.

**Clients**

Clients eligible for participation in the CATI interviews will be those who: are 18 years or older; have attended at least one face-to-face individual appointment with a community mental health clinician within the previous two weeks; have not previously been selected to participate; and have not been identified by their clinician as inappropriate to contact. Additional client eligibility criteria will be assessed upon phone contact and will include: English speaking; not participating in any other surveys regarding health behaviours or care received at community health services; not living in aged care facilities or jail; and being physically and mentally capable of responding to the survey items.

**Clinicians**

All clinicians within eligible services will receive the intervention. This includes multidisciplinary teams of psychiatrists, psychologists, social workers, dieticians, nurses, and occupational therapists. All clinicians who have had a minimum of 10 individual face-to-face appointments with adult clients within the two months prior to the survey, have been employed for a minimum of three months, and are not contractors are eligible for participation in the CATI interviews.
CHAPTER 6: Evaluating the effectiveness of a clinical practice change intervention in increasing clinician provision of preventive care in a network of community-based mental health services: a study protocol of a non-randomised, multiple baseline trial

RECRUITMENT

Clients
Each week, for 36 months, a random sample of 40 adult clients (20 from each of the two groups) who had received care at the eligible community mental health services in the prior two weeks, will be selected from electronic medical records and invited to participate in the data collection.

Clinicians
Clinician surveys will be undertaken pre and post the intervention delivery for each of the two groups. All eligible community mental health clinicians providing care to clients at the community mental health services (approx. n = 200) will be identified through electronic medical records and will be invited to participate in the data collection.

INTERVENTION MODEL

Model of preventive care
As limited clinician time is cited as a barrier to providing preventive care in general primary care settings\textsuperscript{13,43,44} and mental health care settings\textsuperscript{45,46} it has been recommended that the 5A’s (ask, advise, assess, assist and arrange) model of preventive care be shortened to ‘2As and an R’, whereby clinicians ask, advise and refer clients on for specialised further care.\textsuperscript{13,44,47,48} This approach emphasises referral of clients to specialist services rather than clinicians providing the extended care themselves, thereby limiting the demand on clinicians’ time, and encouraging client access to specialised health behaviour change interventions. Based on these recommendations, the study will focus on increasing the routine provision of preventive care, following the ‘2As and an R’ model.\textsuperscript{13,44,47,48}
Assessment

Clients will be screened for each of the four health risk behaviours based on risk levels defined in Australian national guidelines and recommendations. Clients will be defined as being at risk according to the following: any tobacco smoking, consuming less than two servings of fruit or five servings of vegetables per day, consuming more than two standard drinks on average per day, or four or more standard drinks on any one occasion, or engaging in less than 30 minutes of physical activity on at least five days of the week. Inadequate fruit and vegetable consumption were selected as nutrition indicators due to their emphasis within the national guidelines, and associations with lower chronic disease morbidity and mortality, including evidence of a protective effect against cardiovascular diseases, diabetes, and some cancers.

Brief Advice

Clients identified as being at risk for any of the health risk behaviours according to the above definitions of risk, will be provided brief advice regarding their identified health risk behaviour; including advice on how to modify their risk to comply with the Australian national guidelines, and the benefits of doing so.

Referral

All clients identified as at risk for any of the health risk behaviours will be offered a referral to specialised support services. Where available, clients will be referred to the evidence-based, state-wide telephone support services New South Wales (NSW) Quitline for smoking, and the NSW Get Healthy Information and Coaching Service for inadequate fruit and vegetable intake and inadequate physical activity. No equivalent service is currently available for clients identified as at risk for harmful alcohol consumption. Clients identified as having risks will also be prompted to see their
General Practitioner (GP) or Aboriginal Medical Service for further assessment, care and follow-up. Additional referrals (for example; local dietician, community exercise group, drug and alcohol service) may be made according to clinician judgement, or because the referral avenue may be more culturally appropriate for Aboriginal or Torres Strait Islander clients.

Clinical practice change intervention
The multi-strategic clinical practice change intervention will be implemented at each community mental health service to support the provision of preventive care delivery. The practice change intervention is informed by extensive practice change research and reviews of the clinical practice change literature\textsuperscript{29,30,32,33,56} and will include the following:

\textbf{Leadership and consensus}
District-wide policy guidelines and policy compliance procedures will be implemented to formalise the intervention and increase adherence. Existing clinical networks, clinical sites and teams will be engaged and consulted prior to and during the implementation of the intervention. Consultation will be undertaken with high level management regarding their advocacy, leadership and support of the intervention, and to gain agreement on Key Performance Indicators. At each clinical site, managers and clinicians will be consulted regularly throughout the intervention.

\textbf{Enabling systems and procedures}
Modifications will be made to the existing medical record software routinely used by all community mental health clinicians. A standardised electronic assessment tool will be incorporated into the medical record to enable the standardised provision and
recording of: risk assessment for each health risk behaviour, brief advice on how to improve behaviours in order to meet the Australian national guidelines (where a client is at risk), referral to the recommended referral services and/or additional local referral avenues (where a client is at risk), automated production of a tailored client information handout regarding health risk behaviour, advice, and referral, and automated production of a referral letter to clients' GP or Aboriginal Medical Service regarding care provided during the appointment(s). The standardised tool will prompt assessment for each of the health risk behaviours, and based on the risk assessment information entered, will prompt advice and referral where a client has a risk.

**Clinicin and manager training**

Clinicians will be required to complete online educational competency-based training modules covering the importance of providing preventive care, information on the policy guidelines and Key Performance Indicators, the model of preventive care, and the recording of such care in the standardised electronic assessment tool. The online training modules will take approximately two hours to complete, and will be followed by a brief competency-based multiple choice quiz. Clinicians will be considered trained upon the completion of the quiz, with a score of 100% attained. Managers of each service will be required to attend a two-hour, face-to-face training session covering the importance of providing leadership in preventive care, and education around the performance monitoring and feedback strategy, including interpretation and use of preventive care performance reports.
**Monitoring and feedback**

Modifications will be made to the existing electronic medical record software to allow automated production of preventive care performance reports. The reports will include the proportion of clients assessed, and of those identified at risk, the proportions provided brief advice and offered referral. Reports will be provided to and discussed with managers on a monthly basis. Report discussions will be linked to the district-wide Key Performance Indicators and will focus on developing strategies to improve performance where required. Existing district-wide quality assurance systems will also be modified to incorporate preventive care indicators.

** Provision of practice change resources**

All clinicians and managers will receive a preventive care resource pack to assist with delivery of care. Resources within these packs include: a preventive care process flowchart, a guide for providing and recording care within the electronic medical record software, information on fruit and vegetable serving sizes and standard alcoholic drinks, fax-based referral forms for the Quitline and Get Healthy service, a preventive care flipchart to use as a visual aid during care provision, and paper-based preventive care assessment tools for the delivery and recording of preventive care when away from a computer. All clinicians will be provided with monthly newsletters and tip-sheets, and access to an e-mail helpline and internet resource site. Each service will be provided a clinical practice change support officer to support intervention delivery, and provide a minimum of fortnightly phone calls and/or e-mails to support managers in implementing and maintaining preventive care delivery, and monthly face-to-face visits to support managers and clinicians.
CHAPTER 6: Evaluating the effectiveness of a clinical practice change intervention in increasing clinician provision of preventive care in a network of community-based mental health services: a study protocol of a non-randomised, multiple baseline trial

DATA COLLECTION PROCEDURES

Client CATI
Selected clients will be mailed an information statement informing them of the survey and data collection procedures, and providing them with a toll free number that they can call should they not wish to be contacted for participation. Trained interviewers, blind to group allocation, will contact the remaining selected clients by phone approximately two weeks later, and will be asked whether they would like to participate. Consenting clients will be administered the interview, or a more suitable time for conduction of the interview will be arranged.

Clinician CATI
Eligible staff will be mailed an information statement informing them of the survey and data collection procedures, and phoned by trained interviewers approximately four weeks later during work hours and asked to participate in the study. Consenting clinicians will be administered the interview, or a more suitable time for conduction of the interview will be arranged.

MEASURES

Client CATI
Client characteristics
Clients will be asked to report their: Aboriginality (Aboriginal, Torres Strait Islander, both, neither), highest education level attained (never attended school, some primary school, primary school, some high school, school certificate or equivalent, High School Certificate or equivalent, TAFE certificate or diploma, university degree or higher), current employment status (full time, part-time/casual, unemployed, can’t work for health reasons, home duties, student, retired, other), current marital status (never
married, married or living together in a relationship, separated, divorced, widowed), and any physical or psychiatric conditions for which they have received care within the previous two months. Further demographics of age, gender, postcode, and number of community mental health appointments within the last 12 months will be attained from electronic medical records.

**Client risk status**

Clients will be asked to report on their health behaviour risk status during the month prior to seeing their community mental health clinician. Clients will be asked:

1. If they smoke any tobacco products (yes – daily; yes - less than once a week; not at all - quit less than 4 months ago; not at all - quit 4 months or more ago; not at all-never smoked);
2. How many serves of fruit (0, 1, 2 or more) and vegetables (0, 1, 2, 3, 4, 5 or more) they usually ate per day;
3. How often they had a drink containing alcohol (never; monthly or less; 2 to 4 times a month; 2 to 3 times a week; 4 or more times a week); and for those who had consumed alcohol during the month prior to seeing their community mental health service, how many standard drinks they consumed on a typical drinking day (1 to 2; 3 to 4; 5 to 6; 7 to 9; 10 or more) and how often they consumed four or more standard drinks on one occasion (never, less than monthly, monthly, weekly, daily or almost daily); and
4. How many days a week they usually undertook 30 minutes or more of physical activity (0; 1; 2; 3; 4; 5 or more; can’t for health or treatment reasons).
In line with Australian National Guidelines, clients will be defined as being at risk if they report: smoking any tobacco products,\textsuperscript{49} consuming less than two servings of fruit or five servings of vegetables per day\textsuperscript{50} consuming more than two standard drinks on average per day, or four or more standard drinks on any one occasion,\textsuperscript{51} or engaging in less than 30 minutes of physical activity on at least five days of the week.\textsuperscript{52}

**Provision of preventive care**

**Assessment:**
Clients will be asked to report whether, during their community mental health appointments, the clinician asked about their smoking status, fruit and vegetable intake, alcohol consumption, and physical activity (yes, no, don’t know for each).

**Brief Advice:**
Clients classified as at risk for a health risk behaviour(s) will be asked whether their community mental health clinician advised them to modify their behaviour(s) (yes, no, don’t know for each).

**Referral:**
Clients classified as at risk for a health risk behaviour(s) will be asked whether their community mental health clinician: (yes, no, don’t know for each)

1. Spoke to them about the NSW Quitline telephone support service (for clients at risk for smoking);
2. Spoke to them about the NSW Get Healthy Coaching and Information Service (for clients with inadequate fruit and vegetable intake or inadequate physical activity);
3 Offered to arrange for a telephone support service (NSW Quitline or NSW Get Healthy Coaching and Information Service) to call them; and if so, whether the client accepted this offer;

4 Recommended that they speak to their GP or Aboriginal Medical Service about their health risk behaviour(s);

5 Advised them to use any other supports to make changes to their health behaviour(s) (for example, a dietician, physical activity classes, support groups, or internet websites), and what support was advised; and

6 Offered to send their GP or Aboriginal Medical Service a letter summarizing their health behaviour risks and the preventive care provided.

**Acceptability of preventive care delivery**

Clients will be asked to respond on a five-point Likert scale their agreement with statements regarding each element of care for each health risk behaviour (strongly disagree to strongly agree). For example, ‘It is acceptable for the service to ask you about how much alcohol you drink.’ Clients will additionally be asked to respond on a five-point Likert scale their agreement with statements regarding receiving each element of care for all four health risk behaviours in the one appointment (strongly disagree to strongly agree).

**Clinician CATI**

**Clinician characteristics**

Clinicians will be asked to report their age (20 to 29, 30 to 39, 40 to 49, 50 to 59, 60 to 64, 65 to 69, 70+), Aboriginality (Aboriginal, Torres Strait Islander, both, neither), years in their current discipline (1 to 2, 3 to 4, 5 to 9, 10+), and their current employment status (full time, part time, casual, other). Clinicians will further be asked to report on
their own health behaviour risk status during the month prior to the interview. Additional clinician characteristics including service type and discipline type will be obtained through the electronic medical records system.

**Preventive care delivery**

On a scale of 0% to 100%, clinicians will be asked to estimate over the previous two months the proportion of new adult clients they provided with the following:

**Assessment:**
The proportion for which they assessed their smoking status, fruit and vegetable intake, alcohol consumption, and physical activity;

**Brief Advice:**
For clients with health risk behaviours, the proportion to which they provided brief advice to modify that behaviour(s); and

**Referral:**
For clients with health risk behaviour(s), the proportion they spoke to about the telephone support services, the proportion they arranged for a telephone support service to call them, the proportion they recommended speak to their GP or Aboriginal Medical Service about that behaviour(s), the proportion they advised to use any other supports to make changes to their health behaviour(s), and the proportion they offered to send a summary of their health risks behaviour(s) to their GP or Aboriginal Medical Service.

**Attitudes and beliefs towards preventive care**

Clinicians will be asked to respond on a five-point Likert scale their agreement with a number of statements related to their attitudes and beliefs towards providing preventive care to their clients (strongly disagree to strongly agree). Items will relate to: whether
clients find preventive care acceptable, clinician confidence in providing preventive care, availability of services to refer clients to, whether clients will change their behaviours as a result of the care they provide, management support regarding the delivery of preventive care, knowledge and skills, role congruence, time available to provide preventive care, whether preventive care will jeopardise relationships with clients, and whether clients are interested in changing health behaviours.

**Resources and supports available for preventive care delivery**

Clinicians will be asked whether there are resources and supports available to assist in the delivery of preventive care (yes, no, don’t know), and where available, the usefulness of that resource or support (very useful, somewhat useful, not at all useful). Resources and supports will include printed educational materials (e.g., hard copy resources), educational meetings (e.g., training), local opinion leaders (e.g., a staff member to support preventive care), audit and feedback (e.g., feedback on preventive care provided within the service), and reminders or prompts (e.g., list of referral services).

**SAMPLE SIZE AND POWER**

Pilot data indicate an expected completion rate of 50% for the primary data collection (client CATI). Based on this completion rate, the estimated sample size is as follows: 1,040 participants during the baseline periods (260 from group 1; 780 from group 2), 1,040 participants during the intervention periods (520 from each of group 1 and group 2), and 1,040 participants during the follow-up periods (780 from group 1; 260 from group 2). [See Figure 6.1]
Based on a 50% prevalence of care at baseline, and with before and after samples of approximately 1,040 clients, the study will have 80% power to detect a 7% increase in the provision of assessment of risk behaviours at the 1.67% significance level. An alpha level of 0.0167 has been chosen because there are three primary endpoints to be tested (assessment for all behaviours, advice for all behaviours, and referral for all behaviours). Analysis of changes in the provision of brief advice or offer of referral will be undertaken only for clients who report a risk factor. Based on the least prevalent risk factor (50% of clients at harm for harmful alcohol consumption), there will be before and after samples of approximately 520 clients at risk. With a presumed prevalence of care at baseline of 50%, the study will have 80% power to detect a 10% increase in the provision of brief advice and offer of a referral.

STATISTICAL ANALYSIS
Descriptive statistics will be used to describe client and clinician characteristics, risk status, prevalence of preventive care provided, client acceptability of preventive care, clinician attitudes and beliefs toward preventive care, and clinician-reported availability of resources and supports for preventive care delivery.

Client CATI
Logistic regression will be used to examine changes in preventive care delivery from baseline to follow-up, across the two groups combined. The models will examine change in each of the behaviours and change in all four behaviours combined. In the first set of models, the outcome of interest will be the client-reported assessment of risk behaviour. The predictor variable of interest will be time (i.e., before/after) and we will include the covariates of age, gender, and number of visits to the service in the prior 12 months to account for any introduced selection bias and group.
The second set of models will be restricted to those subjects who report risk behaviours, with the outcomes of interest being whether the community mental health clinician was reported to have provided brief advice or offer of a referral.

As simple random sampling of community mental health clients from a complete list of all clients who attended at least one face-to-face individual appointment with a community mental health clinician within the previous two weeks was used (see Recruitment), there is no need to adjust for clinician, community mental health service, or any other natural clustering that occurs within the community. An unadjusted analysis will provide an unbiased estimate of the statistics of interest.

ETHICS APPROVAL
Ethical approval to conduct the study has been obtained from the Hunter New England Human Research Ethics Committee (approval No. 09/06/17/4.03) and University of Newcastle Human Research Ethics Committee (approval No. H-2010-1116).

TRIAL STATUS
The intervention is currently underway within the second group of services.

DISCUSSION
To the authors' knowledge, this is the first study to assess the effectiveness of a multi-strategic clinical practice change intervention in increasing clinician provision of preventive care for behavioural risk factors of chronic disease across a network of community mental health services. This study is an important step towards redressing the disparity in preventable health outcomes for those with mental illness, through the
provision of a potentially sustainable practice change intervention aiming to improve clinical care for four behavioural health risk factors that contribute substantially to the increased rates of chronic disease morbidity and mortality experienced by this group. The results will inform future policy and practice regarding the ability of clinicians within mental health settings to improve preventive care provision as a result of such interventions.
REFERENCE LIST


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51 National Health and Medical Research Council. Australian guidelines to reduce health risks from drinking alcohol. Canberra: Commonwealth of Australia; 2009.


EFFECTIVENESS OF AN INTERVENTION IN INCREASING THE PROVISION OF PREVENTIVE CARE BY COMMUNITY MENTAL HEALTH SERVICES: A MULTIPLE BASELINE IMPLEMENTATION TRIAL

Chapter 7 is a paper that has been submitted for peer review: Bartlem K, Bowman J, Freund M, Wye P, Barker D, McElwaine K, Wolfenden L, Campbell E, McElduff P, Gillham K, Wiggers J. Effectiveness of a clinical practice change intervention in increasing the provision of preventive care in a network of community mental health services: a multiple baseline implementation trial. The American Journal of Psychiatry [Under review]
BACKGROUND

People with a mental illness experience a disproportionately high chronic disease burden when compared to the general population, and a substantially reduced life expectancy as a consequence.\textsuperscript{1,2} Such poor health outcomes are contributed to by a higher prevalence of modifiable chronic disease health risk behaviours, including smoking, harmful alcohol consumption, inadequate nutrition, and inadequate physical activity.\textsuperscript{3,4}

Routine care delivery by clinicians to address chronic disease health risk behaviours (preventive care) is recommended for all health services,\textsuperscript{5,6} including mental health services.\textsuperscript{7,8} Such care is recommended to involve, at a minimum, clinician assessment of client risk status, and for clients identified as being at risk, provision of advice and referral to specialist preventive care services.\textsuperscript{9,10} Although community mental health services represent a key setting for the provision of preventive care,\textsuperscript{11} the provision of such care in this setting is both variable and sub-optimal.\textsuperscript{11-13}

Cochrane systematic review evidence supports the efficacy of a range of strategies in improving the provision of recommended elements of clinical care, including the provision of preventive care in general health services, with such strategies including: leadership and consensus,\textsuperscript{14} enabling systems and procedures,\textsuperscript{15-17} training and education,\textsuperscript{18} monitoring and feedback\textsuperscript{19} provision of practice change resources such as educational materials and clinical practice guidelines,\textsuperscript{20} and practice change support such as educational outreach or academic detailing.\textsuperscript{21}
Only one study could be identified that assessed the effectiveness of a practice change intervention in increasing the provision of preventive care for health risk behaviours in a community mental health setting. A single group pre-post study was undertaken in two United States community mental health services of a six-month intervention to increase the provision of risk assessment regarding a number of cardiovascular disease risks (tobacco smoking and non-behavioural risks e.g. blood pressure and cholesterol), and the sending of a letter to clients’ primary care providers. The intervention practice change strategies included: staff education; an electronic screening tool; and a template for a standard communication letter. A random sample of clients' medical records were audited before (n=129) and after (n=117) the intervention. The proportion of clients screened for smoking by psychiatrists, mental health nurses and case managers increased from 76% to 89%, while the proportion of clients for whom a letter was sent to their primary care provider increased from 19% to 32%.

Further research is needed to examine whether a practice change intervention can improve the provision of a broader range of preventive care elements for the most common chronic disease risk behaviours. To address this need, a study was undertaken to determine the effectiveness of a multi-strategic practice change intervention in increasing the provision of three elements of preventive care (risk assessment, brief advice and referral) by community mental health clinicians for four health risk behaviours (smoking, harmful alcohol consumption, inadequate fruit and vegetable consumption, and inadequate physical activity).
CHAPTER 7: Effectiveness of an intervention in increasing the provision of preventive care by community mental health services: a multiple baseline implementation trial

METHODS

STUDY DESIGN AND SETTING

A multiple baseline trial was undertaken involving a 12 month intervention delivered sequentially in two groups of community-based mental health services. Outcome data were collected for both groups from six months prior to the implementation of the intervention in the first group of services, and continued until six months after the completion of the intervention in the second group of services (36 month study period). [Figure 7.1] Further details of the study design and methods have been reported previously. The study was undertaken in a single regional health district in New South Wales, Australia. Ethics approval was obtained from the Hunter New England Human Research Ethics Committee (approval No. 09/06/17/4.03) and the University of Newcastle Human Research Ethics Committee (approval No. H-2010-1116). The trial was registered with the Australian and New Zealand Clinical Trials Registry (ACTRN12613000693729).

FIGURE 7.1: Overview of study design

<table>
<thead>
<tr>
<th>Group 1</th>
<th>Months 1 to 6</th>
<th>Months 7 to 12</th>
<th>Months 13 to 18</th>
<th>Months 19 to 24</th>
<th>Months 25 to 30</th>
<th>Months 31 to 36</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 2</td>
<td>18 month baseline</td>
<td>12 month intervention</td>
<td>18 month follow-up</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From November, 2011</td>
<td>From November, 2011</td>
<td>From November, 2011</td>
<td>From November, 2011</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From November, 2011
PARTICIPANTS

Community mental health facilities
All community mental health services (n=19) in the health district that provided ambulatory care to clients 18 years of age or greater, and were not involved in a pilot of this study were included, and allocated to two service groups (n=7; n=12) based on their geographic location and associated administrative boundaries. The services provided general adult community mental health care, and care for specific client populations, including older persons, psychiatric rehabilitation, early diagnosis, comorbid substance use, eating disorders and borderline personality disorder.

Clinicians
All clinicians and managers in the eligible services (psychiatrists, psychologists, social workers, dietitians, nurses, occupational therapists and health service managers) received the intervention. The services were staffed with approximately 220 clinicians, predominantly nurses (40%), psychiatrists (15%) and psychologists (15%).

Clients
All clients who attended a face-to-face individual clinical appointment were eligible to receive preventive care.

Clients were eligible to be selected for data collection if they: were 18 years or older; had attended at least one face-to-face individual appointment with an eligible service within the previous two weeks; had not previously been selected to participate in the study; and had not been identified by their clinician as too unwell to participate. Of such clients, additional eligibility criteria were: English speaking, not living in aged care
facilities or gaol, and being physically and mentally capable of responding to the survey items.

**INTERVENTION**

**Preventive Care**
Clinicians were asked to routinely provide preventive care based on the recommended ‘2As and R’ model, a model that includes three elements of care.\(^9,10\)

**Assessment**
Assessment of client risk status for each of the four health risk behaviours based on levels of risk defined in Australian national guidelines.\(^24-27\)

**Brief Advice**
Provision of advice to clients assessed as being at-risk to modify their risk to comply with the Australian national guidelines,\(^24-27\) and the benefits of doing so.

**Referral**
Offer of a referral for clients with risks to evidence-based state-wide telephone support services for smoking (New South Wales [NSW] Quitline), and for inadequate physical activity and inadequate nutrition (NSW Get Healthy Service). For all risk behaviours, referral could additionally be provided to the client’s primary care provider (General Practitioner or Aboriginal Medical Service) or local referral options (e.g. dietitians, exercise groups, and drug and alcohol services).

**Practice change intervention**
The following multi-strategic clinical practice change intervention, informed by research and reviews of the clinical practice change literature.\(^14-21\) was implemented [see Appendices 7.1 to 7.11 for examples of intervention material]:
**Leadership and consensus**

A district-wide policy and key performance indicators regarding the provision of preventive care were implemented based on consultation with health district executives, senior clinicians and managers.

**Enabling systems and procedures**

A tool was incorporated into the electronic medical record used by all clinicians to enable: standardised assessment and recording of risk status and subsequent provision of preventive care; the automated production of a tailored client risk reduction information sheet and referral letter to the clients’ primary care provider; and prompts to deliver brief advice and referral where clients were identified as at-risk.

**Clinician and manager training**

Clinicians and managers were provided online educational competency-based training of approximately two hours duration, addressing: the provision of preventive care; policy guidelines and performance indicators; and the recording of such care in the standardised electronic tool. Managers were additionally provided with a two hour, face to face training session regarding care delivery performance monitoring and feedback and leadership in preventive care.

**Monitoring and feedback**

Modifications were made to the electronic medical record to allow automated production of monthly performance reports regarding the provision of preventive care at the service level. Reports were provided to, and discussed with managers monthly.
Provision of practice change resources
An e-mail helpline and internet resource site was established. Monthly newsletters and tip-sheets and a resource pack including: a process flowchart; a guide; information on each risk behaviour; fax-based referral forms for telephone referral services; and a paper-based preventive care assessment tool for use during home visits were distributed to clinicians and managers.

Practice change support
Project personnel (approximately one full time equivalent per group) were allocated to support intervention delivery, including monthly face to face visits with managers and clinicians, and fortnightly support phone calls and/or e-mails to managers. The project personnel discussed the feedback reports, and provided both proactive and reactive support to managers and clinicians.

DATA COLLECTION PROCEDURES
Recruitment
Each week, a random sample of 40 eligible adult clients (20 from each of the two groups; approximately 7% of eligible clients per week) was drawn from the health service electronic medical records. These clients were mailed an information statement and contacted via telephone by trained interviewers, blind to group allocation, to confirm eligibility.

Eligible clients were asked to participate in a telephone interview regarding their health behaviour risk status, the preventive care they had received for such risks, and a number of demographic and clinical characteristics. The interview was approximately 20 minutes in length.
CHAPTER 7: Effectiveness of an intervention in increasing the provision of preventive care by community mental health services: a multiple baseline implementation trial

MEASURES

Client characteristics
Clients reported their: Aboriginal and/or Torres Strait Islander status, highest education level attained, employment status, marital status, and physical or psychiatric conditions for which they had received health care within the previous two months. Client age, gender, postcode, and the number of community mental health appointments within the last 12 months were obtained from the electronic medical record.

Client health behaviour risk status
Clients reported their health behaviour risk status for the month prior to seeing their community mental health clinician. In line with national guidelines, clients were defined as being at-risk if they reported: smoking any tobacco products, consuming less than two serves of fruit or five serves of vegetables per day, consuming more than two standard drinks on average per day or four or more standard drinks on any one occasion, or engaging in less than 30 minutes of physical activity on at least five days of the week.

Client reported receipt of preventive care
Assessment
Clients were asked to report whether, during a community mental health appointment, a clinician had asked about their: smoking status, alcohol consumption, fruit and vegetable intake, and physical activity (yes, no, don’t know for each).

Brief advice
Clients classified as being at-risk for a health risk behaviour(s) based on their self-report were asked whether their community mental health clinician had advised them to modify their behaviour(s) (yes, no, don’t know for each).
CHAPTER 7: Effectiveness of an intervention in increasing the provision of preventive care by community mental health services: a multiple baseline implementation trial

Referral
Clients classified as having at least one risk were asked whether their community mental health clinician had offered to send their primary care provider a letter summarising their health behaviour risks and the preventive care provided. Clients classified as at risk for a health risk behaviour(s) were also asked whether their clinician had provided each of the following forms of referral (‘yes, no, or don’t know’):

a. Spoke about the NSW Quitline telephone support service (for smoking); or the NSW Get Healthy Service (for inadequate fruit and vegetable intake or inadequate physical activity);

b. Offered to arrange for a telephone support service to call them (NSW Quitline or NSW Get Healthy Service);

c. Recommended speaking to their primary care provider about their health risk behaviour(s); and

d. Advised to use any other supports to make changes to their health behaviour(s) (e.g. dietitian, physical activity classes, website).

Intervention delivery
Project personnel recorded the implementation of each practice change strategy for each service on a monthly basis. [Appendix 7.12]

STATISTICAL ANALYSIS
Analyses were undertaken using SAS V9.4. Residential postcode was used to classify client residential geographic location and socio-economic status. Chi square tests were used to compare consenters and non-consenters regarding age group, gender, remoteness, disadvantage, and number of appointments. Descriptive statistics were
used to describe participating client characteristics, health behaviour risk status, and receipt of preventive care.

For care receipt items, clients who responded ‘don’t know’ were classified as not having received care. For each of the four behaviours, referral items were combined to create a single variable reflecting receipt of any form of referral. A variable was created to reflect client receipt of assessment for all four risk behaviours. Separate variables were also created to reflect client receipt of brief advice for all behaviours for which they were at risk, and receipt of any referral for all behaviours for which they were at risk (‘all risks combined’).

**Intervention effectiveness**

Logistic regression models were used to examine changes in the prevalence of preventive care delivery between the baseline and follow-up periods for the two service groups combined. Separate models were developed to examine change in delivery of each of the three elements of preventive care for each of the four risk behaviours, and for all four behaviours combined; and for the delivery of a letter to the client’s primary care provider (16 models in total). For all models, intervention effect was defined as the difference in prevalence of preventive care delivery from the baseline to the post intervention periods, adjusted for service group, time and the number of client visits to the service in the prior 12 months (the latter added to account for any introduced selection bias). Analyses are reported using data collected during the baseline and follow-up periods. While all models were also analysed incorporating the intervention period data, the simpler method is presented as the results did not differ between the two approaches. A significance level of $\alpha=0.01$ was used to adjust for multiple testing.
RESULTS

SAMPLE CHARACTERISTICS
Of the 3,764 clients selected to participate, 2,817 were able to be contacted by telephone (75%), and 375 were identified as ineligible upon contact. Of the 2,442 eligible potential participants, 1,787 (73%) consented to participate and completed the survey (n=805 baseline, n=982 follow-up). There were no significant differences in the characteristics between consenting and non-consenting clients. Characteristics of the sample are presented in Table 7.1.

INTERVENTION EFFECTIVENESS
There was a significant increase in the prevalence of one of the 16 outcome measures. From baseline to follow-up, there was an increase in assessment for all risks combined (18% to 29%; OR 3.55, p=.002). [Table 7.2]

INTERVENTION IMPLEMENTATION
The implementation of intervention strategies is shown in Table 7.3 [See Appendix 7.13 for a full record of intervention implementation].
### TABLE 7.1: Sample characteristics by group and time

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>CLASS</th>
<th>GROUP 1</th>
<th>GROUP 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Baseline</td>
<td>Follow-up</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(n=110)</td>
<td>(n=677)</td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>49</td>
<td>45%</td>
</tr>
<tr>
<td></td>
<td>&lt;40</td>
<td>53</td>
<td>48%</td>
</tr>
<tr>
<td></td>
<td>40-49</td>
<td>19</td>
<td>17%</td>
</tr>
<tr>
<td></td>
<td>50-59</td>
<td>22</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>60+</td>
<td>16</td>
<td>15%</td>
</tr>
<tr>
<td>Age</td>
<td>&lt;40</td>
<td>53</td>
<td>48%</td>
</tr>
<tr>
<td></td>
<td>40-49</td>
<td>19</td>
<td>17%</td>
</tr>
<tr>
<td></td>
<td>50-59</td>
<td>22</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>60+</td>
<td>16</td>
<td>15%</td>
</tr>
<tr>
<td>Index of disadvantage(b)</td>
<td>Lower half</td>
<td>92</td>
<td>84%</td>
</tr>
<tr>
<td></td>
<td>Higher half</td>
<td>17</td>
<td>16%</td>
</tr>
<tr>
<td>Remoteness(c)</td>
<td>Major Cities</td>
<td>0</td>
<td>0%</td>
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<tr>
<td></td>
<td>Regional/Remote</td>
<td>109</td>
<td>100%</td>
</tr>
<tr>
<td>Aboriginality</td>
<td>Aboriginal and/or Torres Strait Islander</td>
<td>8</td>
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</tr>
<tr>
<td>Marital Status</td>
<td>Not living with a partner</td>
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<tr>
<td></td>
<td>Living with partner</td>
<td>41</td>
<td>37%</td>
</tr>
<tr>
<td>Education</td>
<td>Some high school or less</td>
<td>66</td>
<td>60%</td>
</tr>
<tr>
<td></td>
<td>Completed high school</td>
<td>14</td>
<td>13%</td>
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<td></td>
<td>TAFE certificate or diploma</td>
<td>19</td>
<td>17%</td>
</tr>
<tr>
<td></td>
<td>University, CAE, Degree or higher</td>
<td>11</td>
<td>10%</td>
</tr>
<tr>
<td>VARIABLE</td>
<td>CLASS</td>
<td>GROUP 1</td>
<td>GROUP 2</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>---------------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td></td>
<td>Baseline (n=110)</td>
<td>Follow-up (n=677)</td>
<td>Baseline (n=695)</td>
</tr>
<tr>
<td>Employment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>17</td>
<td>191</td>
<td>153</td>
</tr>
<tr>
<td>Not working</td>
<td>64</td>
<td>307</td>
<td>381</td>
</tr>
<tr>
<td>Retired</td>
<td>11</td>
<td>68</td>
<td>58</td>
</tr>
<tr>
<td>Other</td>
<td>18</td>
<td>111</td>
<td>103</td>
</tr>
<tr>
<td>Psychiatry Diagnosis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>54</td>
<td>443</td>
<td>392</td>
</tr>
<tr>
<td>Bipolar disorder</td>
<td>24</td>
<td>77</td>
<td>139</td>
</tr>
<tr>
<td>Schizophrenia/psychosis</td>
<td>17</td>
<td>82</td>
<td>207</td>
</tr>
<tr>
<td>Anxiety</td>
<td>29</td>
<td>268</td>
<td>226</td>
</tr>
<tr>
<td>Appointments in previous 12 months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-2</td>
<td>34</td>
<td>532</td>
<td>159</td>
</tr>
<tr>
<td>3-11</td>
<td>47</td>
<td>140</td>
<td>221</td>
</tr>
<tr>
<td>12+</td>
<td>29</td>
<td>5</td>
<td>315</td>
</tr>
<tr>
<td>Risk Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking</td>
<td>49</td>
<td>340</td>
<td>355</td>
</tr>
<tr>
<td>Inadequate physical activity</td>
<td>49</td>
<td>232</td>
<td>332</td>
</tr>
<tr>
<td>Harmful alcohol consumption</td>
<td>50</td>
<td>294</td>
<td>309</td>
</tr>
<tr>
<td>Inadequate fruit and vegetable consumption</td>
<td>98</td>
<td>557</td>
<td>611</td>
</tr>
</tbody>
</table>
### Variable Classification Table

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>CLASS</th>
<th>GROUP 1</th>
<th></th>
<th>GROUP 2</th>
<th></th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Baseline (n=110)</td>
<td>Follow-up (n=677)</td>
<td>Baseline (n=695)</td>
<td>Follow-up (n=305)</td>
</tr>
<tr>
<td>Number or risks</td>
<td>0</td>
<td>4</td>
<td>4%</td>
<td>43</td>
<td>6%</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>22</td>
<td>20%</td>
<td>153</td>
<td>23%</td>
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<tr>
<td></td>
<td>2</td>
<td>35</td>
<td>32%</td>
<td>235</td>
<td>35%</td>
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<tr>
<td></td>
<td>3</td>
<td>35</td>
<td>32%</td>
<td>184</td>
<td>27%</td>
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<td></td>
<td>4</td>
<td>14</td>
<td>13%</td>
<td>62</td>
<td>9%</td>
</tr>
</tbody>
</table>

* Denominator varies by item due to non-responses
* SEIFA index of disadvantage: lower NSW half (<=991); higher NSW half (>991)
* Accessibility/Remoteness Index of Australia (ARIA)
* Percentages do not add to 100% as participants could elect more than one diagnosis.

A number of participants reported no psychiatric diagnoses (Group 1: 7 at baseline, 53 at follow-up; Group 2: 52 at baseline, 21 at follow-up)
### TABLE 7.2: Levels of preventive care at baseline and follow-up, and estimates of the intervention effect

<table>
<thead>
<tr>
<th>OUTCOME</th>
<th>Baseline (n=805)</th>
<th>Follow-up (n=982)</th>
<th>Intervention effect (95% CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Risk Assessment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking</td>
<td>610 (76%)</td>
<td>805 (82%)</td>
<td>0.87 (.41 – 1.83)</td>
<td>.712</td>
</tr>
<tr>
<td>Alcohol</td>
<td>632 (79%)</td>
<td>820 (84%)</td>
<td>1.83 (.85 – 3.96)</td>
<td>.123</td>
</tr>
<tr>
<td>Nutrition</td>
<td>191 (24%)</td>
<td>357 (36%)</td>
<td>2.62 (1.25 – 5.52)</td>
<td>.011</td>
</tr>
<tr>
<td>Physical activity</td>
<td>467 (58%)</td>
<td>575 (59%)</td>
<td>1.03 (.54 – 1.95)</td>
<td>.934</td>
</tr>
<tr>
<td>All risks combined</td>
<td>146 (18%)</td>
<td>297 (30%)</td>
<td>3.55 (1.56 – 8.08)</td>
<td>.002</td>
</tr>
<tr>
<td><strong>Brief Advice</strong>a</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking</td>
<td>275 (67%)</td>
<td>298 (65%)</td>
<td>1.89 (.73 – 4.92)</td>
<td>.19</td>
</tr>
<tr>
<td>Alcohol</td>
<td>222 (62%)</td>
<td>238 (57%)</td>
<td>1.44 (.54 – 3.81)</td>
<td>.468</td>
</tr>
<tr>
<td>Nutrition</td>
<td>186 (26%)</td>
<td>267 (33%)</td>
<td>2.43 (1.11 – 5.33)</td>
<td>.026</td>
</tr>
<tr>
<td>Physical activity</td>
<td>234 (61%)</td>
<td>191 (52%)</td>
<td>0.38 (.14 – 0.99)</td>
<td>.048</td>
</tr>
<tr>
<td>All applicable risks combined</td>
<td>185 (24%)</td>
<td>250 (27%)</td>
<td>1.33 (0.62 – 2.87)</td>
<td>.468</td>
</tr>
<tr>
<td><strong>Referral</strong>b</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking referral (any)b</td>
<td>173 (42%)</td>
<td>224 (48%)</td>
<td>2.16 (0.86 – 5.40)</td>
<td>.101</td>
</tr>
<tr>
<td>Alcohol referral (any)c</td>
<td>127 (35%)</td>
<td>153 (36%)</td>
<td>1.01 (0.37 – 2.75)</td>
<td>.981</td>
</tr>
<tr>
<td>Nutrition referral (any)d</td>
<td>128 (18%)</td>
<td>174 (22%)</td>
<td>1.36 (0.56 – 3.29)</td>
<td>.493</td>
</tr>
<tr>
<td>Physical activity referral (any)e</td>
<td>123 (32%)</td>
<td>113 (31%)</td>
<td>1.04 (0.38 – 2.84)</td>
<td>.947</td>
</tr>
<tr>
<td>Referral – all applicable risks (any)d</td>
<td>0 (0%)</td>
<td>12 (1%)</td>
<td>0.93 (0.19 – 4.50)</td>
<td>.925</td>
</tr>
<tr>
<td>Letter to primary care provider</td>
<td>206 (26%)</td>
<td>227 (23%)</td>
<td>0.66 (0.32 – 1.34)</td>
<td>.249</td>
</tr>
</tbody>
</table>

*Effectiveness of an intervention in increasing the provision of preventive care by community mental health services: a multiple baseline implementation trial*
**Additional referral outcomes<sup>a,e</sup>**

<table>
<thead>
<tr>
<th>OUTCOME</th>
<th>Baseline (n=805)</th>
<th>Follow-up (n=982)</th>
<th>Intervention effect</th>
<th>Odds Ratio (95% CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking arrange</td>
<td>11</td>
<td>11</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Nutrition arrange</td>
<td>5</td>
<td>40</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Physical activity arrange</td>
<td>7</td>
<td>11</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Smoking – primary care provider</td>
<td>52</td>
<td>79</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Alcohol – primary care provider</td>
<td>38</td>
<td>41</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Nutrition – primary care provider</td>
<td>6</td>
<td>25</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Physical activity – primary care provider</td>
<td>5</td>
<td>6</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

<sup>a</sup> Of participants who reported being at-risk for each relevant behaviour.

<sup>b</sup> Includes: clinician spoke about NSW Quitline, or offered to arrange for NSW Quitline to call the, or recommended they speak to their primary care provider, or advised them to use any other support.

<sup>c</sup> Includes: recommended they speak to their primary care provider, or advised them to use any other support.

<sup>d</sup> Includes: clinician spoke about NSW Get Healthy Service, or offered to arrange for NSW Get Healthy Service to call the, or recommended they speak to their primary care provider, or advised them to use any other support.

<sup>e</sup> Intervention effect could not be modelled meaningfully due to small sample size.
TABLE 7.3: Summary of intervention strategy implementation

<table>
<thead>
<tr>
<th>Monthly Intervention Strategies</th>
<th>Average number who received strategy per month&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Group 1&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Group 2&lt;sup&gt;c&lt;/sup&gt;</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practice change support officer contacts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Face to face visits (managers)</td>
<td>1.6 / 3</td>
<td>7.6 / 10</td>
<td>9.2 / 13</td>
<td></td>
</tr>
<tr>
<td>Face to face visits (clinicians)&lt;sup&gt;d&lt;/sup&gt;</td>
<td>4.8 / 7</td>
<td>8.7 / 12</td>
<td>13.4 / 19</td>
<td></td>
</tr>
<tr>
<td>Fortnightly phone/email support (managers)</td>
<td>1.8 / 3</td>
<td>8.3 / 10</td>
<td>10.1 / 13</td>
<td></td>
</tr>
<tr>
<td>Monitoring and feedback</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance reports provided (managers)&lt;sup&gt;e&lt;/sup&gt;</td>
<td>1.4 / 3</td>
<td>7.5 / 10</td>
<td>8.9 / 13</td>
<td></td>
</tr>
<tr>
<td>Performance reports discussed with (managers)&lt;sup&gt;e&lt;/sup&gt;</td>
<td>1.0 / 3</td>
<td>7.2 / 10</td>
<td>8.2 / 13</td>
<td></td>
</tr>
<tr>
<td>Practice change resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tips and update sheets provided to clinicians (service)&lt;sup&gt;f&lt;/sup&gt;</td>
<td>3.4 / 7</td>
<td>9.0 / 12</td>
<td>12.4 / 19</td>
<td></td>
</tr>
<tr>
<td>Newsletter provided to clinicians (service)&lt;sup&gt;f&lt;/sup&gt;</td>
<td>4.4 / 7</td>
<td>9.0 / 12</td>
<td>13.4 / 19</td>
<td></td>
</tr>
<tr>
<td>One-off Intervention Strategies&lt;sup&gt;g&lt;/sup&gt;</td>
<td>Month by which majority of target (80%) received strategy&lt;sup&gt;h&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Group 1</td>
<td>Group 2</td>
<td>Overall</td>
</tr>
<tr>
<td>Clinician and manager training</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manager training (managers)</td>
<td>5 / 12</td>
<td>4 / 12</td>
<td>5 / 12</td>
<td></td>
</tr>
<tr>
<td>Online training (managers)</td>
<td>n/a&lt;sup&gt;i&lt;/sup&gt;</td>
<td>4 / 12</td>
<td>5 / 12</td>
<td></td>
</tr>
<tr>
<td>Online training (clinicians)</td>
<td>7 / 12</td>
<td>5 / 12</td>
<td>6 / 12</td>
<td></td>
</tr>
<tr>
<td>Practice change resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provision of resource pack (service)&lt;sup&gt;f&lt;/sup&gt;</td>
<td>4 / 12</td>
<td>1 / 12</td>
<td>3 / 12</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> Average number of targets of the intervention strategy (services or managers) who received each strategy per month
<sup>b</sup> Includes 7 services, with a total of 3 managers and 52 clinicians
<sup>c</sup> Includes 12 services, with a total of 10 managers and 165 clinicians
<sup>d</sup> Recorded at service level as support officer made available to all clinicians at relevant service
<sup>e</sup> Due to complications with the software used for performance monitoring and feedback, this strategy was not available for 6/12 months of the intervention period in Group 1, and 3/12 months in Group 2.
<sup>f</sup> Recorded at service level as resource provided to the service to distribute to individual clinicians
<sup>g</sup> The following strategies were implemented across the health district prior to intervention implementation: district wide preventive care policy, key performance indicators (based on consultation with health district executives, senior clinicians and managers), tool incorporated into the electronic medical record, email helpline, and an internet resource site.
<sup>h</sup> Intervention month in which the majority of services, managers or clinicians (80%) had received each ‘once off’ intervention strategy.
<sup>i</sup> <80% of managers in Group 1 completed the online training modules by the completion of the intervention. By month 5, 2/3 managers had completed the modules. The third manager did not complete the modules by the completion of the intervention.
DISCUSSION

This is the first study to examine the effectiveness of a multi-strategy practice change intervention in increasing the provision of multiple elements of preventive care for multiple chronic disease health risk behaviours within a community mental health care setting. Overall, the study had a limited effect in increasing the provision of elements of care, with an effect observed only for the assessment of risk status for all behaviours combined. Further research is required to identify strategies for improving the delivery of chronic disease preventive care in these settings.

One previous study has examined the effectiveness of similar practice change strategies in increasing the delivery of cardiovascular disease risk screening in community mental health services. The single group pre-post study conducted in the United States reported an increase in assessment of smoking status (13%), and for providing a letter to the clients' primary care provider (13%). In comparison, in our controlled trial we found an effect for assessment across all risks combined, but not smoking, and not for providing a letter to the primary care provider. The absence of a control group in the previous study precludes a direct comparison of effect between the two studies.

The intervention in the current study involved the use of practice change strategies previously found to be effective in general health care services, but not trialled in mental health services. Importantly, the same intervention strategies were implemented in a contemporaneous study conducted in general community health services (addressing physical health care) within the same health district in which the current study was conducted. That study found, using the same outcome measures
and intervention approach, increases in care provision for six out of ten assessment and advice measures of preventive care (assessment of fruit and vegetable consumption, physical activity, and for all risks; and brief advice for inadequate fruit and vegetable consumption, harmful alcohol consumption, and for all risks). However, consistent with this trial, no effect was found for provision of any element of smoking care or, of referral.

The need to address the clinical, professional, cultural and organisational factors that distinguish community mental health service delivery from the delivery of general community health services may have contributed to the contrasting findings. The findings suggest that a greater understanding of the context and barriers to the provision of preventive care in community mental health services is required. Similarly, tailoring of recommendations regarding the provision of care addressing chronic disease risk behaviours that can be operationalised in the context and circumstances of community mental health services also appears warranted, as does tailoring of the practice change strategies to support the delivery of such care. The use of systematic and theory-based methods for identifying barriers and designing interventions, such as the Theoretical Domains Framework may provide a useful approach to achieving this.

No increases in either brief advice or referral were identified for any of the four health risk behaviours. Such findings are of significance as any benefit in terms of reduction in risk of chronic disease is dependent upon either or both of these elements of care. Both elements of care have been shown to be effective in reducing the prevalence of health risks for clients of general health services. Previous research has identified a number of barriers to mental health clinician provision of risk advice, including clinician
attitudes regarding their role in providing preventive care \(^{38}\) and a lack of training in how to do so.\(^{11,38}\) Previous research has also identified a lack of referral options as a barrier to mental health clinicians providing referrals.\(^{13}\) The current study sought to address barriers to both elements of preventive care through a comprehensive suite of practice change strategies including: a policy, electronic prompts, fax referral forms to free public evidence-based specialist risk reduction services, automated production of referral letters to primary care providers, clinician training and education, monthly performance monitoring feedback reports, and allocated practice change support personnel for 12 months. Notwithstanding the comprehensiveness of these strategies, they may not have been of a sufficient dose (e.g. frequency of contact with allocated practice change support) or of sufficient length.

Additional factors also may have impeded the clinicians’ ability to refer clients. In United States primary care services, additional strategies have been found to be effective in increasing referrals to tobacco quitlines and community behavioural counselling services including the use of financial incentives,\(^{39}\) and automatic, electronic referral processes.\(^{40}\) However, the effectiveness of these strategies in increasing referrals regarding chronic disease risk behaviours is yet to be examined in community mental health services.

The study outcomes should be interpreted in light of a number of its methodological characteristics. First, although the study was conducted across a number of community mental health services in urban, regional and rural locations, all the services were located within one health district, potentially limiting the generalisability of findings to other jurisdictions. Second, the main outcome measure was based on client reported
receipt of preventive care. The extent to which the receipt of such care in this study is either an over or under estimate of the care received, particularly amongst people with a mental illness is unknown.

In summary, the observed lack of an increase in preventive care provision for almost all outcome measures suggests that an intervention better tailored to the circumstances of community mental health services may be required, or one that is more intensive or includes a longer intervention period. Alternatively, a different model of delivering preventive care to clients of community mental health services may be required. Regardless of the specific approach, the need for a greater understanding of the barriers and facilitators to the provision of preventive care in community mental health services is indicated.
CHAPTER 7: Effectiveness of an intervention in increasing the provision of preventive care by community mental health services: a multiple baseline implementation trial

REFERENCE LIST


CHAPTER 7: Effectiveness of an intervention in increasing the provision of preventive care by community mental health services: a multiple baseline implementation trial


CHAPTER 8

SUMMARY OF KEY FINDINGS AND IMPLICATIONS
INTRODUCTION

As highlighted in the introductory chapter, people with a mental illness experience a significantly reduced life expectancy, with a large proportion of excess mortality attributable to preventable chronic diseases. Although the literature identifies modifiable health risk behaviours as important contributors to the prevalence of chronic diseases, limited evidence exists regarding the prevalence of such behaviours among people with a mental illness, and the potential for mental health services to contribute to a reduction in the prevalence of such risks in this population group.

This thesis has sought to address these evidence gaps through a series of related studies regarding key modifiable chronic disease health risk behaviours (tobacco smoking, harmful alcohol consumption, inadequate nutrition, and inadequate physical activity). The studies involved cross-sectional surveys with clients and clinicians of a network of 19 community mental health services in a single local health district in New South Wales, Australia; and a subsequent practice change intervention in the same setting. This concluding chapter firstly provides a brief summary of the studies undertaken, and subsequently explores the implications of the findings for future research.
SUMMARY OF KEY FINDINGS

CHAPTER 1:
CHRONIC DISEASE, HEALTH RISK BEHAVIOURS AND PREVENTIVE CARE FOR PEOPLE WITH A MENTAL ILLNESS

Chapter 1 synthesised the evidence regarding the increased chronic disease burden and related behavioural risks among people with a mental illness. The key role of four modifiable health risk behaviours: smoking; harmful alcohol consumption; inadequate nutrition; and inadequate physical activity, was highlighted. The review found that previous research regarding the prevalence of such health risk behaviours most frequently focused upon specific diagnostic sub-groups such as those with severe psychiatric diagnoses (such as schizophrenia),\textsuperscript{1-9} and as such the extent to which findings are representative of the wider population of people with a mental illness is unknown. There had also been a greater focus on smoking,\textsuperscript{2-4,7,10-18} with less research for harmful alcohol consumption,\textsuperscript{2,7,11,13,14,18} inadequate nutrition,\textsuperscript{2,5-8,11,18} and inadequate physical activity.\textsuperscript{1,2,6-9,11,13,18} The identified studies suggested a higher prevalence of chronic disease behavioural risk factors among people with a mental illness compared to the general population,\textsuperscript{1-4,6,7,10-18} despite direct comparison often being limited by methodological differences.\textsuperscript{2,6-8,11,18} It was concluded that a need existed for further research to examine the prevalence of health risk behaviours among more representative samples of people with a mental illness that could be compared to the general population.

Chapter 1 identified that mental health clinician provision of care to address the health risk behaviours of clients, often termed ‘preventive care’, represents an appropriate means for such clinicians to contribute to reducing the inequitable burden of chronic disease and related health risk behaviours among people with a mental illness. The
Chapter 8: Summary of key findings and implications

The chapter described a recommended framework for providing preventive care, the ‘2As and an R’ framework, whereby clinicians: ask/assess a client about a particular risk; advise at risk clients to change their behaviour; and refer at risk clients to behaviour change services for further support. Despite the suggested opportunity for mental health services to provide preventive care in this manner, and the apparent suitability of community mental health services in particular, limited research has reported the extent of its provision in the community mental health setting. The large majority of such studies were found to have reported sub-optimal care levels, and were limited in terms of a focus on: a single risk behaviour, most commonly smoking cessation care, single elements of preventive care, most commonly provision of advice, and the use of staff reported or medical record audit estimates of care provision. In the context of such findings, it was concluded that a need existed for further research to ascertain the prevalence of preventive care provision within the most commonly utilised specialist mental health service in Australia: community mental health services.

Chapter 1 further identified a number of factors suggested to contribute to the reported low levels of preventive care provision. These included: clinician-level factors such as confidence and beliefs regarding the role of mental health clinicians in preventive care provision, and systems-level factors such as clinician receipt of training and the availability of client risk assessment tools. A limited number of studies (n=5) quantitatively examined the association between such factors and the delivery of preventive care in community mental health services, with the majority of such research being descriptive in nature.
Chapter 1 also reviewed the evidence of the effectiveness of practice change interventions in improving the provision of preventive care in community mental health services. Only one study was identified, and was undertaken in two community mental health services in the United States, using a single group pre-post design. The intervention was reported to be effective in increasing screening for tobacco smoking and a number of biomedical cardiovascular risks such as blood pressure and cholesterol, and in increasing the provision of information to clients’ primary care providers. The chapter concluded that a need existed for further research regarding the effectiveness of practice change interventions in increasing the provision by community mental health clinicians of preventive care elements for a range of chronic disease health risk behaviours.

**CHAPTER 2: CHRONIC DISEASE HEALTH RISK BEHAVIOURS AMONGST PEOPLE WITH A MENTAL ILLNESS**

To provide further evidence regarding the prevalence of chronic disease health risk behaviours among people with a mental illness, a study was undertaken to determine the prevalence of four health risk behaviours (tobacco smoking, harmful alcohol consumption, inadequate fruit and/or vegetable consumption, and inadequate physical activity) in a sample of community mental health service clients, and to determine client interest in modifying these behaviours. The study involved a cross-sectional telephone survey of 558 Australian community mental health service clients with a variety of psychiatric diagnoses. Almost all respondents (96.0%) were ‘at risk’ for at least one health risk behaviour according to the Australian national guidelines. The majority of respondents consumed inadequate servings of fruit and/or vegetables (86.7%), and half were current smokers of tobacco products (50.7%). Just under half of the respondents did not engage in an adequate level of physical activity (46.8%) or
consumed alcohol at a harmful level (43.2%). The findings also indicated that health risk behaviours were likely to co-occur, with 78.4% of respondents at risk for two or more behaviours, and 10.2% at risk for all four behaviours. All prevalence estimates were higher than those reported for the general population in a methodologically comparable study of clients attending generalist community health services.  

Notably, in contrast to a belief reported to be held by mental health clinicians, the study demonstrated a significant client interest in improving their health risk behaviours, with the majority of respondents considering making changes over the next month. Of the respondents who were identified as being at risk, the majority indicated that over the next month, they were considering: quitting or reducing their tobacco smoking (65.1%); increasing their fruit and/or vegetable consumption (53.3%); and increasing their physical activity (71.1%). A smaller proportion of respondents were considering reducing their alcohol consumption (27.9%).

In contrast to a number of previous studies, no differences in the prevalence of risk were identified across different psychiatric diagnoses (including depression, bipolar disorder, schizophrenia and other psychotic disorders, and anxiety disorders). Further, interest in improving health risk behaviours was consistent across diagnostic groups, with the exception of depression, with participants with this disorder expressing a greater interest in quitting or reducing smoking and increasing their physical activity than other diagnostic groups. Given the high prevalence of health risk behaviours and a high level of interest in modifying these behaviours across the population of community-dwelling people with a mental illness, the findings of Chapter
CHAPTER 3:
CARE PROVISION TO PREVENT CHRONIC DISEASE BY COMMUNITY BASED MENTAL HEALTH CLINICIANS

Mental health clinical settings are suggested to provide an opportunity for the delivery of preventive care to address the chronic disease related health risk behaviours of people with a mental illness. To determine the extent to which this opportunity was being realised in community mental health services, a cross-sectional telephone survey of 151 clinicians from such services was undertaken. The survey aimed to estimate the level of preventive care provided to clients regarding the four health risk behaviours previously outlined. Given the possible contribution of system level barriers to the provision of preventive care, as identified in Chapter 1, the study further aimed to identify the availability of practice support strategies to facilitate the delivery of preventive care, and to investigate the association between such supports and the delivery of preventive care.

The survey found that the provision of ‘optimal’ assessment, brief advice and referral (care provided to at least 80% of clients for all health risk behaviours) was low, with 8.6% of clinicians reporting the provision of optimal risk behaviour assessment, 24.5% reporting optimal brief advice to at risk clients, and 9.9% reporting optimal referral or follow-up to at risk clients. Substantial variation in the provision of care was evident by both type of health risk behaviour and element of preventive care. The provision of preventive care to the majority (80% or more) of clients was consistently lowest for inadequate fruit and/or vegetable consumption (13.2% clinicians providing assessment, 46.3% advice, 22.5% referral or follow-up) and highest for harmful alcohol consumption.
(89.4%, 80.1% and 60.9% respectively). Referral was provided less frequently than the other elements of preventive care across all four behaviours. Referral to telephone behaviour change coaching services (e.g. New South Wales Quitline) was particularly underutilised, with few clinicians discussing the use of such services with the majority of clients at risk (tobacco smoking 15.2%, inadequate fruit and or/vegetable consumption 4.0%, and inadequate physical activity 4.0%); and less than 1% of clinicians arranging a referral to such a service for the majority of at risk clients.

Practice support strategies that facilitate the delivery of preventive care were found to be available to few clinicians. While two thirds of respondents indicated a clinical policy regarding the provision of preventive care was available in their service, less than one quarter were aware of guidelines regarding how to comply with the policy, or had received training in providing preventive care. The importance of such strategies to the provision of preventive care was demonstrated by optimal assessment and referral being eight and 11 times more likely to be provided respectively when a greater number of practice support strategies were available. Given the low prevalence of preventive care, the findings highlighted the need for additional strategies to improve the provision of preventive care by community mental health clinicians, and the importance of such practice supports.

CHAPTER 4:
MENTAL HEALTH CLINICIAN ATTITUDES TO THE PROVISION OF PREVENTIVE CARE FOR CHRONIC DISEASE RISK BEHAVIOURS AND ASSOCIATION WITH CARE PROVISION

The clinician survey described in Chapter 3 also explored clinician attitudes towards the provision of preventive care to clients, and Chapter 4 reported such attitudes descriptively, and investigated whether they were associated with the delivery of preventive care. Clinicians were found to hold positive attitudes towards providing
preventive care, and had a positive perception of their self-efficacy in doing so. For example, almost all clinicians believed that: clients find it acceptable to talk about their health risk behaviours (92.7%); it is the clinician’s role to provide preventive care (90.7%); the provision of preventive care is important to the clinician’s manager (87.4%); and addressing health risk behaviours would not jeopardise the client-clinician relationship (86.1%). Most clinicians believed that they had the confidence (92.7%), and the knowledge and skills (88.1%) to provide preventive care. However, approximately 30% of clinicians were unaware of services to which they could refer clients to change their health risk behaviours, or did not believe that providing preventive care would result in clients changing their health risk behaviours. Just under half of clinicians held positive perceptions of their clients’ interest in improving health risk behaviours (47.7%), and one third (33.8%) reported that the provision of preventive care would negatively impact on the time available for their delivery of clinical care.

A number of clinician attitudes were found to be associated with an increased likelihood of provision of preventive care including: a positive attitude towards their preventive care role (OR 3.6 – 6.1); a belief that clients were interested in improving their health risk behaviours (OR 2.2); and the belief that addressing health risk behaviours would not negatively impact the client-clinician relationship (OR 3.2). In combination with the results of Chapter 3 indicating that the provision of preventive care within community mental health services was low, these findings suggested that additional strategies are required to translate positive clinician attitudes into improved client care, and to address attitudes that may hinder the provision of preventive care. Such attitudes include the belief that clients are not interested in changing their health risk behaviours,
demonstrated to be erroneous by the self-report of clients attending the same services [Chapter 2].

CHAPTER 5:
ACCEPTABILITY AND RECEIPT OF PREVENTIVE CARE FOR CHRONIC DISEASE HEALTH RISK BEHAVIOURS REPORTED BY CLIENTS OF COMMUNITY MENTAL HEALTH SERVICES

Whilst the findings of Chapter 2 suggested that clients are interested in improving health risk behaviours, no studies have examined the extent to which clients of community mental health services are acceptable towards the receipt of behaviour change assistance in that setting. To address this evidence gap, Chapter 5 described the conduct and findings of a cross-sectional survey of 558 community mental health clients to determine the acceptability of being provided preventive care at their community mental health service, and their reported receipt of such care.

The receipt of preventive care was found to be acceptable to the majority of clients, with in excess of 86% agreeing that it was acceptable to receive each element of preventive care from their community mental health service for each of the four health risk behaviours of interest. In contrast to such high levels of acceptability, client reported receipt of care indicated predominantly inadequate and variable provision of preventive care. In line with the sub-optimal and variable level of staff reported provision of care described in Chapter 3, such care was least likely to be provided for fruit and vegetable consumption. Twenty six percent (25.7%) of clients received assessment of fruit and vegetable consumption, and of those who were at risk and reported being assessed, the majority received advice to increase their consumption (68.5%). However, a minority were advised to use any type of referral or follow-up option to increase their fruit and vegetable consumption (42.7%). The receipt of advice to use any referral or follow-up option was also low across the remaining three
behaviours (harmful alcohol consumption 37.5%, inadequate physical activity 46.3%, and smoking 49.1%). Also consistent with staff reported provision of preventive care, referral to telephone support services occurred infrequently: for 7.1%, 0.8%, and 3.7% of clients who were at risk for tobacco smoking, inadequate fruit and/or vegetable consumption, or inadequate physical activity, respectively.

These findings add to those of the previous chapters, indicating that in addition to being interested in improving health risk behaviours (Chapter 2), clients of community mental health services are acceptable to receiving care to support this improvement. Despite this high level of client interest and acceptability, the low receipt of preventive care, as reported by clients in this chapter, supports the findings of Chapter 3. These findings demonstrated that the opportunity for mental health services to address the chronic disease health risk behaviours of people with a mental illness was not being realised, and that additional strategies to increase the provision of preventive care by mental health services were required.

CHAPTER 6:
EVALUATING THE EFFECTIVENESS OF A CLINICAL PRACTICE CHANGE INTERVENTION IN INCREASING CLINICIAN PROVISION OF PREVENTIVE CARE IN A NETWORK OF COMMUNITY-BASED MENTAL HEALTH SERVICES: A STUDY PROTOCOL OF A NON-RANDOMISED, MULTIPLE BASELINE TRIAL

To address the findings of sub-optimal and variable provision of preventive care identified in Chapters 3 and 5, despite client need and perceived acceptability of such care, Chapter 6 described the methods of a multiple baseline trial examining the effectiveness of a practice change intervention in increasing the provision of preventive care by community mental health clinicians. The protocol described a trial to be conducted over a three-year period in 19 community mental health services in one
health district in the state of New South Wales, Australia. Practice change strategies were to be implemented to increase the provision of preventive care for four health risk behaviours: tobacco smoking, harmful alcohol consumption, inadequate fruit and/or vegetable consumption, and inadequate physical activity according to the ‘2As and R’ model of preventive care.\textsuperscript{19,20,62} This model of care involved the delivery of three elements of care: assessment of health risk behaviours; provision of brief advice to modify identified behavioural risks; and referral for ongoing behaviour change support for such risks. Client self-report of the receipt of such care for these risks constituted the trial’s primary outcomes.

Given the lack of previous research examining the effectiveness of interventions in increasing the provision of preventive care in community mental health services specifically, the intervention strategies were informed by the body of evidence regarding the effectiveness of practice change strategies in health care services generally.\textsuperscript{63-70} The broad types of strategies included in the intervention were: leadership and consensus;\textsuperscript{71} enabling systems and procedures;\textsuperscript{72,73} clinician and manager training;\textsuperscript{74} practice change support officers;\textsuperscript{75} monitoring and feedback;\textsuperscript{76,77} and provision of practice change resources.\textsuperscript{78}

CHAPTER 7:
EFFECTIVENESS OF AN INTERVENTION IN INCREASING THE PROVISION OF PREVENTIVE CARE BY COMMUNITY MENTAL HEALTH SERVICES: A MULTIPLE BASELINE IMPLEMENTATION TRIAL
Chapter 7 described the primary outcomes of the trial described in Chapter 6. The findings of the trial indicated that the clinical practice change intervention had limited effectiveness in increasing clinician provision of preventive care, with increases in just one of sixteen care outcome measures. The provision of assessment for all four risks combined increased following the intervention (18% to 29%). No increases in any of
the three elements of preventive care for any individual health risk behaviours were observed. The provision of referral or follow-up was particularly low prior to the practice change intervention, and continued to be so following its implementation. Given the importance of ongoing support and referral to specialist preventive care services in effecting risk behaviour change, the need to identify strategies for increasing such referrals was identified as a key area for future research.

The overall findings of the trial contrasted with those of a parallel trial involving the implementation of the same intervention with the same objectives in generalist community health services in the same health district. The parallel trial reported increases in care provision for assessment of fruit and vegetable consumption, physical activity, and for all risks combined; and increases in the provision of brief advice for inadequate fruit and vegetable consumption, harmful alcohol consumption, and for all risks. Similar to the findings reported in this thesis, the parallel trial did not result in an increase in the provision of referral for any health risk behaviour. The predominantly contrasting findings suggest that professional, organisational or cultural differences between generalist and mental community health services may have contributed to the differential trial outcomes. It was concluded that further research was required regarding the characteristics of community mental health services that may impede mental health clinician delivery of care addressing behavioural health risks, and the need to tailor practice change intervention strategies to such characteristics accordingly.
IMPLICATIONS FOR THE DESIGN OF FUTURE PREVENTIVE CARE INTERVENTIONS IN COMMUNITY MENTAL HEALTH SERVICES

Based on the findings of the studies undertaken for this thesis, this section discusses two major considerations for future intervention research regarding the provision of preventive care by community mental health services:

1. the design of the intervention to align with the characteristics and circumstances of community mental health services; and
2. the exploration of alternative models of preventive care delivery.

DESIGN OF THE INTERVENTION TO ALIGN WITH THE CHARACTERISTICS AND CIRCUMSTANCES OF COMMUNITY MENTAL HEALTH SERVICES

The findings reported in Chapters 2, 3, 4 and 5 provide some indication of the specific barriers that may need to be addressed when considering future preventive care practice change interventions in the community mental health service context. Three key potential barriers identified from the findings of this thesis, and for which previous literature provides some support, relate to: the process of referral; clinician misperception of client interest in changing health risk behaviours; and clinician acceptance of a role in providing preventive care. These three barriers are discussed below, followed by a consideration of the potential to use a theory-based tool, the Theoretical Domains Framework, to assist in future attempts to comprehensively identify barriers for incorporation into intervention design specific to this context.

Facilitating the process of referral

Previous research in community mental health services has demonstrated low rates of referral to services that address client health risk behaviours, a finding that is consistent with the outcomes of Chapters 3, 5 and 7 of this thesis. Previous literature
has identified a number of barriers to referral for physical health concerns in mental health services that are likely to have relevance in the context of referrals for preventive care in community mental health services. These include a limited awareness of referral options, a lack of processes or systems for ease of referral, and a perception that generalist referral services do not understand the clinical needs of people with a mental illness.

Chapter 3 identified the importance of preventive care practice support strategies (e.g. lists of referral services, fax referral forms, and real time reminders of best practice) in facilitating clinician referrals, with an increased number of such strategies being associated with an 11-fold increased likelihood of referral provision. Despite this, few clinicians reported such supports being available. For instance, only half of the clinicians reported that a list of referral services was available, and a minority reported the availability of fax referral forms (18.5%) or an ability to produce automated referral letters to their clients’ General Practitioner (31.8%). Chapter 4 similarly identified that almost one third of clinicians were unaware of services to which they could refer clients for support in changing health risk behaviours. The intervention described in Chapters 6 and 7 of this thesis incorporated a number of strategies to address these barriers including: changes to the electronic medical records system to prompt referral and to enable production of tailored information letters to the clients’ general practitioner; identification and provision of contact details for free accessible evidence based referral options; and provision of fax referral forms for manual referral to such services. Despite the inclusion of such strategies, no increase in the provision of referral was found. Such findings suggest additional improvements to referral procedures may be required.
One potential option for improving the prevalence of referral by community mental health clinicians is the automation of the referral process as a means of limiting the administrative and time burden involved.\textsuperscript{62,85-88} Although electronic referral processes embedded in electronic medical record systems have been found to be effective in increasing the provision of referrals to smoking cessation telephone support services in United States primary care and Veterans Affair services,\textsuperscript{62,85-88} no research has reported their effectiveness in increasing referral for other health risk behaviours, or when implemented in community mental health services. It is recommended that future research assess the effectiveness of automated electronic referral mechanisms in increasing the referral of clients to health risk behaviour change services by community mental health clinicians.

Previous research has suggested that referral by mental health clinicians may also be hampered by their concerns that non-specialist mental health professionals may lack understanding of the specific mental health clinical needs of people with a mental illness.\textsuperscript{39,84} In the trial described in Chapters 6 and 7, the recommended referral options for tobacco smoking, inadequate fruit and/or vegetable consumption, and inadequate physical activity were free telephone based behaviour change support services.\textsuperscript{89,90} Systematic review evidence supports the efficacy of telephone-based coaching services for smoking cessation, weight reduction and improvement in nutrition and physical activity.\textsuperscript{91-95} Although further research is required, an increasing body of research suggests they are also effective for\textsuperscript{20,96-100} and acceptable to,\textsuperscript{100,101} people with a mental illness. Within the Australian context there has been one attempt reported to tailor telephone-based coaching service delivery to better meet the needs of people with a mental illness.\textsuperscript{98} To address concerns regarding the relevance and
appropriateness of non-specialist mental health referral points, it is recommended that future interventions to increase the delivery of preventive care to clients of community mental health services include a greater focus on providing clinicians with information regarding the evidence underpinning the benefit of referral, the evidence base for specific referral services, and their ability to meet the particular care needs and circumstances of people with a mental illness.

Clinician misperception of client interest in improving their health risk behaviours
Chapter 4 identified a positive association between the delivery of preventive care and clinician perceptions that: the client-clinician relationship would not be negatively impacted by the provision of preventive care; and that clients were interested in improving their health risk behaviours. Notably, more than half of the clinicians believed that their clients were not interested in changing their health risk behaviours. Mental health clinician perceptions of a lack of client interest in changing health risk behaviours, and a perception of client inability to successfully change their health risk behaviours have been reported previously.28,29,34,35,40

In contrast however, the findings from the client survey reported in Chapters 2 and 5 add further weight to an increasing body of evidence that such perceptions are erroneous, and that clients are both receptive to receiving preventive care102,103 and are interested in improving their health risk behaviours.6,17,103-107 Previous research has also demonstrated that people with a mental illness are capable of making improvements to their health risk behaviours.100,108-112 The study described in Chapter 5 found that almost all community mental health service clients found it acceptable to be provided with preventive care by their community mental health service. Further, the findings reported in Chapter 2 indicated that a majority of such clients with behavioural risks
were considering making improvements to those behaviours. Previous research has similarly identified that mental health service clients are receptive to receiving smoking cessation care\textsuperscript{102} and support to increase physical activity,\textsuperscript{103} and to be interested in quitting smoking,\textsuperscript{6,17,104-106} reducing their alcohol consumption,\textsuperscript{107} increasing their physical activity,\textsuperscript{6,103,106,107} and improving their diets.\textsuperscript{6,106,107} Such findings highlight the importance of clinicians offering preventive care to all clients, as recommended by care guidelines,\textsuperscript{49-61,79,113-132} and the inadvisability of making assumptions regarding client interest.

The lack of congruence between the perceptions of clinicians and the expressed interest and ability of clients regarding health risk behaviour change suggest that strategies to address the misperceptions of clinicians are required to strengthen future practice change intervention designs. Clinician education has been suggested as an appropriate strategy to address clinician perceptions, beliefs and attitudes,\textsuperscript{28} and is supported by Cochrane review evidence for improving professional practice.\textsuperscript{74} Further, educational strategies have been demonstrated to improve mental health clinician perceptions regarding the provision of physical health care for people with a mental illness.\textsuperscript{133} For example, in a small pilot study in the United Kingdom, primary care practice nurses’ misperceptions regarding the physical health risk factors of people with a mental illness were improved following a two hour educational package.\textsuperscript{133}

Although the intervention described in Chapters 6 and 7 incorporated a training and education component, [Appendix 7.5 – 7.6] its content and design were generic in nature, and did not explicitly address the context and circumstances of care delivery in mental health services or of people with a mental illness. Given this, it is recommended
that future intervention research that aims to increase the provision of preventive care in community mental health services include educational components tailored to address mental health service specific barriers to such care provision. Such education could include a focus on client positivity towards the receipt of preventive care and interest in changing their behaviours in order to motivate clinician behaviour change. Cochrane review evidence suggests that such education should be interactive, or involve a combination of interactive and didactic strategies, as opposed to strategies which are didactic alone. Evidence also suggests that the delivery of such strategies are most effective with the involvement of local opinion leaders, that is, individuals who are seen to be credible, respected and trustworthy and who are nominated by their colleagues as being ‘educationally influential’.

Promoting the mental health clinician’s role in preventive care

In addition to addressing clinician misperceptions regarding client interest in improving their health risk behaviours, the literature also suggests a need to promote the provision of preventive care as being a key component of the role of a mental health clinician and mental health services more broadly. Although Chapter 4 and an additional two studies conducted in Australian and United Kingdom community mental health services have suggested that mental health clinicians hold positive attitudes towards their role in providing preventive care for behavioural health risks, physical health care historically has not been considered part of the role of mental health services, and there has been a lack of integration between the provision of physical and mental health care.

The importance of addressing any enduring negative attitudes towards having a role in providing preventive care for health risk behaviours is highlighted by the findings of
Chapter 4 and two additional studies that have identified a positive association between the provision of preventive care and clinician perception that it was part of their professional role.\textsuperscript{21,29} One Canadian study in community mental health services found that mental health clinicians were more likely to provide smoking cessation care when they believed it was their role to do so,\textsuperscript{21} whilst the other identified that community mental health and inpatient mental health nurses in the United Kingdom were more likely to provide physical health care (including addressing health risk behaviours) when they believed it was part of their role.\textsuperscript{29}

The survey described in Chapter 4 identified that prior to the implementation of the intervention, clinicians within the community mental health services were positive towards their role in providing preventive care, a finding that is similar to two other descriptive studies conducted in community mental health services in Australia and the United Kingdom.\textsuperscript{29,33} However, this positive disposition did not translate to adequate provision of preventive care. It is possible that the responses reported by clinicians were subject to some social desirability response bias,\textsuperscript{137} especially in the context of new policy initiatives,\textsuperscript{123} which may have inflated responses that such care was seen as being an important part of their role as a mental health clinician. It is also possible that the broad concept of having a role in the provision of preventive care, as presented in the survey prior to their experience with providing such care, was seen positively, yet the actual practice of such care delivery at the level of the individual clinician may be constrained by clinical, professional or system barriers. Some support for such a suggestion is indicated by the findings of an Australian qualitative study where attitudes of mental health nurses towards their role in screening clients’ physical health problems were largely positive, however, when provided with a concrete method of screening,
attitudes towards the provision of such care became less positive. Such findings suggest that future studies of clinician acceptability of their role in providing preventive care may need a focus on the role of the clinician in providing specific preventive care actions and elements of care at the individual clinician level.

In addition to a need to develop a better understanding of clinician attitudes towards their role in the provision of preventive care, future interventions may need to incorporate specific strategies that seek to directly address clinician perceptions of their role in the provision of such care. It has been recommended that such strategies promote individual clinician’s ownership and responsibility for providing physical health care and, given the historical separation between mental and physical health care, the overall organisational culture of mental health services. The use of social processes such as encouragement, support and pressure to increase awareness, education, and motivation may be required to challenge provider perceptions that the provision of preventive care is not part of the role of a mental health clinician.

Use of a systematic, theory-driven approach to identify barriers and inform future intervention design: the Theoretical Domains Framework as an example

Research supports the importance of utilising behaviour change theory in the development of interventions to increase the likelihood of successful behaviour change. Such theories provide a comprehensive understanding of the possible determinants of behaviour, and of behaviour change, enabling a more effective targeting of interventions to address such determinants. Theory-based behaviour change models and frameworks have been suggested to aid in systematically identifying barriers and enablers to clinician behaviour and practice change, and their use in future research may aid the development of effective interventions in this
Numerous models and frameworks have been recommended for use in understanding the determinants that influence clinician behaviour change,143 such as the Consolidated Framework for Implementation Research,145 the Ecological Framework,146 the Promoting Action on Research Implementation in Health Services Framework,147 and the Theoretical Domains Framework.83

The Theoretical Domains Framework for instance, is a relatively recent advance in the health behaviour change literature,83 and represents a comprehensive framework that integrates 33 theories and 128 key theoretical constructs relevant to changing the behaviour of health practitioners.148 The original framework consisted of 12 theoretical domains recommended for consideration when examining explanations for clinician behaviour, and for designing effective practice change interventions.83 More recently, the framework has been refined to contain 14 theoretical domains, grouping 84 constructs relevant to clinical behaviour change.149 [Appendix 8] The domains allow for factors related to both the individual and the broader systems and environmental context to be addressed, and include: knowledge; skills; social and professional role and identity; beliefs about capabilities; optimism; beliefs about consequences; reinforcement intentions; goals; memory, attention and decision processes; environmental context and resources; social influences; emotion; and behavioural regulation. Once the framework has been used to identify the factors influencing clinician behaviour, specific behaviour change techniques to address these barriers can then be implemented.138,150

When employing the Theoretical Domains Framework to identify barriers and enablers to change, a number of tools including qualitative interviews142,148,151 and quantitative
questionnaires\textsuperscript{152-156} have been suggested for use. For instance, in the mental health service context, a theory-based implementation interview based upon the Theoretical Domains Framework has been used to examine difficulties within community mental health teams in implementing guidelines regarding offering family intervention.\textsuperscript{142} A specific tool that can be used to identify barriers and enablers to change is the Determinants of Implementation Behavior Questionnaire.\textsuperscript{152,153} The questionnaire is a quantitative tool that exhibits acceptable psychometric properties,\textsuperscript{152,153} and although designed and first used to assess factors influencing the implementation of physical activity interventions in primary health care, the questionnaire can be applied to understanding determinants of behaviour across a broad range of settings as the questions were designed to be easily adaptable.\textsuperscript{152,153}

The Theoretical Domains Framework has been used across multiple health care systems to understand barriers to the implementation of evidence-based practice and to the design of tailored interventions, including in mental health service settings.\textsuperscript{142,148,151} No study has as yet used the framework to systematically identify and suggest strategies for addressing barriers to the delivery of preventive care in mental health services, and it is recommended that future research does so.

\textbf{CONSIDERING AN ALTERNATIVE APPROACH TO INCREASING THE PROVISION OF PREVENTIVE CARE WITHIN COMMUNITY MENTAL HEALTH SERVICES}

In addition to further research regarding the barriers to the routine provision of preventive care by all clinicians within community mental health services and trialling interventions to increase care provision by clinicians, there are possible alternative approaches to increasing client access to preventive care that should also be investigated. One alternative approach that has been explored in a limited fashion
involves removing the need for all mental health clinicians to engage in preventive care delivery by having such care provided by a designated specialist preventive care clinician provider.84,157-161

The role of a specialist provider of preventive care within mental health services has been described in various ways, and generally involves the detection and prevention of physical health issues by a specialist provider with qualifications and experience in providing both physical and mental health care.84,157-161 Such care may address, at a minimal level, screening of physical health risks, including health risk behaviours, cardiovascular risks and metabolic monitoring; and the provision of care to address these risks, or referral to appropriate services.36,84,157-165 More comprehensive care delivery models have included additional roles such as: facilitating communication between primary care and mental health services regarding client physical and mental health, including treatments and medications;161,163 liaison to facilitate client access of primary care and specialist medical care providers;158,163,166 and organisation of transportation and childcare.166

Three trials have been located that demonstrate the potential of such a specialist provider approach whereby chronic disease care is incorporated into community mental health services by a person allocated to the specific role of delivering this care.158,161,166 In the United Kingdom, a randomised feasibility trial of a six month intervention to increase rates of cardiovascular screening for people with severe mental illness was conducted (n=121).161 A nurse working across six community mental health teams and aligned general practice services: reviewed if risk screening had occurred for a client; sent prompts to primary and secondary care staff if it had not; and offered
screening if necessary. The researchers reported the nurse-led intervention resulted in an absolute increase of approximately 30% more clients receiving risk screening at six month follow-up.\(^{161}\)

In the United States, a randomised trial of a ‘medical care management’ intervention in a single community mental health service examined the impact of an embedded physical health care manager.\(^{166}\) For intervention group clients, the embedded care manager provided: chronic disease health education; communication and advocacy with the clients’ medical providers regarding medical management; and problem solving of barriers to accessing physical health care, such as transportation barriers. At 12 month follow-up, positive findings were reported, with the intervention group clients (n=205) receiving a significantly higher proportion of care elements for cardiovascular conditions (34.9% vs. 27.7%) and such clients having a significantly lower Framingham cardiovascular risk score (6.9% vs. 9.8%).\(^{166}\)

Finally, a retrospective cross-sectional comparison study in Australia compared metabolic monitoring in two community mental health services following the introduction of a new policy requiring screening and referral for cardiovascular risk factors.\(^{158}\) The proportion of new clients (n=432) who received metabolic monitoring following the policy introduction was compared between the two services. In one service, each clients’ case manager was responsible for ensuring they received metabolic monitoring (n=298), and in the other service, specialist roles were developed to support the undertaking of metabolic monitoring and other physical health assessments (n=134). Compared to the case manager only group, a significantly higher proportion of new clients received metabolic monitoring in the service with
specialist roles (78% versus 3%). However, it was unclear whether the case manager only group received any strategies to support the provision of care, and no baseline figures were presented.158

Although these studies demonstrate a potential for a specialist provider model in increasing the provision of physical health care more broadly, the effectiveness of this model has not yet been rigorously tested, nor has it been examined for chronic disease health risk behaviours specifically. The specialist provider approach may offer a number of potential advantages for the delivery of preventive care by community mental health services. First, this approach has the potential to address the lack of integration between mental health and physical health care services.36,84,161,166 Greater communication between the service types may be facilitated through the specialist provider liaising directly with other health care services, such as General Practitioners, regarding client physical and mental health, treatments, medications and appointments.36,84,161,166 Second, the specialist provider’s role could include providing training and education to other mental health clinicians within their services regarding meeting the physical health care needs of their clients.18,36,159,165 Third, this approach may present less challenges for, and require less clinical behaviour change by existing mental health clinicians than the integrated approach described in Chapters 6 and 7. A number of studies in Australia and elsewhere have reported support among mental health nurses159,162,164,167 and other mental health clinicians and primary care providers84 for the specialist provider model.

Despite such support, a number of potential disadvantages to such an approach have also been suggested, including reduced role responsibility and de-skilling among
mental health clinicians for physical health care.\textsuperscript{159,162,165} Such an outcome could possibly reinforce the existing separation of physical and mental health care provision within mental health services, a separation that has been suggested to have contributed in part to the current poorer physical health status of people with a mental illness.\textsuperscript{25,35,39} A more pragmatic limitation involves the need for government and funding agencies to invest in the creation of new clinical positions at a time when health funding constraints are widely apparent.\textsuperscript{159,162,165,167} Nevertheless, further research would be valuable in determining the effectiveness and cost effectiveness of this model for increasing the provision of preventive care in community mental health services.
CONCLUSIONS

The work encompassed in this thesis has contributed to advancing research in this field in a number of ways. Firstly, the methodological approaches used have allowed for conclusions to be drawn that are more broadly applicable than previous research. The inclusion of all types of mental illness diagnoses, rather than a focus on severe mental illnesses or a specific disorder, has demonstrated that the need for preventive care programs for people with a mental illness is a priority universal to all diagnostic groups. The inclusion of all professional disciplines within community mental health, and the focus on a full evidence based model of preventive care and multiple health behaviour risks further broadens the applicability and generalisability of findings. Secondly, the thesis tested a novel approach to increase the provision of preventive care within community mental health services, with the findings of the trial providing important insight for future interventions.

The findings of this thesis should be interpreted in light of a number of methodological aspects of the included studies, as noted throughout the previous chapters. Firstly, the outcomes for the included studies were self-reported by clients and clinicians. As such, it is unknown to what extent the observed estimates of risk and care prevalence may be either under or overestimated. Secondly, the studies were undertaken within one local health district in Australia, with a mandatory policy regarding the provision of preventive care. It is unknown to what extent this may affect the generalisability of findings to other health services in Australia and internationally. Thirdly, although the inclusion of all professional disciplines and all types of mental illness diagnoses broadens the applicability and generalisability of findings, it is also a point of difference from most previous research, thereby limiting comparability to previous studies.
The findings of this thesis include evidence among people with a broad range of mental disorders accessing community mental health services, of a high prevalence of risk for four health risk behaviours, high client interest in improving such behaviours, and high client acceptability towards receiving preventive care to address these behaviours. Despite an evident need to address the health risk behaviours within this population, it was demonstrated that the provision of preventive care is low. Although the intervention trialled did not result in increased preventive care provision, it has provided important insight for future interventions. It is suggested that future research trialling approaches to improve the routine provision of preventive care in community mental health services consider the barriers identified throughout this thesis, such as barriers to referral and clinician attitudes, and consider utilising advances in the science of clinical practice change design such as the Theoretical Domains Framework. In addition, alternative models of care such as a specialist provider should be the subject of further research. There is a clear need to continue to think broadly and explore all avenues for redressing the inequitable health risk and chronic disease burden borne by people with a mental illness, in order to reduce the physical health inequity experienced by this already disadvantaged and vulnerable population group.
REFERENCE LIST


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CHAPTER 8: Summary of key findings and implications


133 Hardy S. Training practice nurses to improve the physical health of patients with severe mental illness: effects on beliefs and attitudes. International Journal of Mental Health Nursing. 2012;21(3):259-65.


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APPENDIX ONE:
UNIVERSITY OF NEWCASTLE THESIS BY PUBLICATION GUIDELINES

Office of Graduate Studies
Information Sheet
Thesis by Publication

The Rules Governing Research Higher Degrees allow for a thesis to be submitted in the form of a series of published papers and the additional rules specific to this style of thesis are presented below. **It is important to note that the general rules for a University of Newcastle thesis are also applicable. Please ensure you also refer to Rule 38 within the above rule link.**

**Rule 39.1**   A thesis by publication will include:

i. a full explanatory overview included to link the separate papers and to place them in the context of an established body of knowledge;

ii. a literature review;

iii. if detailed data and descriptions of methods are not otherwise given within the separate papers, they must be included in the body of the thesis or as appendices to the thesis;

**Rule 39.2**   For a thesis by publication:

i. the separate papers provided under sub-clause 39.1(i) must be published, in press or submitted to scholarly media only, i.e. refereed publications classified by current national standards and refereed conference papers, however at least 50% of these papers must have been published. Papers published up to three years prior to enrolment may be included provided they were published in scholarly media and do not represent more than 50% of the total papers;

ii. publications submitted by the candidate for another degree may only be referred to in the thesis literature review;

iii. the number of papers submitted should be sufficient for the body of work to constitute a significant and original contribution to knowledge;

iv. the candidate must be the lead author in at least 50% of the papers written in the time of their formal Research Higher Degree candidature. Any published paper of which the candidate is a joint author may only be included in the thesis provided the work done by the candidate is clearly identified. The candidate must include in the thesis a written statement from each co-author attesting to the candidate’s contribution to a joint publication included as part of the thesis. These statements must be endorsed by the Assistant Dean (Research Training);

v. the Assistant Dean (Research Training) may seek the approval of the Dean of Graduate Studies to include a paper that is outside the scope of these rules.
Issues to consider

- Each discipline area will have different issues to consider in the decision to submit a thesis in the form of a series of published papers.
- It is essential that you discuss your options carefully with your supervisor(s). The thesis must reflect a sustained and cohesive theme, an integrated whole that sits logically in the context of the available literature. Overall the material presented for examination needs to equate to that which would otherwise be presented in the traditional thesis format.
- Some journals take a long time to finalise the review process and waiting for papers to be accepted can delay thesis submission. Time management and selection of journals/publishers is critical. Focusing on publication rather than research may lead to candidates being tempted to publish sections of their work prematurely and missing opportunities to fully capitalize on the significance of the work.
- You need to consider the thesis from the examiners’ viewpoint - if the publications do not have a clear cohesion and the contribution to knowledge is not clearly demonstrated, then the thesis may attract criticism and be rejected by examiners. The content of the thesis remains a matter of professional judgment for the supervisor(s) and candidate.
- Any published paper of which the candidate is a joint author may only be included in the thesis provided the work done by the candidate is clearly identified. The candidate must include in the thesis a written statement from each co-author attesting to the candidate’s contribution to a joint publication included as part of the thesis. The statement/s need to be signed by the Faculty Assistant Dean (Research Training). A sample statement is provided below.
- We strongly advise you to arrange for the signatures from co-authors to be collected as soon as the paper is prepared or submitted for publication rather than trying to collect them at the time of thesis submission.
- There is no minimum or maximum requirement on the number of papers. Of equal, or perhaps more importance than quantity, is the quality of the journals.

Other options

As discussed above, you need to consider if your publications will form a sufficient body of work to meet the requirements of thesis by publication. You may wish to consider the other option of including publications within a standard thesis format, either in the body or as an appendix as supported in the rule below.

Rule 38.5. A thesis may:

i. Include publications arising as a consequence of the research undertaken for a thesis.
   When the candidate includes a co-authored published paper or co-authored scholarly work, or a substantive component of a co-authored published paper or co-authored scholarly work in the body of the thesis, the candidate must include in the thesis a written statement attesting to their contribution to the joint publication. This
statement must be signed by the supervisor. A statement is not required when publications are included as an appendix to the thesis.

Suggested format

1. Title Page

2. Declaration
   "I hereby certify that this thesis is submitted in the form of a series of published papers of which I am a joint author. I have included as part of the thesis a written statement from each co-author; and endorsed by the Faculty Assistant Dean (Research Training), attesting to my contribution to the joint publications."

3. Acknowledgements

4. List of publications included as part of the thesis
   4.1 List all of the included published work with the full bibliographic citations in the order they appear in the thesis.

   4.2 Provide a statement to indicate that where necessary permission regarding copyright has been obtained from copyright owners. For example, the statement may say "I warrant that I have obtained, where necessary, permission from the copyright owners to use any third party copyright material reproduced in the thesis (e.g. questionnaires, artwork, unpublished letters), or to use any of my own published work (e.g. journal articles) in which the copyright is held by another party (e.g. publisher, co-author)."

5. Statement of Contribution of Others
   Include in the thesis a written statement from each co-author attesting to the candidate’s contribution to a joint publication included as part of the thesis. The purpose of this statement is to summarise and clearly identify the nature and extent of the intellectual input by the candidate and any co-authors.

   5.1 Sample co-author statement
   I, (insert co-author’s name in full), attest that Research Higher Degree candidate (insert name) contributed (insert outline of contribution) to the paper/publication entitled (insert reference details).

   (Signature of Co-Author)

   (Full Name of Co-Author)

   Date:

   (Signature of Candidate)

   (Full Name of Candidate)

   Date:
(Signature of Assistant Dean Research Training (ADRT))

(Full Name of ADRT)

Date:

6. List of additional publications
   List additional publications and conference presentations which have relevance to the thesis, but are not included in it. List these alphabetically and chronologically.

7. Table of Contents

8. Abstract
   An abstract of approximately 300 words is required to describe the content of the thesis.

9. Overview
   A full explanatory overview is required to link the published papers to the research thesis. This may include sections for Literature Review, Research Design and Review/Discussion. Not all of these sections may be necessary. Choose the format that underpins the academic argument so that the contents of the thesis are established as a substantial and significant body of work, but without unnecessary repetition.

10. Published papers
    Each chapter should have an introduction to explain how it contributes to the overall body of knowledge. Where the candidate is relying on publications, the author's final version of the paper (the version of the paper accepted by the journal for publication, including all modifications from the publishing per review process) would normally be included. It is not necessary to reformat published works in the thesis. Publications can be included in full or in parts thereof, where appropriate, to substantiate the contribution to knowledge.

11. Appendices
    Appendices may include permission letters regarding copyright, evidence supporting refereed status of publications such as conference papers, and acceptance of papers which have not yet appeared in print.

12. Bibliography
    List all references cited in the thesis.
APPENDIX TWO: ETHICS APPROVAL FOR CHAPTERS 2 TO 7

APPENDIX 2.1:
UNIVERSITY OF NEWCASTLE HUMAN RESEARCH ETHICS COMMITTEE

HUMAN RESEARCH ETHICS COMMITTEE

Notification of Expedited Approval

To Chief Investigator or Project Supervisor: Associate Professor John Wiggers
Co-Investigators / Research Students: Ms Megan Froud, Ms Jenny Knight, Ms Karen Gillham

Re Protocol: Increasing the delivery of routine preventative care by HREC Clinicians

Date: 30-Jun-2018
Reference No.: H-2018-1116
Date of Initial Approval:

Thank you for your Initial Application submission to the Human Research Ethics Committee (HREC) seeking approval in relation to the above protocol.

Your submission was considered under Expedited Review of External Approval review by the Chair/Deputy Chair.

I am pleased to advise that the decision in your submission is External HREC Approval Noted effective 30-Jun-2018.

In approving this protocol, the Human Research Ethics Committee (HREC) is of the opinion that the project complies with the provisions contained in the National Statement on Ethical Conduct in Human Research, 2007, and the requirements within this University relating to human research.

Approval will remain valid subject to the submission, and satisfactory assessment, of annual progress reports. If the approval of an External HREC has been "Noted" the approval period is as determined by that HREC.

The full Committee will be asked to ratify this decision at its next scheduled meeting. A formal Certificate of Approval will be available upon request. Your approval number is H-2018-1116.

If the research requires the use of an Information Statement, ensure this number is inserted at the relevant point in the Complaints paragraph prior to distribution to potential participants. You may then proceed with the research.

Conditions of Approval

This approval has been granted subject to you complying with the requirements for Monitoring of Progress, Reporting of Adverse Events, and Variations to the Approved Protocol as detailed below.

PLEASE NOTE: In the case where the HREC has "Noted" the approval of an External HREC, progress reports and reports of adverse events are to be submitted to the External HREC only. In the case of Variations to the approved protocol, or a Renewal of approval, you will apply to the External HREC for approval in the first instance and then Register that approval with the University’s HREC.
• Monitoring of Progress

Other than above, the University is obliged to monitor the progress of research projects involving human participants to ensure that they are conducted according to the protocols as approved by the HREC. A progress report is required on an annual basis. Continuation of your HREC approval for this project is conditional upon receipt, and satisfactory assessment, of annual progress reports. You will be advised when a report is due.

• Reporting of Adverse Events

1. It is the responsibility of the person first named on this Approval Advice to report adverse events.

2. Adverse events, however minor, must be recorded by the investigator as observed by the investigator or as volunteered by a participant in the research. Full details are to be documented whether or not the investigator, or his/her deputies, consider the event to be related to the research substance or procedure.

3. Serious or unforeseen adverse events that occur during the research or within six (6) months of completion of the research, must be reported by the person first named on the Approval Advice to the HREC by way of the Adverse Event Report form within 72 hours of the occurrence of the event or the investigator receiving advice of the event.

4. Serious adverse events are defined as:
   o Causing death, life threatening or serious disability.
   o Causing or prolonging hospitalisation.
   o Overdoses, cancers, congenital abnormalities, tissue damage, whether or not they are judged to be caused by the investigational agent or procedure.
   o Causing psychological or financial harm. This covers everything from perceived invasion of privacy, breach of confidentiality, or the diminution of social reputation, to the creation of psychological fears and trauma.
   o Any other event which might affect the continued ethical acceptability of the project.

5. Reports of adverse events must include:
   o Participant's study identification number;
   o date of birth;
   o date of entry into the study;
   o treatment arm (if applicable);
   o date of event;
   o details of event;
   o investigator's opinion as to whether the event is related to the research procedures and action taken in response to the event.

6. Adverse events which do not fall within the definition of serious or unexpected, including those reported from other sites involved in the research, are to be reported in detail at the time of the annual progress report to the HREC.

• Variations to approved protocol

If you wish to change, or deviate from, the approved protocol, you will need to submit an Application for Variation to Approved Human Research. Variations may include, but are not limited to, changes or additions to investigators, study design, study population, number of participants, methods of recruitment, or participant information/consent documentation. Variations must be approved by the HREC before they are implemented except when registering an approval of a variation from an external HREC which has been designated the lead HREC, in which case you may proceed as soon as you receive an acknowledgement of your registration.

Linkage of ethics approval to a new Grant

HREC approvals cannot be assigned to a new grant or award (ie those that were not identified on the application for ethics approval) without confirmation of the approval from the Human Research Ethics Officer on behalf of the HREC.

Best wishes for a successful project.

Associate Professor Alison Ferguson
Chair, Human Research Ethics Committee
For communications and enquiries:

Human Research Ethics Administration

Research Services  
Research Office  
The University of Newcastle  
Callaghan NSW 2308  
T +61 2 492 15900  
F +61 2 492 17164  
human.ethics@newcastle.edu.au

<table>
<thead>
<tr>
<th>Funding body</th>
<th>Funding project title</th>
<th>First named investigator</th>
<th>Grant Ref</th>
</tr>
</thead>
</table>

Linked University of Newcastle administered funding:
APPENDIX 2.2:
HUNTER NEW ENGLAND HUMAN RESEARCH ETHICS COMMITTEE

20 August 2009

Professor J Wiggers
Director
HNE Population Health
Wallsend Campus

Dear Professor Wiggers,

Re: Increasing the delivery of routine preventive care by HNE Clinicians (09/06/17/4.03)

HNEHREC Reference No: 09/06/17/4.03
NSW HREC Reference No: HREC/08/nHNE/216

Thank you for submitting the above protocol for single ethical review. This project was first considered by the Hunter New England Human Research Ethics Committee at its meeting held on 17 June 2009. This Human Research Ethics Committee is constituted and operates in accordance with the National Health and Medical Research Council’s National Statement on Ethical Conduct in Human Research (2007) (National Statement) and the CPMP/ICH Note for Guidance on Good Clinical Practice. Further, this Committee has been accredited by the NSW Department of Health as a lead HREC under the model for single ethical and scientific review. The Committee’s Terms of Reference are available from the Hunter New England Area Health Service website: http://www.hnehealth.nsw.gov.au/Human_Research_Ethics.

I am pleased to advise that following acceptance under delegated authority of the requested clarifications and revised Information Statements and Phone Survey by Dr Nicole Gerrand, Manager, Research Ethics & Governance, the Hunter New England Human Research Ethics Committee has granted ethical approval of the above project.

The following documentation has been reviewed and approved by the Hunter New England Human Research Ethics Committee:

- The Information Sheet for a Phone Survey (Version 2 dated 23 June 2009);
- The Information Statement and Consent Form for consenting to access medical records (Version 2 dated 23 June 2009); and
- The Phone Survey (Version 2 dated 23 June 2009)

For the protocol Increasing the delivery of routine preventive care by HNE Clinicians

Approval from the Hunter New England Human Research Ethics Committee for the above protocol is given for a maximum of 3 years from the date of this letter, after which a renewal application will be required if the protocol has not been completed.
The National Statement on Ethical Conduct in Human Research (2007), which the Committee is obliged to adhere to, includes the requirement that the committee monitors the research protocols it has approved. In order for the Committee to fulfill this function, it requires:

- A report of the progress of the above protocol be submitted at 12 monthly intervals. Your review date is August 2010. A proforma for the annual report will be sent two weeks prior to the due date.

- A final report is submitted at the completion of the above protocol, that is, after data analysis has been completed and a final report compiled. A proforma for the final report will be sent two weeks prior to the due date.

- All variations or amendments to this protocol, including amendments to the Information Sheet and Consent Form, must be forwarded to and approved by the Hunter New England Human Research Ethics Committee prior to their implementation.

- The Principal Investigator will immediately report anything which might warrant review of ethical approval of the project in the specified format, including:
  - any serious or unexpected adverse events
    - Adverse events, however minor, must be recorded as observed by the investigator or as volunteered by a participant in this protocol. Full details will be documented, whether or not the investigator or his deputies considers the event to be related to the trial substance or procedure. These do not need to be reported to the Hunter New England Human Research Ethics Committee.
    - Serious adverse events that occur during the study or within six months of completion of the trial at your site should be reported to the Manager, Research Ethics & Governance, of the Hunter New England Human Research Ethics Committee as soon as possible and at the latest within 72 hours.
    - Serious adverse events are defined as:
      - Causing death, life threatening or serious disability.
      - Cause or prolong hospitalisation.
      - Overdoses, cancers, congenital abnormalities whether judged to be caused by the investigational agent or new procedure or not.
      - Unforeseen events that might affect continued ethical acceptability of the project.

- If for some reason the above protocol does not commence (for example it does not receive funding), is suspended or discontinued, please inform Dr Nicole Gerrand, as soon as possible.

Hunter New England Research Ethics & Governance Unit

Locked Bag No 1
New Lambton NSW 2305
Telephone (02) 49214 900 Facsimile (02) 49214 919
Email: hnhrec@hnehealth.nsw.gov.au
You are reminded that this letter constitutes ethical approval only. You must not commence this research project at a site until separate authorisation from the Chief Executive or delegate of that site has been obtained.

A copy of this letter must be forwarded to all site investigators for submission to the relevant Research Governance Officer.

Should you have any concerns or questions about your research, please contact Dr Gerrand as per her details at the bottom of this page. The Hunter New England Human Research Ethics Committee wishes you every success in your research.

Please quote 09/06/17/4.03 in all correspondence.

The Hunter New England Human Research Ethics Committee wishes you every success in your research.

Yours faithfully

For: Dr MP Parsons
Chair
Hunter New England Human Research Ethics Committee

Hunter New England Research Ethics & Governance Unit
Locked Bag No 1
New Lambton NSW 2305
Telephone (02) 49214 950 Facsimile (02) 49214 916
Email: hnehrec@health.nsw.gov.au
APPENDIX THREE: EVIDENCE TO SUPPORT MANUSCRIPT SUBMISSION

APPENDIX 3.1: EVIDENCE TO SUPPORT MANUSCRIPT SUBMISSION FOR CHAPTER 4

Confirmation of your submission to BMC Psychiatry
em.bpsy.0.449bb9.5684e823@editorialmanager.com
[em.bpsy.0.449bb9.5684e823@editorialmanager.com] on behalf of
BMC Psychiatry - Editorial Office [em@editorialmanager.com]
Sent: Tuesday, 21 July 2015 10:03 AM
To: Kate M. Bartlem

Mental health clinician attitudes to the provision of preventive care for chronic disease risk behaviours and association with care provision
Kate Bartlem; Jenny Bowman; Kate Ross; Megan Freund; Paula Wye; Kathleen McElwaine; Karen Gillham; Emma Doherty; Luke Wolfenden; John Wiggers
BMC Psychiatry

Dear Ms Bartlem,

Thank you for submitting your manuscript 'Mental health clinician attitudes to the provision of preventive care for chronic disease risk behaviours and association with care provision' to BMC Psychiatry.

During the review process, you can keep track of the status of your manuscript by accessing the following website:

http://bpsy.edmgr.com/

If you have forgotten your username or password please use the "Send Username/Password" link to get your login information. For security reasons, your password will be reset.

Best wishes,

BMC Psychiatry
APPENDIX 3.2: EVIDENCE TO SUPPORT MANUSCRIPT SUBMISSION FOR CHAPTER 6

on behalf of ajp@psych.org
[onbehalfof+ajp+psych.org@manuscriptcentral.com] on behalf of ajp@psych.org
[ajp@psych.org]
Sent: Wednesday, 15 July 2015 4:51 PM
To: Kate M. Bartlem

Dear Ms. Bartlem,

Your manuscript has been received in the office of The American Journal of Psychiatry and is now being reviewed. Your submission has been assigned the unique number AJP-15-07-0917.

You do NOT need to send in your Copyright Transfer and Authorship Forms at this time. You will be asked to submit these forms, along with all financial disclosure information, if your paper is accepted for publication.

You may check the status of your paper at any time by logging onto the Journal's website at https://mc.manuscriptcentral.com/appi-ajp.

User ID: kate.bartlem@hnehealth.nsw.gov.au
Your Password: r8z30506*

Click on the Author Center and scroll to see a list of your submitted papers. Only you as the corresponding author, and not your co-authors, will be able to check the status of this paper.

The editors will notify you as soon as a decision is made on your manuscript.

Sincerely,

The American Journal of Psychiatry Editorial Office
APPENDIX FOUR:
ADDITIONAL MATERIAL FOR CHAPTERS 2, 5 AND 7

APPENDIX 4.1:
CLIENT SURVEY INFORMATION LETTER

Information Sheet for a phone survey to assess
health behaviour care delivery by Hunter New
England Health clinicians

[DD/MM/YYYY]

[FIRST NAME] [LAST NAME]
[STREET ADDRESS]
[SUBURB] [STATE] [POSTCODE]

Dear [FIRST NAME]

Hunter New England Health is committed to improving the health of people living within
the Hunter New England region. To help achieve this, Hunter New England Health is
working to increase the number of Hunter New England Health clinicians who offer
advice and assistance to patients about health behaviours such as physical activity and
healthy eating. People who have recently attended a Hunter New England Area
community health facility may be contacted by phone to be asked about the care that
was received during their visit. Information obtained from phone surveys will be used to
help identify whether the number of clinicians providing support to patients about health
behaviours is changing.

Who will be contacted?
Over a two year period we will be contacting randomly selected adult patients that have
recently attended a Hunter New England Health community health facility. Your name
was selected at random from the list of people that have recently attended a Hunter
New England facility. This letter has been sent from community health personnel and
the researchers have not had any access to your or any other potential participant’s
medical records.

What is the phone survey about?
The survey will ask you questions about health behaviours such as physical activity and
healthy eating. The survey will also ask about the health behaviour care and
support you received during your visit to the Hunter New England Health facility, and
about the acceptability of such care. Please note that you can decline to answer at any
time.

What will happen to the information you give us?
All the answers you provide us will be treated in STRICT CONFIDENCE. These
answers will be entered onto our computer and stored securely. Your name and
personal information will not be stored in the same place as the answers you give to
the survey. When the survey is completed for all people the names and contact details will be destroyed. Reports that are based on the survey information will only refer to the entire group of people surveyed. Individual people or their answers will NOT be identified. The data collected in this survey is intended to be used by Hunter New England Health for the purposes of quality assurance and improving service provision.

**Do you have to talk to us?**
Participation in this survey is entirely your choice. You do not have to answer our questions if you do not want to.

**If you do not wish to receive a call, you can call a toll free number (1300 670 561) 24 hours a day.**

If you call the toll free number, clearly state your first name and surname. Your name will then be withdrawn from the survey list and you will NOT be contacted. Alternatively, you can tell the interviewer that you do not wish to participate when they call you. If you decide to not participate, it will not affect your relationship with any staff member or the treatment you receive from any of the services offered by the Hunter New England Area Health Service.

**What happens now?**
In the next 2 weeks, an interviewer from Hunter New England Health will contact you by phone. The interviewer will ask you if you would like to participate in the survey. You may refuse to participate at this point. If you do agree to participate the interviewer will ask you if it is convenient to talk and if not arrange a suitable time to call back. The phone survey should take between 8 and 20 minutes depending on your answers.

At the time of the telephone survey the interviewer will also ask if you would consent to a clinical staff member checking the clinical record of your last visit for any notes about the health behaviour care and support that may have been provided to you. If you agree to the clinical record check we will post you a consent form to sign and return in a reply paid envelope.

If you have any questions about this survey, please do not hesitate in contacting Megan Freund, on (02) 49246374.

Thank you for your time and consideration.

Yours sincerely

Assoc/Prof John Wiggers
Hunter New England (HNE) Population Health
Quality Assurance Team:
Assoc/Prof John Wiggers         Dr Megan Freund         Ms Jenny Knight         Ms Karen Gillham
Director          Research Fellow  Program Manager            Service Director
HNE Population Health                  HNE Population Health     HNE Population Health     HNE Population Health

This project has been approved by the Hunter New England Human Research Ethics Committee of Hunter New England Health, Reference 09/06/17/4.03.

Should you have concerns about your rights as a participant in this research, or you have a complaint about the manner in which the research is conducted, it may be given to the researcher, or, if an independent person is preferred, to Dr Nicole Gerrand, Professional Officer (Research Ethics), Hunter New England Human Research Ethics Committee, Hunter New England Area Health Service, Locked Bag 1, New Lambton NSW 2305 or Telephone (02) 4921 4950, email Hnehrec@hnehealth.nsw.gov.au
APPENDIX 4.2:
CLIENT SURVEY: COMPUTER ASSISTED TELEPHONE INTERVIEW SCRIPT

TITL 0 title 1 CATI NOADD NOLAB

Prev Care Community Health Patients

TIME 0 T_start 1 LABEL
TIME Start
This records duration to current point
Start time of interview

LINK 1 address 1 LABEL
EXTERNAL DATASET 4
T_start gt .
Items in external dataset
DATACATI.CONFID address
DATACATI.CONFID team
DATACATI.CONFID age
DATACATI.CONFID indig
Links to external data

INFO 2 INTRO1 3 NOLAB
Intro
address gt " and team gt "
and age gt . and indig gt .
Hello, my name is _INTVR_ and I am calling on behalf of the
Hunter New England Area Health Service about a survey. I am calling
to speak to _RNAME_.

CHCE 1 18 INTRO2 1 _MAKE_ NOLAB
Intro
INTRO1=1
Is _RNAME_ available?
1 speaking to that person
2 person called to phone
3 person not at home (record on L/S)
4 person unwell at the moment (record on L/S)
5 person has died (record on L/S)
6 someone in household recently died (record on L/S)
7 business (record on L/S)
8 person physically or mentally incapable (record on L/S)
9 non English speaking and no help available (record on L/S)
10 person has moved, no forwarding contact details (record on L/S)
11 other (record on L/S)
12 Called 1800 to refuse *** Record on log sheet DF ***
13 Wrong number or No number and no number found in W/P(WN or No#)
14 Ineligible Service RECORD ON L/S AS [OS 504]
15 Unlocatable (10 attempts, no contact)(Kim ONLY)[UL 10]
16 Abandoned (10 attempts+contact)(Kim ONLY)[OP 13]
17  OS due to clinician discretion (Kim ONLY)[OS 505]
    .R  Refused

****************** SINGLE CHOICE - CATI VERSION ***********************
OPEN  1 200  INTRO3  3  NOLAB
intro
INTRO2 in (7, 11)
OK, thank you for your time.
[Record reason- if no reason given, record as no reason)
*** RECORD ON LOG SHEET AS OS *** 502,508,509,510

****************** INFORMATION SCREEN ITEM ***********************
INFO  1  INTR18  2  NOLAB
Intro
INTRO2=10
OK, thanks for your time
*** RECORD ON LOG SHEET AS RM ***

****************** OPEN ENDED ENTRY ITEM ***********************
INFO  1  INTRO4  4  NOLAB
intro
INTRO2=2
Hello, my name is ^_INTVR_^ and I'm calling from the Hunter New England Area Health Service. You may have received a letter from us in the last week or so letting you know that we might call seeking your help and advice on how to improve health care in community health.

****************** INFORMATION SCREEN ITEM ***********************
INFO  1  INTRO5  3  NOLAB
Intro
INTRO2=1
You may have received a letter from us in the last week or so letting you know that we might call seeking your help and advice on how to improve health care in community health.

****************** INFORMATION SCREEN ITEM ***********************
CHCE  1 3  INTRO6  2  _MAKE_  NOLAB
Intro
INTRO2=3
Could I arrange a convenient time to call back to talk to ^_RNAME_^?
1  Yes
2  No
    .R  Refused

****************** SINGLE CHOICE - CATI VERSION ***********************
CHCE  1 3  INTRO7  2  _MAKE_  NOLAB
Intro
INTRO2=4
I'm sorry to hear they are not feeling well. Would it be OK if I called back at a later time to talk with ^_RNAME_^?
1  Yes
2  No
    .R  Refused

****************** SINGLE CHOICE - CATI VERSION ***********************
INFO  1  Qloss1  4  NOLAB
Intro
INTRO2=5
I’m sorry for your loss, please accept my apology for calling you at such a difficult time. We were ringing because we are conducting a survey of patients visiting a community health service. Once again, I am sorry to have bothered you.

*************** INFORMATION SCREEN ITEM *******************************
INFO 1  Qloss2  4  NOLAB
Intro
INTRO2=6
I’m sorry for your loss, please accept my apology for calling you at such a difficult time. Of course you are welcome to complete the survey but I understand if you would prefer not to. Once again I’m sorry to have bothered you.

*************** INFORMATION SCREEN ITEM *******************************
INFO 2  INTRO8  4  NOLAB
Intro
INTRO6=1 or INTRO7=1
When would be a good time to call back to talk with them?
Would ...... at........... be convenient.
Great, I’ll call back then. Thank you.

*** Record on log sheet CB ***

*************** INFORMATION SCREEN ITEM *******************************
INFO 1  INTR8a  2  NOLAB
Intro
INTRO6 in (2, .R)
OK, thanks for your time

*** Record on log sheet D3 ***

*************** INFORMATION SCREEN ITEM *******************************
INFO 1  INTRO9  2  NOLAB
Intro
INTRO7 in (2, .R)
OK, thanks for your time

*** Record on log sheet RS 501 ***

*************** INFORMATION SCREEN ITEM *******************************
INFO 1  INTR9a  2  NOLAB
Intro
INTRO2=8
OK, thanks for your time

*** Record on log sheet OS 500***

*************** INFORMATION SCREEN ITEM *******************************
INFO 1  INTR9b  2  NOLAB
Intro
INTRO2=9
OK, thanks for your time

*** Record on log sheet OS 503 ***

*************** INFORMATION SCREEN ITEM *******************************
INFO 1  INTR9c  2  NOLAB
Intro
Thanks for your time

*** Record on log sheet RD ***

**************************************** INFORMATION SCREEN ITEM ****************************************
CHCE 1 4  INTR11c 7 _MAKE_ LABEL
Intro
INTRO4=1 or
INTRO5=1
Our records show that you saw ^team^ recently. Do you recall this
community health appointment?
[Prompt: Please spend time prompting before selecting No or
Don’t know: Community health includes services at a community health
centre or community nursing visits at home, HNE Allied health - OT,
physio, podiatry etc, hospital in the home, child and family health
nurse visit for a young child etc.]
1  Yes
2  No
3  Don’t Know
.R  Refused
recall community health appointment
**************************************** SINGLE CHOICE - CATI VERSION ****************************************
INFO 1  INTR11d22 NOLAB
Intro
INTR11c=1
That’s fine we are just finding out more about the experiences of the
people we are talking to
**************************************** INFORMATION SCREEN ITEM ****************************************
INFO 1  INTR11e 2 NOLAB
Intro
INTR11c in (2 3 .R)
OK, thanks for your time
*** Record on log sheet OS 506 ***

**************************************** INFORMATION SCREEN ITEM ****************************************
INFO 1  INTR12a 10 NOLAB
Intro
INTR11d2=1
We would like to ask about the appointment/s you have had with
^team^. Our focus is particularly on the care provided for the health
habits of smoking, alcohol, nutrition, physical activity, vaccinations
and falls.
Your individual answers are confidential and will not be used to assess
your clinician individually, or be reported back to ^team^.
Your participation in this survey would be appreciated but is voluntary.
Do you have any questions?
[NOTE FOR INTERVIEWERS: if client sounds young can leave off
immunisations and falls].
**************************************** INFORMATION SCREEN ITEM ****************************************
CHCE 1 4  INTR12 2 _MAKE_ LABEL
Intro
INTR12a=1
Depending on your answers, the survey will take about 20 minutes to complete. Would you like to help us improve our health care services?
1  Yes
2  Yes but would like letter sent first
3  No
.R  Refused

Consent to phone survey

************************* SINGLE CHOICE - CATI VERSION ***************************
CHCE  1 3  INTR13  1       _MAKE_                LABEL
Intro
INT12=1
I can talk to you at a time that suits you. Is now an ok time to talk?
1  Yes
2  No
.R  Refused

Consent to phone survey

************************* SINGLE CHOICE - CATI VERSION ***************************
INFO  1         INTR14  3                                             NOLAB
Intro
INTR13=1 or intr12=2
Would ...... at............ be convenient?
Great, I'll call back then. Thank you.
*** Record on log sheet CB ***

*************************** INFORMATION SCREEN ITEM *******************************
INFO  3         INTR15  2                                             NOLAB
Intro
INT12=1 or qloss2=1 or Intro2=.R
OK, thank you for your time.
*** Record on log sheet DR ***

*************************** INFORMATION SCREEN ITEM *******************************
INFO  1         INFIN  3                                             NOLAB
Intro
intr13=1
Great. We would first like to ask some questions about you to make sure that the feedback we collect represents all people who attend our Community Health Services.

*************************** INFORMATION SCREEN ITEM *******************************
CHCE  1 9  INEMP  2       _MAKE_                LABEL
DEMOGRAPHICS
inf1=1
What is your current employment status?
(PROMPT: Read out response options if required)
1  Employed full time
2  Employed part time or casual
3  Unemployed
4  Can't work - health reasons
5  Home duties
6  Student
7 Retired
8 Other
.R Refused

Employment Status
********************************** SINGLE CHOICE - CATI VERSION **********************************
CHCE 1 5 INORI 2 _LABEL
DEMOGRAPHICS
inemp gt .
Are you of Aboriginal or Torres Strait Islander origin?
(PROMPT: Read out response options if required)
1 Yes, Aboriginal origin
2 Yes, Torres Strait Islander origin
3 Yes, both Aboriginal and Torres Strait Islander origin
4 No
.R Refused

Aboriginal/Torres Strait Origin
********************************** SINGLE CHOICE - CATI VERSION **********************************
CHCE 1 4 INORASK 7 _LABEL
DEMOGRAPHICS
inori gt .
During your appointment with ^team^ were you asked this question?
[PROMPT 'Asked what?': If you were of Aboriginal or Torres Strait Islander origin?]
1 Yes
2 No
3 Don't know
.R Refused

Asked Identification Question
********************************** SINGLE CHOICE - CATI VERSION **********************************
CHCE 1 6 INMAR 2 _LABEL
DEMOGRAPHICS
INORASK gt .
What is your present marital status?
(PROMPT: Read out response options if required)
1 Never married
2 Married or living together in a relationship
3 Separated
4 Divorced
5 Widowed
.R Refused

Marital Status
********************************** SINGLE CHOICE - CATI VERSION **********************************
CHCE 1 9 INEDU 2 _LABEL
DEMOGRAPHICS
inmar gt .
What is the highest level of education you have achieved?
(PROMPT: Read out response options if required)
1 Never attended school
2 Some primary school
3 Completed primary school
4 Some high school
5 School certificate, Intermediate, Yr 10, 4th Form
6 Completed HSC, Leaving, Year 12 or 6th Form
7 TAFE certificate or diploma
8 University, CAE, Degree or higher
.R Refused

Education Level
************************** SINGLE CHOICE - CATI VERSION **************************
CHCE 1 4 INMEDYN 4 _MAKE_ LABEL
DEMOGRAPHICS
inedu gt .
In the last two months have you had any conditions for which you needed to take medication or receive medical attention? This can include physical and mental health conditions, for example, high blood pressure, diabetes or depression.
1 Yes
2 No
3 Don't know
.R Refused

Needed Medication
************************** SINGLE CHOICE - CATI VERSION **************************
MULT 1 21 INMED 5 18 mltrib
DEMOGRAPHICS
INMEDYN=1
Which condition(s) would that be?
[PROMPT FOR ALL CONDITIONS]

[NOTE TO INTERVIEWERS: If a Mental Health client, start prompt with DEPRESSION down to ANXIETY DISORDERS, then go back to first option]
1 Heart disease such as a heart attack, angina or heart failure
2 Stroke
3 High blood pressure
4 High blood cholesterol
5 Blood clot (or thrombosis)
6 Diabetes
7 Osteoporosis
8 Cancer
9 Asthma
10 Lung or respiratory cond., but NOT asthma (eg bronchitis, emphysema)
11 Arthritis
12 [DON'T READ OR USE THIS OPTION] Depression, Anxiety, Stress
13 Overweight/Obesity
14 Other significant illness
15 Depression (uni-polar)
16 Bi-polar disorder
17 Schizophrenia and other psychotic disorders
18 Anxiety disorders (with specification
19 Mental Health issues related to alcohol use
20 Mental Health issues related to other substance use
.R Refused
Current Medical Condition/s
Heart disease such as a heart attack, angina or heart failure
Stroke
High blood pressure
High blood cholesterol
Blood clot (or thrombosis)
Diabetes
Osteoporosis
Cancer
Asthma
Lung or respiratory cond., but NOT asthma (eg bronchitis, emphysema)
Arthritis
Depression, Anxiety, Stress
Overweight/Obesity
Other significant illness
Depression (uni-polar)
Bi-polar disorder
Schizophrenia and other psychotic disorders
Anxiety disorders (with specification
Mental Health issues related to alcohol use
Mental Health issues related to other substance use
Refused

*******************MULTIPLE CHOICE - CATI VERSION***************************
OPEN 1 400 INMEDa 1 LABEL DEMOGRAPHICS
substr(inmed,14,1)='1'
Can you please tell me what 'other' significant illness is?
Other illness

******************* OPEN ENDED ENTRY ITEM *********************************
OPEN 1 400 INMEDb 1 LABEL DEMOGRAPHICS
substr(inmed,18,1)='1' and (substr(INMED,14,1)='0' or INMEDa gt '')
Can you please tell me what Anxiety disorder/s?
Other anxiety disorder/s

******************* OPEN ENDED ENTRY ITEM *********************************
INFO 4 INFSM 6 NOLAB
HEALTH RISKS INTRO
INMEDYN in (2 3 .R) or
INMED gt '00000000000000000000000000000000' and substr(INMED,14,1)="0' and
substr(inmed,18,1)="0'
or INMEDa gt " and substr(inmed,18,1)="0' or
INMEDb gt "
The remaining questions ask about all the appointment/s you have had
with "team". We would like to ask about your health habits and whether
you have received any care for these during the appointment/s. There are
no right or wrong answers. The survey is designed to understand what
care is being provided around these health habits and to strengthen this care in the future.

******************* INFORMATION SCREEN ITEM ***********************

CHCE 1 4  ININT 3  _MAKE_  LABEL
HEALTH RISKS INTRO
infsm=1
Firstly, during your appointment/s with ^team^ did staff let you know that they'd be asking you some questions around your health behaviours like physical activity, alcohol and smoking?
1. Yes
2. No
3. Don't know
.R. Refused

Introduce Preventive Care

***************** SINGLE CHOICE - CATI VERSION **********************

CHCE 1 4  INEXP 2  _MAKE_  LABEL
HEALTH RISKS INTRO
ININT=1
Did ^team^ explain why they would be asking you questions around your health behaviours?
1. Yes
2. No
3. Don't know
.R. Refused

Explain why Preventive Care

***************** SINGLE CHOICE - CATI VERSION **********************

CHCE 2 4  HAN 6  _MAKE_  LABEL
HEALTH RISKS INTRO
ININT in (2 3 .R) or INEXP gt .
One of the things ^team^ can do is provide a feedback and information sheet called how healthy are your habits. Do you recall receiving a How Healthy are your habits information sheet from ^team^ tailored to suit you?
(PROMPT: Information sheet lists the things the client is doing well and provides advice on those habits they can improve on)
1. Yes
2. No
3. Don't know
.R. Refused

Healthy Habits Handout

***************** SINGLE CHOICE - CATI VERSION **********************

CHCE 1 4  GP 4  _MAKE_  LABEL
HEALTH RISKS INTRO
han gt .
^team^ can also send your General Practice, Aboriginal Medical Service or other nominated clinician a summary of your health habits. Do you recall whether ^team^ sent a summary of your health habits to your GP or another clinician or if they asked you if it was OK to do this?
1. Yes
Results to GP

*************** SINGLE CHOICE - CATI VERSION ***********************
INFO 1 NUINF1 3 NOLAB
NUTRITION
gp gt .
Now I’d like to ask you more about the care you received around some particular health habits. The first questions ask about care around healthy eating.

******************* INFORMATION SCREEN ITEM ***********************
CHCE 1 4 NUASKV 4 MAKE_ LABEL
NUTRITION
nuinf1=1
During your appointment/s with ^team^ were you asked about how many vegetables you eat?
(PROMPT: Participant was only required to be asked once by the community health clinician - not at every appointment)
1 Yes
2 No
3 Don't know
.R Refused
Asked about vegetables

*************** SINGLE CHOICE - CATI VERSION ***********************
CHCE 1 4 NUASKF 1 MAKE_ LABEL
NUTRITION
nuaskv gt .
Were you asked about how much fruit you eat?
1 Yes
2 No
3 Don't know
.R Refused
Asked about fruit

*************** SINGLE CHOICE - CATI VERSION ***********************
CHCE 1 8 NUVPR 4 MAKE_ LABEL
NUTRITION
nuaskf gt .
In the month before seeing ^team^ how many serves of vegetables did you usually eat each day?
(A serve is half a cup of cooked vegetables or 1 cup of salad vegetables).
1 0
2 1
3 2
4 3
5 4
6 5 or more
7 Don't know
.R Refused
Vegetables pre
*************** SINGLE CHOICE - CATI VERSION ***********************
CHCE  1 4  NUTBAV  4  _MAKE_  LABEL
NUTRITION
nuvpr in (1 2 3 4 5 7 .R)
During your appointment/s were you advised to eat more vegetables?
(PROMPT: Participant was only required to be advised once - not at every appointment)
1  Yes
2  No
3  Don't know
.R  Refused
Nutrition Brief Advice Vegetables
*************** SINGLE CHOICE - CATI VERSION ***********************
CHCE  2 5  NUFPR  4  _MAKE_  LABEL
NUVPR=6 or
nutbav gt .
In the month before seeing ^team^ how many serves of fruit did you usually eat each day?
(A serve is 1 medium piece or 2 small pieces of fruit or 1 cup of diced pieces).
1  0
2  1
3  2 or more
4  Don't know
.R  Refused
Fruit pre
*************** SINGLE CHOICE - CATI VERSION ***********************
CHCE  2 4  NUBAF  3  _MAKE_  LABEL
NUTRITION
nufpr in (1,2,4,.R) and nuvpr=6 or
nuvpr in (1 2 3 4 5 7 .R) and nufpr in (1,2,4,.R)
During your appointment/s were you advised to eat more fruit?
(PROMPT: Participant was only required to be advised once - not at every appointment)
1  Yes
2  No
3  Don't know
.R  Refused
Nutrition Brief Advice Fruit
*************** SINGLE CHOICE - CATI VERSION ***********************
CHCE  2 4  NUGH  7  _MAKE_  LABEL
NUTRITION
nubaf gt . or
nuvpr in (1 2 3 4 5 7 .R) and nufpr=3
Did ^team^ talk to you about a free telephone service called Get Healthy that can help you eat more fruit and vegetables.
[PROMPT: Get Healthy is a NSW Health initiative that provides up to 10 free telephone based coaching calls over a 6 month period to help people with healthy eating, being physically active and reaching and maintaining a healthy weight. Call 1300 806 258]

1       Yes
2       No
3       Don't know
.R      Refused

Nutrition Get Healthy told

Did ^team^ offer to arrange for the Get Healthy telephone service to call you?

1       Yes
2       No
3       Don't know
.R      Refused

Nutrition Get Healthy arrange

Did you accept this offer?

1       Yes
2       No
3       Don't know
.R      Refused

Nutrition Get Healthy accept

What are your reasons for not accepting this offer?
(PROMPT: Read out response options)

1       Don't have the time
2       Don't need/want help
3       Going away
4       Don't know the callers
5       Callers won't understand
6       Other
7       Already accepted offer from other clinician
-1      Don't know
.R      Refused

Nutrition Get healthy didn’t accept

Don't have the time
Don't need/want help
Going away
Don't know the callers
Callers won't understand
Already accepted offer from other clinician
Other
Don't know
Refused

***********************MULTIPLE CHOICE - CATI VERSION******************************
OPEN 1 400 NUGHAN 1 LABEL
NUTRITION
substr(nughn,6,1)='1'
Can you please tell me what 'other' is?
Nutrition Get Healthy didn't accept

****************** OPEN ENDED ENTRY ITEM ***************************************
CHCE 4 4 NUGHH 2 _MAKE_ LABEL
NUTRITION
nugho in (2, 3, .R) or
nugha in (3, .R) or
substr(nughn,6,1)='0' and nughn gt '000000000' or
nughan gt ''
Did ^team^ tell you how to contact the
Get Healthy telephone service for yourself?
1       Yes
2       No
3       Don't know
. R Refused
Nutrition Get Healthy how to contact

****************** SINGLE CHOICE - CATI VERSION *******************************
CHCE 2 5 NUGHY 1 _MAKE_ LABEL
NUTRITION
nugha=1 or
nughh=1
Have you spoken to the Get Healthy telephone service yet?
1       Yes
2       No
3       No, told them not to call yet
4       Don't know
. R Refused
Nutrition Get Healthy called

****************** SINGLE CHOICE - CATI VERSION *******************************
CALC 1 FVWRDCLC0 NOLAB
MODULE SUBMOD 6 1
nughy=1
length FVWRD $20.;
if nuvpr in (1 2 3 4 5 7 .R) and nufpr=3 then FVWRD='vegetables';
if nufpr in (1,2,4,.R) and nuvpr=6 then FVWRD='fruit';
if nuvpr in (1 2 3 4 5 7 .R) and nufpr in (1,2,4,.R) then FVWRD='fruit and vegetables';
FVWRD=lowcase(left(trim(FVWRD))); FVWRDCLC=1;
FVWRD C

****************** CALCULATION ITEM ******************************************
CHCE 1 4 NUGHYU 2 _MAKE_ LABEL
APPENDIX FOUR: Additional material for chapters 2, 5 and 7

NUTRITION

FVWRDCLC=1 or FVWRD gt "

Has the Get Healthy telephone service been useful in helping you to eat more ^FVWRD^?

1       Yes
2       No
3       Don't know
.R      Refused

Nutrition Get Healthy useful?

******************** SINGLE CHOICE - CATI VERSION **********************

OPEN  1 400   NUGHYH  1  

Why do you think it has been helpful?

Nutrition Get Healthy helpful

******************** OPEN ENDED ENTRY ITEM *******************************

OPEN  1 400   NUGHYN  1  

Why do you think it has not been helpful?

Nutrition Get Healthy NOT helpful

******************** OPEN ENDED ENTRY ITEM *******************************

CHCE  3 4   NUSFV  4  

Were you advised by ^team^ to use any other type of support to help you eat more fruit and vegetables?

(PROMPT: Support can include visiting a professional or support group, reading information relating to the health habit etc)

1       Yes
2       No
3       Don't know
.R      Refused

Nutrition support F&V

******************** SINGLE CHOICE - CATI VERSION **************************

CHCE  3 4   NUSV  4  

Were you advised by ^team^ to use any other type of support to help you eat more vegetables?

(PROMPT: Support can include visiting a professional or support group, reading information relating to the health habit etc)

1       Yes
2       No
3       Don't know
.R      Refused
Nutrition support vegetables

****************** SINGLE CHOICE - CATI VERSION **********************
CHCE  3 4   NUSF 4 _MAKE_ LABEL
NUTRITION
nuvpr=6 and nufpr in (1,2,4,.R) and
(nughh gt . or nugh in (2,3,.R) or nughy in (2,3,4,.R) or nughyu
in (3,.R) or nughygt " or NUGHYN gt ")
Were you advised by ^team^ to use any other type of support to help you eat
more fruit?
(PROMPT: Support can include visiting a professional or support
group, reading information relating to the health habit etc)
1 Yes
2 No
3 Don't know
.R Refused

Nutrition support fruit

****************** SINGLE CHOICE - CATI VERSION **********************
MULT  3 10  NUSW 2 8 mtlb
NUTRITION
nusfv=1 or
nusv=1 or
nusf=1
What support was advised?
(PROMPT: Read out response options)
1 General Practice
2 Aboriginal medical service
3 Dietician HNE
4 Dietician other
5 Support group HNE
6 Support group other
7 Internet website
8 Other
-1 Don't know
.R Refused
General Practice
General Practice
Aboriginal medical service
Dietician HNE
Dietician other
Support group HNE
Support group other
Internet website
Other
Don't know
Refused

******************MULTIPLE CHOICE - CATI VERSION**********************
OPEN  1 400  NUSWO 1
NUTRITION
substr(nusw,8,1)='1'
Can you please tell me what 'other' is?
Nutrition specify other support advised

******************** OPEN ENDED ENTRY ITEM ****************************
CHCE 5 4 NUSIN 3 ___MAKE__ LABEL
NUTRITION
nusfv in (2,3,.R) or
nusv in (2,3,.R) or
nusf in (2,3,.R) or
substr(nusw,8,1)='0' and NUSW gt '0000000000' or
nuswo gt "

Have you used any support since your visit?
(PROMPT: Support can include visiting a professional or support
group, reading information relating to the health habit etc)
1       Yes
2       No
3       Don't know
.R      Refused

Nutrition used support

******************** SINGLE CHOICE - CATI VERSION ****************************
MULT 1 10 NUSNW 2 7 mltlb
NUTRITION
nusin=1
What type of support have you used?
(PROMPT: Read out response options)
1       General Practice
2       Aboriginal medical service
3       Dietician HNE
4       Dietician other
5       Support group HNE
6       Support group other
7       Internet website
8       Other
-1      Don't know
.R      Refused

Other support used F&V
General Practice
Aboriginal medical service
Dietician HNE
Dietician other
Support group HNE
Support group other
Internet website
Other
Don't know
Refused

***********************MULTIPLE CHOICE - CATI VERSION***************************
OPEN 1 400 NUSNWO 1 LABEL
NUTRITION
substr(nusnw,8,1)='1'
Can you please tell me what 'other' is?

Nutrition support used other
Were you provided with any information resources about fruit and vegetables. For example, booklets or pamphlets.

1 Yes
2 No
3 Don't know
.R Refused

Nutrition Information Resources

What information resources were provided?
(PROMPT: Read out response options)
1 Booklet/pamphlet
2 Personalised info(eg clinician notes)
3 Sticker
4 Other
-1 Don't know
.R Refused

Nutrition Information Resources Type
Booklet/pamphlet
Personalised info(eg clinician notes)
Sticker
Other
Don't know
Refused

Can you please tell me what 'other' is?

Self protections for NUVPO

How many serves of vegetables do you usually eat each day now?
APPENDIX FOUR: Additional material for chapters 2, 5 and 7

Vegetables post

CHCE  1 4       NUVCNG  2                      _MAKE_                 LABEL
NUTRITION
nupvo in (1 2 3 4 5 7 .R)
Are you seriously thinking about eating more vegetables in the next month?
1       Yes
2       No
3       Don't Know
.R      Refused

Thinking about V change

Fruit post

CHCE  1 4       NUFCNG  2                      _MAKE_                 LABEL
NUTRITION
nufpo in (1 2 4 .R)
Are you seriously thinking about eating more fruit in the next month?
1       Yes
2       No
3       Don't Know
.R      Refused

Thinking about F change
APPENDIX FOUR: Additional material for chapters 2, 5 and 7

*************** SINGLE CHOICE - CATI VERSION ***********************
NULL 3  NULL3 1  NOLAB
NUTRITION
(nuvcng gt . or nuvpo=6) and nuvpr in (1 2 3 4 5 7 .R) and nufpr=3 or
nufcng gt . or nufpo=3 or
nuvpr=6 and nufpr=3
Brings everyone back together
*************** NULL ITEM - DOES NOTHING ***********************
INFO 1  NUINF2 4  NOLAB
NUTRITION
NULL3=1
We would now like to ask you how strongly you agree or disagree
with care being provided at community health for eating fruit
and vegetables. The response options are strongly agree, agree,
unsure, disagree and strongly disagree.
*************** INFORMATION SCREEN ITEM ***********************
CHCE 1 6  NUAA 2   _MAKE_ LABEL
NUTRITION
nuinf2=1
It is acceptable for ^team^ to ask you about
how much fruit and vegetables you eat.
1   Strongly disagree
2   Disagree
3   Unsure
4   Agree
5   Strongly agree
.R    Refused
Nutrition acceptable ask
*************** SINGLE CHOICE - CATI VERSION ***********************
CHCE 3 6  NUABA 2   _MAKE_ LABEL
NUTRITION
nuaa gt . and
(nuvpr in (1 2 3 4 5 7 .R) or
nufpr in (1,2,4,.R))
It is acceptable for ^team^ to advise you to
increase how much fruit or vegetables you eat.
1   Strongly disagree
2   Disagree
3   Unsure
4   Agree
5   Strongly agree
.R    Refused
Nutrition acceptable advise
*************** SINGLE CHOICE - CATI VERSION ***********************
CHCE 1 6  NUAFS 2   _MAKE_ LABEL
NUTRITION
nuaba gt .
It is acceptable for ^team^ to arrange further
support for you to help you eat more fruit or vegetables.
1   Strongly disagree
Nutrition acceptable arrange

*************** SINGLE CHOICE - CATI VERSION **********************

INFO 3 PAINF1 6 NOLAB

PHYSICAL ACTIVITY

nuaa gt . and
(nuvpr=6 and nufpr=3) or
nuafs gt .

The next questions ask about physical activity. By physical activity we mean any activity that increases your heart rate or makes you breathe harder than normal. This can include brisk walking, swimming, team sports or even things like gardening. You can add up your total time during the day, for example walking to the shops and back.

*************** INFORMATION SCREEN ITEM ***********************

CHCE 1 4 PAASK 4 MAKE_ LABEL

PHYSICAL ACTIVITY

painf1=1

During your appointment/s with team were you asked about how much physical activity you do?
(PROMPT: Participant was only required to be asked once by the community health clinician - not at every appointment)

1  Yes
2  No
3  Don't know
.R  Refused

Asked physical activity

*************** SINGLE CHOICE - CATI VERSION **********************

CHCE 1 9 PAPR 3 MAKE_ LABEL

PHYSICAL ACTIVITY

paask gt .

In the month before seeing team how many days a week did you usually do 30 minutes or more of physical activity?

1  0
2  1
3  2
4  3
5  4
6  5 or more
7  Don't know
8  Can't for health or treatment reasons [Do not read out]
.R  Refused

physical activity pre

*************** SINGLE CHOICE - CATI VERSION **********************

CHCE 1 4 PABA 4 MAKE_ LABEL
PHYSICAL ACTIVITY
papr in (1 2 3 4 5 7 .R)
During your appointment/s, were you advised to do more physical activity?
(PROMPT: Participant was only required to be advised once - not at every appointment)
1       Yes
2       No
3       Don't know
.R      Refused
Physical activity Brief advice
*************** SINGLE CHOICE - CATI VERSION ***********************
CHCE  1 4       PAGH    6                      _MAKE_                 LABEL
PHYSICAL ACTIVITY
paba gt .
Did ^team^ tell you about a free telephone service
called Get Healthy that can help increase your physical activity.
[PROMPT: It is a NSW Health initiative that provides up to 10 free
telephone based coaching calls over a 6 month period to help people
with healthy eating, being physically active and reaching and
maintaining a healthy weight. Call 1300 806 258]
1       Yes
2       No
3       Don't know
.R      Refused
Physical Activity Get Healthy told
*************** SINGLE CHOICE - CATI VERSION ***********************
CHCE  1 4       PAGHO   2                      _MAKE_                 LABEL
PHYSICAL ACTIVITY
pagh=1
Did ^team^ offer to arrange for the Get
Healthy telephone service to call you?
1       Yes
2       No
3       Don't know
.R      Refused
Physical Activity Get Healthy arrange
*************** SINGLE CHOICE - CATI VERSION ***********************
CHCE  1 4       PAGHA   1                      _MAKE_                 LABEL
PHYSICAL ACTIVITY
pagho=1
Did you accept this offer?
1       Yes
2       No
3       Don't know
.R      Refused
Physical Activity Get Healthy accept
*************** SINGLE CHOICE - CATI VERSION ***********************
MULT  1 9       PAGHN   2                                     7       mltlb
NUTRITION
pagha=2
What are your reasons for not accepting this offer?
(PROMPT: Read out response options)
1 Don't have the time
2 Don't need/want help
3 Going away
4 Don't know the callers
5 Callers won't understand
6 Other
7 Already accepted offer from other clinician
-1 Don't know
.R Refused
Physical activity Get healthy didn't accept
Don't have the time
Don't need/want help
Going away
Don't know the callers
Callers won't understand
Already accepted offer from other clinician
Other
Don't know
Refused

**************************MULTIPLE CHOICE - CATI VERSION**************************
OPEN 1 600 PAGHAN 1 LABEL
PHYSICAL ACTIVITY
substr(paghn,6,1)='1'
Can you please tell me what 'other' is?
PA Get Healthy didn't accept

**************************OPEN ENDED ENTRY ITEM******************************
NULL 4 NULLPA 1 NOLAB
NUTRITION
pagho in (2,3,.R) or
pagha in (3,.R) or
substr(paghn,6,1)='0' and paghn gt '000000000' or
paghan gt " or papr in (6 8)
Self protections for NUVPO

**************************NULL ITEM - DOES NOTHING**************************
CHCE 1 6 PANUACC14 MAKE_ LABEL
NUTRITION
NULLPA=1 and (PAGHO in (2 3 .R) or NUGHO in (2 3 .R))
Please tell me your agreement with the following statement:

It would be acceptable for *team* to offer you a referral to the Get Healthy telephone service?
1 Strongly disagree
2 Disagree
3 Unsure
4 Agree
5 Strongly agree
.R Refused
Get Healthy acceptable offer referral

*************** SINGLE CHOICE - CATI VERSION ****************************
CHCE 1 4 PANUACC22 _MAKE_ LABEL
PHYSICAL ACTIVITY
PANUACC1 gt .
Would you have accepted a referral to the Get Healthy telephone service if it was offered?
1 Yes
2 No
3 Don't know
.R Refused

Get Healthy accepted offer to refer

*************** SINGLE CHOICE - CATI VERSION ****************************
CHCE 2 4 PAGHH 2 _MAKE_ LABEL
PHYSICAL ACTIVITY
NULLPA and (PAGHO=1 and NUGHO=1)
or PANUACC2 gt . and papr in (1 2 3 4 5 7 .R)
Did ^team^ tell you how to contact the Get Healthy telephone service for yourself?
1 Yes
2 No
3 Don't know
.R Refused

PA Get Healthy how to contact

*************** SINGLE CHOICE - CATI VERSION ****************************
CHCE 2 5 PAGHY 1 _MAKE_ LABEL
PHYSICAL ACTIVITY
pagha=1 or
paghh=1
Have you spoken to the Get Healthy telephone service yet?
1 Yes
2 No
3 No, told not to call yet
4 Don't know
.R Refused

Physical Activity Get Healthy called

*************** SINGLE CHOICE - CATI VERSION ****************************
CHCE 1 4 PAGHYU 2 _MAKE_ LABEL
PHYSICAL ACTIVITY
paghy=1
Has the Get Healthy telephone service been useful in helping you to do more physical activity?
1 Yes
2 No
3 Don't know
.R Refused

Physical Activity Get Healthy useful?
paghyu=1
Why do you think it has been helpful?
Physical Activity Get Healthy helpful

********************************************************** OPEN ENDED ENTRY ITEM **********************************************************
OPEN 1 400 PAGHYN 1 LABEL
PHYSICAL ACTIVITY
paghyu=2
Why do you think it has not been helpful?
Physical Activity Get Healthy NOT helpful

********************************************************** OPEN ENDED ENTRY ITEM **********************************************************
CHCE 4 4 PAS 4 MAKE LABEL
PHYSICAL ACTIVITY
pagh in (2,3,.R) or paghh in (2,3,.R) or paghy in (2,3,4,.R) or paghyu in (3,.R) or paghyh gt " or PAGHYN gt "
Were you advised by ^team^ to use any other type of support to help you do more physical activity?
(PROMPT: Support can include visiting a professional or support group, reading information relating to the health habit etc)
1 Yes
2 No
3 Don't know
.R Refused

Physical Activity advised support

********************************************************** SINGLE CHOICE - CATI VERSION **********************************************************
MULT 1 11 PASW 2 9 mltlb
PHYSICAL ACTIVITY
pas=1
What support was advised?
(PROMPT: Read out response options)
1 General Practice
2 Aboriginal Medical Service
3 Physiotherapist at the health service
4 Physiotherapist in private practice
5 Physiotherapist location unknown
6 Community Exercise Group at health service
7 Community Exercise Group at community venue/facility
8 Internet website
9 Other
-1 Don't know
.R Refused
PA type support advised
General Practice
Aboriginal Medical Service
Physiotherapist at the health service
Physiotherapist in private practice
Physiotherapist location unknown
Community Exercise Group at health service
Community Exercise Group at community venue/facility
Internet website
Other
Don't know
Refused

***************************MULTIPLE CHOICE - CATI VERSION***************************
OPEN 1 400 PASWO 1 LABEL
PHYSICAL ACTIVITY
substr(pasw,9,1)='1'
Can you please tell me what 'other' is?
Physical Activity advised other

*************************** OPEN ENDED ENTRY ITEM ***************************
CHCE 3 4 PASIN 3 _MAKE_ LABEL
PHYSICAL ACTIVITY
pas in (2,3,.R) or
substr(pasw,9,1)='0' and pasw gt '00000000000' or
paswo gt "
Have you used any support since your visit?
(PROMPT: Support can include visiting a professional or support group, reading information relating to the health habit etc)
1 Yes
2 No
3 Don't know
.R Refused
Physical activity used any support

*************************** SINGLE CHOICE - CATI VERSION ***************************
MULT 1 11 PASNW 2 8 mltlb
PHYSICAL ACTIVITY
pasin=1
What type of support have you used?
(PROMPT: Read out response options)
1 General Practice
2 Aboriginal Medical Service
3 Physiotherapist at the health service
4 Physiotherapist in private practice
5 Physiotherapist location unknown
6 Community Exercise Group at health service
7 Community Exercise Group at community venue/facility
8 Internet website
9 Other
-1 Don't know
.R Refused
PA type support advised
General Practice
Aboriginal Medical Service
Physiotherapist at the health service
Physiotherapist in private practice
Physiotherapist location unknown
Community Exercise Group at health service
Community Exercise Group at community venue/facility
Internet website
APPENDIX FOUR: Additional material for chapters 2, 5 and 7

**Other**
Don't know
Refused

***************************MULTIPLE CHOICE - CATI VERSION***************************
OPEN 1 400 PASNWO 1 LABEL
PHYSICAL ACTIVITY
substr(pasn,9,1)=’1’
Can you please tell me what 'other' is?
Physical activity used other

*************************** OPEN ENDED ENTRY ITEM ***************************
CHCE 3 4 PAIR 2 _MAKE_ LABEL
PHYSICAL ACTIVITY
pasin in (2,3,.R) or
substr(pasn,9,1)=’0’ and pasnw gt '00000000000' or
pasnwo gt ''

**PHYSICAL ACTIVITY Information Resources**

*************************** SINGLE CHOICE - CATI VERSION ***************************
MULT 1 6 PAIRW 2 4 mltlb LABEL
PHYSICAL ACTIVITY
pair=1
What information resources were provided?
(PROMPT: Readout response options)
1 Booklet/pamphlet
2 Personalised info(eg clinician notes)
3 Sticker
4 Other
-1 Don't know
.R Refused

PA Information Resources Type
Booklet/pamphlet
Personalised info(eg clinician notes)
Sticker
Other
Don't know
Refused

***************************MULTIPLE CHOICE - CATI VERSION***************************
OPEN 1 400 PAIRWO 1 LABEL
PHYSICAL ACTIVITY
substr(pairw,4,1)=’1’
Can you please tell me what 'other' is?
PA Information Resource other

*************************** OPEN ENDED ENTRY ITEM ***************************
CHCE 3 9 PAPO 2 _MAKE_ LABEL
PHYSICAL ACTIVITY
pair in (2,3,.R) or
substr(pairw,4,1)='0' and pairw gt '000000' or
pairwo gt ''

How many days a week do you usually do 30 minutes or more of physical activity now?
1  0
2  1
3  2
4  3
5  4
6  5 or more
7  Don't know
8  Can't for health or treatment reasons [Do not read out]
  .R  Refused

Physical Activity post
************************** SINGLE CHOICE - CATI VERSION **************************
CHCE  1 5   PACNG  2   _MAKE_                 LABEL
PHYSICAL ACTIVITY
papo in (1 2 3 4 5 7 .R)

Are you seriously thinking about doing more physical activity in the next month?
1  Yes
2  No
3  Don't Know
4  Can't for health or treatment reasons [Do not read out]
  .R  Refused

Thinking about PA change
************************** SINGLE CHOICE - CATI VERSION **************************
INFO  2         PAINF2  7                                             NOLAB
PHYSICAL ACTIVITY
pacng gt . or papo in (6 8) or
NULLPA=1 and (PAGHO=. or NUGHO=.) or PANUACC2 gt . and papr in (6 8)

We would now like to ask you how strongly you agree or disagree with care being provided at community health for physical activity. The response options are strongly agree, agree, unsure, disagree and strongly disagree.
(PROMPT: If you have read the response options to the participant before you may just want to say 'The response options are the same as before')

************************** INFORMATION SCREEN ITEM **************************
CHCE  1 6   PAAA    2                      _MAKE_                 LABEL
PHYSICAL ACTIVITY
painf2=1

It is acceptable for ^team^ to ask you about how much physical activity you do.
1  Strongly disagree
2  Disagree
3  Unsure
4  Agree
5  Strongly agree
.R Refused

Physical Activity acceptable ask

**************************** SINGLE CHOICE - CATI VERSION ****************************

CHCE 2 6 PAABA 2 _MAKE_ LABEL
PHYSICAL ACTIVITY
paaa gt . and
papr in (1 2 3 4 5 7 .R)
It is acceptable for ^team^ to advise you to
do more physical activity.
1 Strongly disagree
2 Disagree
3 Unsure
4 Agree
5 Strongly agree
.R Refused

Physical activity acceptable advise

**************************** SINGLE CHOICE - CATI VERSION ****************************

CHCE 1 6 PAAFS 3 _MAKE_ LABEL
PHYSICAL ACTIVITY
paaba gt .
It is acceptable for ^team^ to
arrange further support for you to help you do more physical activity.
1 Strongly disagree
2 Disagree
3 Unsure
4 Agree
5 Strongly agree
.R Refused

Physical activity acceptable arrange

**************************** SINGLE CHOICE - CATI VERSION ****************************

INFO 2 SMINF1 1 NOLAB
SMOKING
(paaa gt . and papr ln (6 8)) or
paafs gt .
The next set of questions ask about smoking.

****************************** INFORMATION SCREEN ITEM **********************************

CHCE 1 4 SMASK 4 _MAKE_ LABEL
SMOKING
sminf1=1
During your appointment/s with ^team^ were you asked if you smoke any tobacco products?
(PROMPT: Participant was only required to be asked once by the community health clinician - not at every appointment)
1 Yes
2 No
3 Don't know
.R Refused

Asked smoking

**************************** SINGLE CHOICE - CATI VERSION ****************************
In the month before seeing the team were you a smoker of any tobacco products?

[PROMPT: Read out response options for participant to pick best fit category]
1. Yes, daily
2. Yes, at least once a week
3. Yes, less than once a week
4. Not at all (quit less than 4 months ago)
5. Not at all (quit 4 months or more ago)
6. Not at all (never smoked)
.R. Refused

How many cigarettes per day did you usually smoke?

[PROMPT: If participant indicates that they smoke cigars or pipes, record how many per day or week on logsheet]
1. 10 or less
2. 11 to 20
3. 21 to 30
4. 31 or more
5. Don't know
.R. Refused

How soon after waking did you usually have your first smoke?
1. Within 5 minutes
2. 6 to 30 minutes
3. 31 to 60 minutes
4. More than 60 minutes
5. Don't know
.R. Refused

During your appointment/s, were you advised to quit smoking?
(PROMPT: Participant was only required to be advised once - not at every appointment)
1. Yes
2 No
3 Don't know
.R Refused

Smoking Brief Advice

******************* SINGLE CHOICE - CATI VERSION *******************

CHCE 1 4 SMM 3 _MAKE_ LABEL
SMOKING smbgt.

Were you advised that Nicotine Replacement Therapy (NRT), such as patches and gum, or other medications can help with quitting smoking?
1 Yes
2 No
3 Don't know
.R Refused

Smoking NRT and medication

******************* SINGLE CHOICE - CATI VERSION *******************

CHCE 1 4 SMMTU 1 _MAKE_ LABEL
SMOKING smm=1

Have you used any of these since your visit?
1 Yes
2 No, but arranged to
3 No
.R Refused

Smoking NRT used

******************* SINGLE CHOICE - CATI VERSION *******************

MULT 1 9 SMMW 2 7 mltlb
SMOKING smmtu=1

What have you used?
(PROMPT: Read out response options)
1 NRT Patches
2 NRT lozenge
3 NRT gum
4 NRT - other type or unsure of type
5 Champix
6 Zyban
7 Medication - other type or unsure of type
-1 Don't know
.R Refused

Smoking NRT Type
NRT Patches
NRT lozenge
NRT gum
NRT - other type or unsure of type
Champix
Zyban
Medication - other type or unsure of type
Don't know
Refused

**********MULTIPLE CHOICE - CATI VERSION**********

CHCE  3 4    SMQ  5    _MAKE_    LABEL
SMOKING
smm in (2,3,.R) or
smmtu in (2,3,.R) or
smmw gt '000000000'

Did ^team^ talk to you about a free telephone
service that can support you to quit smoking called the Quitline?

[PROMPT: The Quitline is a free and confidential service to help
you quit smoking. By calling you can be sent a free quit kit
or speak to a trained advisor. Phone 137 848 (13 QUIT)]

1       Yes
2       No
3       Don't know
.R      Refused

Smoking Quitline told

********** SINGLE CHOICE - CATI VERSION **********

CHCE  1 4    SMQO  2    _MAKE_    LABEL
SMOKING
smq=1

Did ^team^ offer to arrange for
the Quitline to call you?

1       Yes
2       No
3       Don't know
.R      Refused

Smoking Quitline arrange

********** SINGLE CHOICE - CATI VERSION **********

CHCE  1 4    SMQA  1    _MAKE_    LABEL
SMOKING
smqo=1

Did you accept this offer?

1       Yes
2       No
3       Don't know
.R      Refused

Smoking Quitline accept

********** SINGLE CHOICE - CATI VERSION **********

MULT  1 9    SMQN  2    7    mltlb
SMOKING
smqa=2

What are your reasons for not accepting this offer?

(PROMPT: Read out response options)

1       Don't have the time
2       Don't need/want help
3       Going away
4       Don't know the callers
5       Callers won't understand
6       Already offered by other clinician
7 Other
-1 Don't know
.R Refused
Don't have the time
Don't need/want help
Going away
Don't know the callers
Callers won't understand
Already offered by other clinician
Other
Don't know
Refused
Smoking quitline didn't accept

*******************MULTIPLE CHOICE - CATI VERSION**********************
OPEN 1 600 SMQAN 1 LABEL SMOKING
substr(smqn,7,1)='1'
Can you please tell me what 'other' is?
Smoking Quitline didn't accept

******************* OPEN ENDED ENTRY ITEM *******************************
NULL 3 NULLSMQ 1 NOLAB NUTRITION
smqo in (2,3,.R) or smqa in (3,.R) or
substr(smqn,7,1)='0' and smqn gt '000000000' or
smqan gt ''
Self protections for NUVPO

***************** SINGLE CHOICE - CATI VERSION **************************
CHCE 1 6 SMQACC1 3 _MAKE_ LABEL NUTRITION
NULLSMQ=1 and SMQO in (2 3 .R)
Please tell me your agreement with the following statement:
It would be acceptable for ^team^ to offer you a referral to the Quitline?
1 Strongly disagree
2 Disagree
3 Unsure
4 Agree
5 Strongly agree
.R Refused
Quitline acceptable offer referral

***************** SINGLE CHOICE - CATI VERSION **************************
CHCE 1 4 SMQACC2 1 _MAKE_ LABEL PHYSICAL ACTIVITY
SMQACC1 gt .
Would you have accepted a referral to the Quitline if it was offered?
1 Yes
2 No
3 Don't know
.R Refused
Quitline accepted offer to refer
*************** SINGLE CHOICE - CATI VERSION ***********************
CHCE 2 4  SMQH  2  _MAKE_  LABEL
SMOKING
NULLSMQ=1 and SMQO=1
or smqacc2 gt.
Did ^team^ tell you how to contact the Quitline for yourself?
1 Yes
2 No
3 Don't know
.R Refused
Smoking Quitline how to contact
*************** SINGLE CHOICE - CATI VERSION ***********************
CHCE 2 5  SMQY  1  _MAKE_  LABEL
SMOKING
smqa=1 or smqh=1
Have you spoken to the Quitline yet?
1 Yes
2 No
3 No, told not to call yet
4 Don't know
.R Refused
Smoking Quitline called yet
*************** SINGLE CHOICE - CATI VERSION ***********************
CHCE 1 4  SMQYU  1  _MAKE_  LABEL
SMOKING
smqy=1
Has the Quitline been useful in helping you to quit smoking?
1 Yes
2 No
3 Don't know
.R Refused
Smoking Quitline useful?
*************** OPEN ENDED ENTRY ITEM ***********************
OPEN 1 400  SMQYH  1  LABEL
SMOKING
smqyu=1
Why do you think it has been helpful?
Smoking Quitline helpful
*************** OPEN ENDED ENTRY ITEM ***********************
OPEN 1 400  SMQYNH  1  LABEL
SMOKING
smqyu=2
Why do you think it has not been helpful?
Smoking Quitline NOT helpful
*************** OPEN ENDED ENTRY ITEM ***********************
CHCE 4 4  SMS  4  _MAKE_  LABEL
SMOKING
smq in (2,3,.R) or
smqh in (2,3,.R) or
smqy in (2,3,4,.R) or
smqyu in (3,.R) or smqyh gt " or smqynh gt "
Were you advised by ^team^ to use any other type of support to help you quit smoking?
(PROMPT: Support can include visiting a professional or support group, reading information relating to the health habit etc)
1 Yes
2 No
3 Don't know
.R Refused
Smoking advised other support
******************************************************************* SINGLE CHOICE - CATI VERSION ****************************
MULT 1 9 SMSW 2 7 mltlb
SMOKING
sms=1
What support was advised?
(PROMPT: Read out response options)
1 General Practice
2 Aboriginal Medical Service
3 Pharmacist
4 Support group HNE
5 Support group other
6 Internet website
7 Other
-1 Don't know
.R Refused
Smoking type support advised
General Practice
Aboriginal Medical Service
Pharmacist
Support group HNE
Support group other
Internet website
Other
Don't know
Refused
******************************************************************* MULTIPLE CHOICE - CATI VERSION*******************************************************************
OPEN 1 400 SMSWO 1 LABEL
SMOKING
substr(smsw,7,1)="1"
Can you please tell me what 'other' is?
Smoking type support other
******************************************************************* OPEN ENDED ENTRY ITEM*******************************************************************
CHCE 3 4 SMSIN 3 _MAKE_ LABEL
SMOKING
sms in (2,3,.R) or
substr(smsw,7,1)="0' and smsw gt '000000000' or
smswo gt 
Have you used any support since your visit?
(PROMPT: Support can include visiting a professional or support
group, reading information relating to the health habit etc)
1 Yes
2 No
3 Don't know
.R Refused
Smoking used any support

*************** SINGLE CHOICE - CATI VERSION ***********************
MULT 1 9     SMSNW 2         7      mltlb
SMOKING
smsin=1
What type of support have you used?
(PROMPT: Read out response options)
1 General Practice
2 Aboriginal Medical Service
3 Pharmacist
4 Support group
5 Internet website
6 Quitline
7 Other
-1 Don't know
.R Refused
Smoking type support used
General Practice
Aboriginal Medical Service
Pharmacist
Support group
Internet website
Quitline
Other
Don't know
Refused

***************MULTIPLE CHOICE - CATI VERSION*******************
OPEN 1 400  SMSNWO 1   LABEL
SMOKING
substr(smsnw,7,1)='1'
Can you please tell me what 'other' is?
Smoking used other support

*************** OPEN ENDED ENTRY ITEM ***********************
CHCE 3 4     SMIR 2     _MAKE_   LABEL
SMOKING
smsin in (2,3,.R) or
substr(smsnw,7,1)='0' and smsnw gt '000000000' or
smsnw gt 
Were you provided with any information resources about smoking.
For example, pamphlets or booklets.
1 Yes
2 No
3 Don't know
.R Refused
Smoking Information Resources

*************** SINGLE CHOICE - CATI VERSION ********_______________
MULT 1 7      SMIRW 2                          5      mltlb
SMOKING
smir=1
What information resources were provided?
(PROMPT: Read out response options)
1  Quit Kit
2  Booklet/pamphlet
3  Personalised info(eg clinician notes)
4  Sticker
5  Other
-1  Don't know
 .R  Refused
Smoking IR type
Quit kit
Booklet/pamphlet
Personalised info(eg clinician notes)
Sticker
Other
Don't know
Refused

***************MULTIPLE CHOICE - CATI VERSION********_______________
OPEN 1 400     SMIRWO 1                         LABEL
SMOKING
substr(smirw,5,1)='1'
Can you please tell me what 'other' is?
Smoking Information Resources other

*************** OPEN ENDED ENTRY ITEM .............................
CHCE 3 6      SMCGPO 1                      _MAKE_                         LABEL
SMOKING
smir in (2,3,.R) or
substr(smirw,5,1)='0' and smirw gt '0000000' or
smirwo gt "
Are you a smoker of any tobacco products now?
1  Yes, daily
2  Yes, at least once a week
3  Yes, less than once a week
4  Not at all (trying to quit)
5  Not at all (quit greater than 4 months ago)
 .R  Refused
Smoker post

*************** SINGLE CHOICE - CATI VERSION ...........................
CHCE 1 6      SMNCPO 1                      _MAKE_                         LABEL
SMOKING
smcgpo=1
How many cigarettes are you usually smoking each day?
1  10 or less
2  11 to 20
3  21 to 30
4       31 or more
5       Don't know
.R       Refused

Cigarettes per day post

************* SINGLE CHOICE - CATI VERSION ***********************
CHCE 1 6           SMN2PO 1        _MAKE_       LABEL
SMOKING
smncpo gt .

How soon after waking are you usually having your first smoke?
1       Within 5 minutes
2       6 to 30 minutes
3       31 to 60 minutes
4       More than 60 minutes
5       Don't know
.R       Refused

Smoking 30 mins post

************* SINGLE CHOICE - CATI VERSION ***********************
CHCE 1 4           QUITP 2        _MAKE_       LABEL
SMOKING
smn2po gt .

In the last year, did you ever on purpose quit smoking for at least 24 hours?
1       Yes
2       No
3       Don't know
.R       Refused

Quit on purpose

************* SINGLE CHOICE - CATI VERSION ***********************
CHCE 1 4           QUITT 1        _MAKE_       LABEL
SMOKING
quitp gt .

Are you seriously thinking about quitting smoking?
1       Yes
2       No
3       Don't know
.R       Refused

Thinking about quitting

************* SINGLE CHOICE - CATI VERSION ***********************
CHCE 1 6           QUITW 1        _MAKE_       LABEL
SMOKING
quitt gt .

How much do you want to quit smoking?
1       Not at all
2       A little
3       Some
4       Very much
5       Don't know
.R       Refused

How much want to quit
APPENDIX FOUR: Additional material for chapters 2, 5 and 7

CHCE 16  QUILTS 2  _MAKE_  LABEL
SMOKING
quitw gt .
If you decided to quit completely, how sure are you that you
would be able to do it?
1 Not at all sure
2 A little sure
3 Somewhat sure
4 Very sure
5 Don't know
.R Refused
How sure that you can quit
******************************************************************************
CHCE 14  QUITPL 1  _MAKE_  LABEL
SMOKING
quits gt .
Do you plan to quit smoking?
1 Yes
2 No
3 Don't know
.R Refused
Plan to quit
******************************************************************************
CHCE 16  QUITWH 1  _MAKE_  LABEL
SMOKING
quitpl=1
By when do you plan to quit?
1 1 month
2 3 months
3 6 months
4 More than 6 months
5 Don't know
.R Refused
When to quit
******************************************************************************
CHCE 16  QUID 1  _MAKE_  LABEL
SMOKING
quitwh gt .
How determined are you to quit?
1 Not at all determined
2 A little determined
3 Somewhat determined
4 Very determined
5 Don't know
.R Refused
Determined to quit
******************************************************************************
INFO 4  SMINF2 7  NOLAB
SMOKING
quitpl in (2,3,.R) or
quitd gt . or
smcgpr in (4,5,6) or
smcgpo in (2,3,4,5,.R)
We would now like to ask you how strongly you agree or disagree
with care being provided at community health for smoking.
The response options are strongly agree, agree, unsure, disagree
and strongly disagree.
(PROMPT: If you have read the response options to the participant
before you may just want to say "The response options are the same
as before")

******************* INFORMATION SCREEN ITEM ****************************
CHCE 1 6   SMAA 2    _MAKE_                   LABEL
SMOKING
sminf2=1
It is acceptable for ^team^ to ask
you if you smoke any tobacco products.
1    Strongly disagree
2    Disagree
3    Unsure
4    Agree
5    Strongly agree
.R   Refused
Smoking acceptable ask

***************** SINGLE CHOICE - CATI VERSION ****************************
CHCE 2 6   SMABA 2    _MAKE_                   LABEL
SMOKING
smaa gt . and
smcgpr in (1,2,3,.R)
It is acceptable for ^team^ to advise
you to quit smoking.
1    Strongly disagree
2    Disagree
3    Unsure
4    Agree
5    Strongly agree
.R   Refused
Smoking acceptable advise

***************** SINGLE CHOICE - CATI VERSION ****************************
CHCE 1 6   SMAFS 2    _MAKE_                   LABEL
SMOKING
smaba gt .
It is acceptable for ^team^ to
arrange further support for you to help you quit smoking.
1    Strongly disagree
2    Disagree
3    Unsure
4    Agree
5    Strongly agree
.R   Refused
Smoking acceptable arrange
APPENDIX FOUR: Additional material for chapters 2, 5 and 7

*************** SINGLE CHOICE - CATI VERSION ***********************
INFO 3 ALINF1 1 NOLAB
ALCOHOL
smafs gt . or
smaa gt . and
smcgpr in (4,5,6)
The next questions are about alcohol.

*************** INFORMATION SCREEN ITEM ***********************
CHCE 1 4 ALASK 4 _MAKE_ LABEL
ALCOHOL
alinf1=1
During your appointment/s with ^team^ were you asked about how much alcohol you drink?
(PROMPT: Participant was only required to be asked once by the community health clinician - not at every appointment)
1 Yes
2 No
3 Don't know
.R Refused

*************** SINGLE CHOICE - CATI VERSION ***********************
CHCE 1 7 ALADPR 4 _MAKE_ LABEL
ALCOHOL
alask gt .
In the month before seeing ^team^ how often did you have a drink containing alcohol?
[PROMPT: Read out the options and get the participant to pick the one that best fits how often they drink]
1 Never
2 Monthly or less
3 2 to 4 times a month
4 2 to 3 times a week
5 4 or more times a week
6 Don't know
.R Refused
Alcohol drinks pre

*************** SINGLE CHOICE - CATI VERSION ***********************
CHCE 1 7 ALTYPR 3 _MAKE_ LABEL
ALCOHOL
aladpr in (2,3,4,5,6,.R)
How many standard drinks would you have on a typical drinking day?
(PROMPT: A standard drink is 1 schooner of light beer, 1 middy of full strength beer, 1 100ml glass of wine or 1 30ml nip of spirits)
1 1 or 2
2 3 or 4
3 5 or 6
4 7 to 9
5 10 or more
6 Don't know
.R Refused
Typical drinking day pre

How often would you have four or more standard drinks on one occasion?
[READ OUT THE OPTIONS AND GET THE PARTICIPANT TO PICK THE ONE THAT BEST FITS HOW OFTEN THEY DRINK]

1 Never
2 Less than monthly
3 Monthly
4 Weekly
5 Daily or almost daily
6 Don't know
.R Refused

Drinks on any occasion pre

During your appointment/s were you advised to reduce how much alcohol you drink?
(PARTICIPANT WAS ONLY REQUIRED TO BE ADVISED ONCE - NOT AT EVERY APPOINTMENT)

1 Yes
2 No
3 Don't know
.R Refused

Alcohol Brief Advice

Were you advised by *team* to use any type of support to help you reduce how much alcohol you drink?
(SUPPORT CAN INCLUDE VISITING A PROFESSIONAL OR SUPPORT GROUP, READING INFORMATION RELATING TO THE HEALTH HABIT etc)

1 Yes
2 No
3 Don't know
.R Refused

Alcohol advise any support

What support was advised?
(PARTICIPANT WAS NOT NEEDED TO RECOMMEND THE SUPPORT - ONLY WHETHER THEY RECEIVED ANY ADVICE ON SUPPORT)

.M MULT 13 ALSW 2 11 mltlb

ALCOHOL

als=1
1 General Practice
2 Aboriginal Medical Service
3 Drug and Alcohol Counsellor HNE
4 Drug and Alcohol Counsellor Other
5 Detox clinic HNE
6 Detox clinic Other
7 Phone-based support
8 Support group HNE
9 Support group Other eg Alcoholics Anonymous
10 Internet website
11 Other
-1 Don't know
.R Refused

Alcohol support used type
General Practice
Aboriginal Medical Service
Drug and Alcohol Counsellor HNE
Drug and Alcohol Counsellor Other
Detox clinic HNE
Detox clinic Other
Phone-based support
Support group HNE
Support group Other eg Alcoholics Anonymous
Internet website
Other
Don't know
Refused

**************************MULTIPLE CHOICE - CATI VERSION**************************
OPEN 1 400 ALSWO 1 LABEL
ALCOHOL
substr(alsw,11,1)=’1’
Can you please tell me what 'other' is?
Alcohol any support other

************************** OPEN ENDED ENTRY ITEM ******************************
CHCE 3 4 ALSIN 3 _MAKE_ LABEL
ALCOHOL
als in (2,3,.R) or
alswo gt " or
substr(alsw,11,1)=’0’ and alsw gt ’0000000000000’
Have you used any support since your visit?
(PROMPT: Support can include visiting a professional or support group, reading information relating to the health habit etc)
1 Yes
2 No
3 Don't know
.R Refused
Alcohol used support

*************************** SINGLE CHOICE - CATI VERSION ***************************
MULT 1 13 ALSNW 2 11 mltlb
ALCOHOL
alsin=1
What type of support have you used?
(PROMPT: Read out response options unless Drug & Alcohol client)
1       General Practice
2       Aboriginal Medical Service
3       Drug and Alcohol Counsellor HNE
4       Drug and Alcohol Counsellor Other
5       Detox clinic HNE
6       Detox clinic Other
7       Phone-based support
8       Support group HNE
9       Support group Other eg Alcoholics Anonymous
10      Internet website
11      Other
-1      Don't know
.R      Refused
Alcohol support used type
General Practice
Aboriginal Medical Service
Drug and Alcohol Counsellor HNE
Drug and Alcohol Counsellor Other
Detox clinic HNE
Detox clinic Other
Phone-based support
Support group HNE
Support group Other eg Alcoholics Anonymous
Internet website
Other
Don't know
Refused

*******************MULTIPLE CHOICE - CATI VERSION********************************
OPEN  1 400     ALSNWO  1                                             LABEL
ALCOHOL
substr(alsnw,11,1)='1'
Can you please tell me what 'other' is?
Alcohol used support other

******************* OPEN ENDED ENTRY ITEM ***********************************
CHCE  3 5       ALAU    5                      _MAKE_                 LABEL
ALCOHOL
alsin in (2,3,.R) or
substr (alsnw,11,1)='0' and alsnw gt '0000000000000' or
alsnwo gt "
One of the things ^team^ can do is give you a self assessment form
that asks about how much alcohol you drink. Were you advised to
complete this form?
(PROMPT: The self assessment form is like a quiz that you fill out
asking about your drinking habits)
1       Yes, to complete at the visit
2       Yes, to complete at home
3       No
4. Don't know
.R. Refused
Alcohol quiz advised

************ SINGLE CHOICE - CATI VERSION ***************
CHCE 1 4 ALAUC 1 _MAKE_ LABEL
ALCOHOL
alau in (1,2)
Have you completed the self-assessment form?
1. Yes
2. No
3. Don't know
.R. Refused
Alcohol quiz completed

************ SINGLE CHOICE - CATI VERSION ***************
CHCE 1 4 ALAUA 2 _MAKE_ LABEL
ALCOHOL
alauc=1
Have you taken any of the actions suggested by your score on
the self-assessment form?
1. Yes
2. No
3. Don't know
.R. Refused
Alcohol quiz any action

************ SINGLE CHOICE - CATI VERSION ***************
MULT 1 6 ALAUY 1 4 mltlb
ALCOHOL
alaua=1
What actions have you taken?
1. Rang Alcohol and Drug Information Service
2. Visited the General Practitioner
3. Looked on the internet
4. Contacted local Drug and Alcohol Service
-1. Don't know
.R. Refused
Actions taken from quiz
Rang Alcohol and Drug Information Service
Visited the General Practitioner
Looked on the internet
Contacted local Drug and Alcohol Service
Don't know
Refused

************MULTIPLE CHOICE - CATI VERSION***************
CHCE 4 4 ALIR 2 _MAKE_ LABEL
ALCOHOL
alau in (3,4,R) or
alauc in (2,3,R) or
alaua in (2,3,R) or
alauy gt '000000'
Were you provided with any information resources about alcohol.
APPENDIX FOUR: Additional material for chapters 2, 5 and 7

For example, booklets or pamphlets.
1 Yes
2 No
3 Don't know
   .R Refused

Alcohol Information Resources
*************** SINGLE CHOICE - CATI VERSION ***********************
MULT 1 6 ALIRW 2 4 mltlb
ALCOHOL
   alir=1
What information resources were provided?
(PROMPT: Read out response options)
1 Booklet/pamphlet
2 Personalised info(eg clinician notes)
3 Sticker
4 Other
-1 Don't know
   .R Refused

Alcohol Information Resource type
Booklet/pamphlet
Personalised info(eg clinician notes)
Sticker
Other
Don't know
Refused
***************MULTIPLE CHOICE - CATI VERSION**********************
OPEN 1 400 ALIRWO 1 LABEL
ALCOHOL
   substr(alirw,4,1)='1'
Can you please tell me what 'other' is?
Alcohol Information Resources Other
*************** OPEN ENDED ENTRY ITEM ***********************
CHCE 3 7 ALADPO 3 _MAKE_ LABEL
ALCOHOL
   alir in (2,3,.R) or
   substr(alirw,4,1)='0' and alirw gt '000000' or
   alirwo gt "
How often do you have a drink containing alcohol now?
(PROMPT: Read out the options and get the participant to pick the one that best fits how often they drink)
1 Never, not drinking alcohol
2 Monthly or less
3 2 to 4 times a month
4 2 to 3 times a week
5 4 or more times a week
6 Don't know
   .R Refused

Alcohol Drinks Post
*************** SINGLE CHOICE - CATI VERSION ***********************
CHCE 1 8 ALTYPO 1 _MAKE_ LABEL
ALCOHOL
aladpo in (2,3,4,5,6,.R)
How many standard drinks do you have on a typical drinking day now?
1 None, not drinking (DON'T SELECT, back+select 1)
2 1 or 2
3 3 or 4
4 5 or 6
5 7 to 9
6 10 or more
7 Don't know
.R Refused

Typical drinking day post

*************** SINGLE CHOICE - CATI VERSION ********************************
CHCE  1 7 ALOCPO  4 _MAKE_                  LABEL
ALCOHOL
altypo gt .
How often do you have four or more drinks containing alcohol
on one occasion now?
(PROMPT: Read out the options and get the participant to pick the
one that best fits how often they drink)
1 Never
2 Less than monthly
3 Monthly
4 Weekly
5 Daily or almost daily
6 Don't know
.R Refused

Drinks any occasion post

*************** SINGLE CHOICE - CATI VERSION ********************************
CHCE  2 4  ALCNG  2 _MAKE_                  LABEL
ALCOHOL
alocpo gt . and ALTYPO in (3 4 5 6 7 .R) or
alocpo in (2 3 4 5 6 .R) and ALTYPO in (1 2)
Are you seriously thinking about reducing your alcohol intake in the
next month?
1 Yes
2 No
3 Don't Know
.R Refused

Thinking about AL change

*************** SINGLE CHOICE - CATI VERSION ********************************
INFO  4   ALINF2 7 NOLAB
ALCOHOL
alng gt . or (ALOCPO=1 and ALTYPO in (1 2)) or
aladpo=1 or
aladpr=1 or
altypr=1 and alocpr=1
We would now like to ask you how strongly you agree or disagree
with care being provided at community health for alcohol.
The response options are strongly agree, agree, unsure, disagree
and strongly disagree.  

(PROMPT: If you have read the response options to the participant before you may just want to say "The response options are the same as before")

******************* INFORMATION SCREEN ITEM *******************************

CHCE 1 6  ALAA 2 _MAKE_ LABEL
ALCOHOL
alinf2=1
It is acceptable for ^team^ to ask you about how much alcohol you drink.
1   Strongly disagree
2   Disagree
3   Unsure
4   Agree
5   Strongly agree
.R  Refused
Alcohol acceptable ask

******************* SINGLE CHOICE - CATI VERSION *******************************

CHCE 4 6  ALABA 2 _MAKE_ LABEL
ALCOHOL
alaa gt . and
(altypr in (2,3,4,5,6,.R) and alocpr=1 or
altypr=1 and alocpr in (2,3,4,5,6,.R) or
altypr in (2,3,4,5,6,.R) and alocpr in (2,3,4,5,6,.R))
It is acceptable for ^team^ to advise you to reduce how much alcohol you drink.
1   Strongly disagree
2   Disagree
3   Unsure
4   Agree
5   Strongly agree
.R  Refused
Alcohol acceptable advise

******************* SINGLE CHOICE - CATI VERSION *******************************

CHCE 1 6  ALAFS 3 _MAKE_ LABEL
ALCOHOL
alaba gt .
It is acceptable for ^team^ to advise you to seek further support to help you reduce how much alcohol you drink.
1   Strongly disagree
2   Disagree
3   Unsure
4   Agree
5   Strongly agree
.R  Refused
Alcohol acceptable arrange

******************* SINGLE CHOICE - CATI VERSION *******************************

NULL 3  NULLALC 1 NOLAB
MODULE SUBMODUL
alaa gt . and alocpr=1 and altypr=1 or 
alaa gt . and aladpr=1 or 
alafs gt .
A comment line goes here.

******************** NULL ITEM - DOES NOTHING **********************
INFO 1 VACINF1 2 NOLAB
VACCINATIONS
NULLALC=1 and (indig=1 or indig=2 and age ge 65)
The next questions ask about vaccinations that help prevent the 
flu and pneumonia.

******************** INFORMATION SCREEN ITEM ********************
CHCE 1 4 VACASKF 7 _MAKE_ LABEL
VACCINATIONS
vacinf1=1
During your appointment/s with team
were you asked whether you had been vaccinated against flu in the 
last 12 months?
[PROMPT: The 'flu' shot is required once a year and is usually 
given in the months of March to May. The participant was only 
required to be asked once by the community health clinician - not at 
every appointment)
1 Yes
2 No
3 Don't know
.R Refused

Asked flu

******************** SINGLE CHOICE - CATI VERSION ********************
CHCE 1 4 VACFPR 2 _MAKE_ LABEL
VACCINATIONS
vacaskf gt .
Had you been vaccinated against flu in the 12 months prior to 
your appointment/s?
1 Yes
2 No
3 Don't know
.R Refused

Flu pre

******************** SINGLE CHOICE - CATI VERSION ********************
CHCE 1 4 VACBAF 4 _MAKE_ LABEL
VACCINATIONS
vacfpr in (2,3,.R)
During your appointment/s were you advised to have the flu 
vaccination?
(PROMPT: Participant was only required to be advised once - not at 
every appointment)
1 Yes
2 No
3 Don't know
.R Refused

Vaccination brief advice flu
APPENDIX FOUR: Additional material for chapters 2, 5 and 7

*************** SINGLE CHOICE - CATI VERSION ********************
CHCE 2 4 VACASKP 6  _MAKE_  LABEL
VACCINATIONS
(vacfpr=1 or vacbaf gt .) and
(indig=1 and age ge 50 or indig = 2 and age ge 65)
Were you asked whether you had been vaccinated against pneumonia?
[PROMPT: The vaccination for pneumonia is called the pneumococcal
vaccination. The first dose is due at 65 years, or 50 years for
Aboriginal and Torres Strait Islander people, and then a second dose
5 years later. The participant was only required to be asked once by
the community health clinician - not at every appointment]
1      Yes
2      No
3      Don't know
.R     Refused

*************** SINGLE CHOICE - CATI VERSION ********************
CHCE 1 6 VACPPR 6  _MAKE_  LABEL
VACCINATIONS
VACASKP gt .
Had you been vaccinated against pneumonia prior to your
appointment/s?
[PROMPT: If participant has had the vaccination but is unsure whether
they have had 1 or 2 doses, record as yes. If participant has had the
first dose, record yes 1st dose. If they have had both doses record
as yes 2nd dose]
1      Yes
2      Yes 1st dose
3      Yes 2nd dose
4      No
5      Don't know
.R     Refused

*************** SINGLE CHOICE - CATI VERSION ********************
CHCE 1 4 VACBAP 4  _MAKE_  LABEL
VACCINATIONS
vacppr in (4,5,.R)
During your appointment/s, were you advised to have the
pneumonia vaccination?
(Prompt: Participant was only required to be advised once - not at
every appointment)
1      Yes
2      No
3      Don't know
.R     Refused

*************** SINGLE CHOICE - CATI VERSION ********************
CHCE 3 4 VACWH 1  _MAKE_  LABEL
VACCINATIONS
vacbap gt . or
vacfpr in (2,3,.R) and vacppr in (1,2,3) or vacbaf gt . and (indig=1 and age lt 50)
Were you advised on where you could get vaccinated?
1 Yes
2 No
3 Don't know
.R Refused
Vaccinations where to get
****************** SINGLE CHOICE - CATI VERSION **********************
MULT 1 7 VACWG 2
VACCINATIONS
vacwh=1
Where were you advised to get vaccinated?
(PROMPT: Read out response options)
1 General Practice
2 Aboriginal Medical Service
3 Immunisation clinic HNE
4 Received vaccination/s at appointment
5 Other
-1 Don't know
.R Refused
Vaccination specify where
General Practice
Aboriginal Medical Service
Immunisation Clinic HNE
Received vaccination/s at appointment
Other
Don't know
Refused
******************MULTIPLE CHOICE - CATI VERSION***********************
OPEN 1 400 VACWGO 1
VACCINATIONS
substr(vacwg,5,1)='1'
Can you please tell me what 'other' is?
Vaccinations where to get other
****************** OPEN ENDED ENTRY ITEM ***********************
CHCE 3 4 VACIR 2 _MAKE_ LABEL
VACCINATIONS
vacwh in (2,3,.R) or
substr(vacwg,5,1)='' and vacwg gt '0000000' or vacwgo gt ''
Were you provided with any information resources about vaccinations.
For example, booklets or pamphlets.
1 Yes
2 No
3 Don't know
.R Refused
Vaccinations Information Resources
****************** SINGLE CHOICE - CATI VERSION ***********************
MULT 1 6 VAIRW 2
VACCINATIONS
vacir=1
What information resources were provided?
(PROMPT: Read out response options)
1 Booklet/pamphlet
2 Personalised info(eg clinician notes)
3 Sticker
4 Other
-1 Don't know
.R Refused
Vaccination IR type
Booklet/pamphlet
Personalised info(eg clinician notes)
Sticker
Other
Don't know
Refused

*******************MULTIPLE CHOICE - CATI VERSION*****************************
OPEN 1 400 VAIRWO 1 LABEL
VACCINATIONS
substr(vairw,4,1)='1'
Can you please tell me what 'other' is?
Vac Information Resources other

******************* OPEN ENDED ENTRY ITEM ***********************************
NULL 2 NULLVAC11 NOLAB
MODULE SUBMODUL
VACIR in ( 2 3 .R) or VAIRW gt '000000' and substr(vairw,4,1)='0'
or VAIRWO gt ".
A comment line goes here.

***********************NULL ITEM - DOES NOTHING***************************
CHCE 1 5 VACSINF 3 _MAKE_ LABEL
VACCINATIONS
NULLVAC1=1 and vacfpr in (2,3,.R)
Have you had the flu vaccination now?

[NOTE TO INTERVIEWERS: If answer No, prompt to see if they intend to]
1 Yes
2 No
3 No, but intend to
4 Don't know
.R Refused
Vaccination flu post

*********************** SINGLE CHOICE - CATI VERSION ****************************
CHCE 1 5 VACSINP 3 _MAKE_ LABEL
VACCINATIONS
(NULLVAC1=1 or VACSINF gt .) and VACPPR in (4 5 .R)
Have you had the pneumonia vaccination now?

[NOTE TO INTERVIEWERS: If answer No, prompt to see if they intend to]
1 Yes
2 No
3 No, but intend to
4 Don't know
.R Refused
Vaccination pneumonia post

*************** SINGLE CHOICE - CATI VERSION ***********************
INFO 4 VACINF2 7 NOLAB
VACCINATIONS
vacfpr=1 and (indig=1 and age lt 50) or
vacfpr=1 and vacppr in (1,2,3) or
VACSINP gt . or
VACSINF gt . and (VACPPR in (1 2 3) or indig=1 and age lt 50)
We would now like to ask you how strongly you agree or disagree with care being provided at community health for vaccinations.
The response options are strongly agree, agree, unsure, disagree and strongly disagree.
(PROMPT: If you have read the response options to the participant before you may just want to say 'The response options are the same as before')

*************** INFORMATION SCREEN ITEM ********************
CHCE 16 VACAA 3 _MAKE_ LABEL
VACCINATIONS
vacinf2=1
It is acceptable for ^team^ to ask you whether you have been vaccinated against flu or pneumonia.
1 Strongly disagree
2 Disagree
3 Unsure
4 Agree
5 Strongly agree
.R Refused
Vaccinations acceptable ask

*************** SINGLE CHOICE - CATI VERSION ***********************
CHCE 16 VACABA 2 _MAKE_ LABEL
VACCINATIONS
vacaa gt . and (vacfpr in (2,3,.,R) or vacppr in (4,5,.,R))
It is acceptable for ^team^ to advise you to be vaccinated against flu or pneumonia.
1 Strongly disagree
2 Disagree
3 Unsure
4 Agree
5 Strongly agree
.R Refused
Vaccinations acceptable advise

*************** SINGLE CHOICE - CATI VERSION ***********************
NULL 3 nullo 1 NOLAB
MODULE SUBMODUL
vacaba gt . or
vacaa gt . and vacfpr=1 and (vacppr in (1,2,3) or indig=1 and age lt 50) or NULLALC=1 and (indig=2 and age lt 65) from vaccination

***********************************************************************NULL ITEM - DOES NOTHING***********************************************************************
INFO 1  FAINF 1              NOLAB
FALLS
nullo=1 and age ge 50  

The next questions ask about your risk of having a fall.

*********************************************************************** INFORMATION SCREEN ITEM ******************************************************************************
CHCE  1 4  FAPR  1             _MAKE_                             LABEL
FALLS
fainf=1
Have you had a fall in the last 12 months?
1   Yes
2   No
3  Don't know
.R  Refused
Falls in last 12 months

*********************************************************************** SINGLE CHOICE - CATI VERSION **************************************************************************
CHCE  1 4  FAMED  1             _MAKE_                             LABEL
FALLS
fapr gt .
Do you take 4 or more medications?
1   Yes
2   No
3  Don't know
.R  Refused
Falls medications

*********************************************************************** SINGLE CHOICE - CATI VERSION **************************************************************************
CHCE  1 4  FASTR  1             _MAKE_                             LABEL
FALLS
famed gt .
Have you ever had a stroke or do you have Parkinson's disease?
1   Yes
2   No
3  Don't know
.R  Refused
Falls Stroke Parkinson's disease

*********************************************************************** SINGLE CHOICE - CATI VERSION **************************************************************************
CHCE  1 4  FABAL  1             _MAKE_                             LABEL
FALLS
fastr gt .
Do you have any problems with your balance?
1   Yes
2   No
3  Don't know
.R  Refused
Falls problems with balance

*********************************************************************** SINGLE CHOICE - CATI VERSION **************************************************************************
CHCE  1 4  FAARM  1             _MAKE_                             LABEL
FALLS
fabal gt.
Do you need to use your arms to get up from a chair?
1 Yes
2 No
3 Don't know
.R Refused
Falls arms out of chair
************************** SINGLE CHOICE - CATI VERSION **************************
CHCE 1 4 FAASK 2 _MAKE_ LABEL
FALLS faarm gt.
During the appointment/s, do you recall being asked questions about your risk of having a fall?
1 Yes
2 No
3 Don't know
.R Refused
Falls asked
************************** SINGLE CHOICE - CATI VERSION **************************
CALC 1 FACOUNT 0 NOLAB
MODULE SUBMOD 6
FAASK gt.
FACOUNT=0;
if FAPR=1 then FACOUNT=FACOUNT+1;
if FAMED=1 then FACOUNT=FACOUNT+1;
if FASTR=1 then FACOUNT=FACOUNT+1;
if FABAL=1 then FACOUNT=FACOUNT+1;
if FAARM=1 then FACOUNT=FACOUNT+1;
************************** CALCULATION ITEM **************************
CHCE 1 4 FAQUI 4 _MAKE_ LABEL
FALLS FACOUNT ge 3
Did ^team^ recommend that you have more testing done on your risk of having a fall?
(PROMPT: The test is called QuickScreen and it may have required another appointment)
1 Yes
2 No
3 Don't know
.R Refused
Falls recommend QuickScreen
************************** SINGLE CHOICE - CATI VERSION **************************
CHCE 1 4 FATHE 2 _MAKE_ LABEL
FALLS faqui=1
Did ^team^ undertake the Quickscreen testing themselves?
1 Yes
2 No
3 Don't know
.R Refused

Falls QuickScreen undertaken
******************** SINGLE CHOICE - CATI VERSION ***********************
CHCE  1  4  FAREF  2  _MAKE_ LABEL
FALLS
fathe in (2,3,.R)
Did ^team^ refer you to a community health clinician for the QuickScreen testing?
1 Yes
2 No
3 Don't know
.R Refused

Falls refer to nurse
******************** SINGLE CHOICE - CATI VERSION ***********************
CHCE  1  4  FAATT  1  _MAKE_ LABEL
FALLS
faref=1
Did you see the community health clinician?
1 Yes
2 No
3 Don't know
.R Refused

Falls attend referral to nurse
******************** SINGLE CHOICE - CATI VERSION ***********************
MULT  1  8  FARNA  2  6  mltlb
FALLS
faatt=2
What are your reasons for not attending?
(PROMPT: Read out response options)
1 Don't have the time
2 Don't need/want help
3 Going away
4 Don't know the clinician
5 the clinician won't understand
6 Other
-1 Don't know
.R Refused

Reasons for not attending QuickScreen
Don't have the time
Don't need/want help
Going away
Don't know the clinician
the clinician won't understand
Other
Don't know
Refused
********************MULTIPLE CHOICE - CATI VERSION***********************
OPEN  1  400  FARNAO  1  LABEL
FALLS
Can you please tell me what 'other' is?
Other reason for not attending qscreen

************** OPEN ENDED ENTRY ITEM ****************************
CHCE  3 4    FAEXE   2   _MAKE_   LABEL
FALLS
faqui in (2,3,.R) or farnao gt " or fathe=1 or
faref in (2,3,.R) or faatt in (1,3,.R) or
substr(farna,6,1)='0' and farna gt '00000000'

Were you advised to use any other type of support to help you reduce your risk of having a fall?
1  Yes
2  No
3  Don't know
.R  Refused

Reduce fall risk support advice

************** SINGLE CHOICE - CATI VERSION ********************
MULT  1 16    FAEX2   2   9       mltlb
FALLS
faexe=1

What support was advised?
(PROMPT: Read out response options)
1  General Practice
2  Aboriginal Medical Service
3  Physiotherapist at the health service
4  Physiotherapist in private practice
5  Physiotherapist location unknown
6  Community Exercise Group at health service
7  Community Exercise Group at community venue/facility
8  Falls clinic
9  Get healthy phone line
10  Internet website
11  Occupational Therapy
12  Equipment aids/home modifications
13  Safety awareness assessment or advice/Assess home risk
14  Other
-15  Don't know
.R  Refused

PA type support advised
General Practice
Aboriginal Medical Service
Physiotherapist at the health service
Physiotherapist in private practice
Physiotherapist location unknown
Community Exercise Group at health service
Community Exercise Group at community venue/facility
Falls clinic
Get healthy phone line
Internet website
Occupational Therapy
Equipment aids/home modifications
Safety awareness assessment or advice/Assess home risk
Other
Don't know
Refused

***************MULTIPLE CHOICE - CATI VERSION***********************

OPEN 1 200 FAEX2OT 1 LABEL FALLS
substr(faex2,14,1)='1'
Can you please tell me what 'other' is?
Falls: Other support advised

*************** OPEN ENDED ENTRY ITEM ****************************

CHCE 2 4 FAEXE3 3 MAKE_ LABEL FALLS
substr(faex2,14,1)='0' and FAEX2 gt '0000000000000000'
or FAEX2OT gt '' or FAEXE in (2 3 .R)
Have you used any support since your visit?
(PROMPT: Support can include visiting a professional or support group, reading information related to the health behaviour)
1 Yes
2 No
3 Don't know
.R Refused
Reduce fall risk support advice

*************** SINGLE CHOICE - CATI VERSION ****************************

MULT 1 16 FAEX4 2 9 mltlb FALLS
FAEXE3=1
What type of support have you used?
(PROMPT: Read out response options)
1 General Practice
2 Aboriginal Medical Service
3 Physiotherapist at the health service
4 Physiotherapist in private practice
5 Physiotherapist location unknown
6 Community Exercise Group at health service
7 Community Exercise Group at community venue/facility
8 Falls clinic
9 Get healthy phone line
10 Internet website
11 Occupational Therapy
12 Equipment aids/home modifications
13 Safety awareness assessment or advice/Assess home risk
14 Other
-15 Don't know
.R Refused
Falls type support used
General Practice
Aboriginal Medical Service
Physiotherapist at the health service
Physiotherapist in private practice
Physiotherapist location unknown
Community Exercise Group at health service
Community Exercise Group at community venue/facility
Falls clinic
Get healthy phone line
Internet website
Occupational Therapy
Equipment aids/home modifications
Safety awareness assessment or advice/Assess home risk
Other
Don't know
Refused

********************MULTIPLE CHOICE - CATI VERSION**************************
OPEN 1 200  FAEX4OT 1  LABEL
FALLS
substr(FAEX4,14,1)='1'
Can you please tell me what 'other' is?
Falls: Other support used

******************** OPEN ENDED ENTRY ITEM ****************************************
CHCE 2 4  FAEXED 2  _MAKE_  LABEL
FALLS
FAEXE3 in (2 3 .R) or FAEX4OT gt 
or substr(FAEX4,14,1)="0" and FAEX4 gt '0000000000000000'
Did ^team^ talk to you about specific exercises you
can do at home to reduce your risk of having a fall?
1  Yes
2  No
3  Don't know
  .R  Refused
Falls exercises at home

******************* SINGLE CHOICE - CATI VERSION ****************************
CHCE 1 4  FAEXEC 1  _MAKE_  LABEL
FALLS
faexed=1
Have you done any of these exercises?
1  Yes
2  No
3  Don't know
  .R  Refused
Falls done exercises at home

******************* SINGLE CHOICE - CATI VERSION ****************************
CHCE 2 4  FAIR 2  _MAKE_  LABEL
FALLS
faexed in (2,3,.R) or
faexec gt .
Were you provided with any information resources about falls.
For example, booklets or pamphlets.
1  Yes
2  No
3 Don't know
.R Refused

Falls Information Resources

*************** SINGLE CHOICE - CATI VERSION ***********************
MULT  1 6    FAIRW  1    4  mtlb
FALLS
fair=1
What information resources were provided?
1 Booklet/pamphlet
2 Personalised info (eg clinician notes)
3 Sticker
4 Other
-1 Don't know
.R Refused
Falls Which information resources
Booklet/pamphlet
Personalised info (eg clinician notes)
Sticker
Other
Don't know
Refused

***************MULTIPLE CHOICE - CATI VERSION***********************
OPEN  1 200   FAIRO  1   LABEL
FALLS
substr(fairw,4,1)='1'
Can you please tell me what 'other' is?
Falls Other Resource

************** OPEN ENDED ENTRY ITEM *******************************
INFO  3     FAINF2  7   NOLAB
FALLS
facount in (0 1 2) or substr(fairw,4,1)='0' and fairw gt '000000' or
fairo gt "or
fair in (2,3,.R)
We would now like to ask you how strongly you agree or disagree
with care being provided at community health for falls.
The response options are strongly agree, agree, unsure, disagree
and strongly disagree.
(PROMPT: If you have read the response options to the participant
before you may just want to say 'The response options are the same
as before')

************* INFORMATION SCREEN ITEM *****************************
CHCE  1 5    FAAA  2   _MAKE_   LABEL
FALLS
fainf2=1
It is acceptable for ^team^ to ask you
about your risk of having a fall.
1 Strongly disagree
2 Disagree
3 Unsure
4 Agree
5 Strongly agree
Falls acceptability ask

****************** SINGLE CHOICE - CATI VERSION ******************************
CHCE  1 5       FAABA   2                      _MAKE_                 LABEL
FALLS
faaa gt .
It is acceptable for ^team^ to advise you of ways that may help reduce your risk of having a fall.
1 Strongly disagree
2 Disagree
3 Unsure
4 Agree
5 Strongly agree

Falls acceptability advise

****************** SINGLE CHOICE - CATI VERSION ******************************
CHCE  1 5       FAAFS   2                      _MAKE_                 LABEL
FALLS
faaba gt .
It is acceptable for ^team^ to arrange more testing on your risk of having a fall.
1 Strongly disagree
2 Disagree
3 Unsure
4 Agree
5 Strongly Agree

Falls acceptability arrange

****************** SINGLE CHOICE - CATI VERSION ******************************
INFO  2         APPTINF 2                                             NOLAB
Intro
NULLO =1 and age lt 50 or faafs gt .
We would now like to ask you some questions to help us better understand the answers you have provided.

****************** INFORMATION SCREEN ITEM *******************************
CHCE  1 3       APPT1   2                      _MAKE_                 LABEL
OVERALL
APPTINF=1
Was your recent appointment (or group of related appointments) the only time you have ever seen ^team^? ()
1 Yes
2 No
.R Refused

Only appointment?

****************** SINGLE CHOICE - CATI VERSION ******************************
CHCE  1 5       APPT2   2                      _MAKE_                 LABEL
OVERALL
APPT1 IN (2 .r)
Did you answer the health behaviour questions (like smoking and physical activity) based on the month before your most recent appointment/s?
1 Yes
Health behaviours reported most recently?

MULTIPLE CHOICE - CATI VERSION

OPEN 1 400  APPT3O 1
OVERALL
APPT2=4
Can you please tell me what 'other' is?

Health habits reported for other

SINGLE CHOICE - CATI VERSION

CHCE 1 5  APPT4 2
OVERALL
APPT2 in (1 2 3 .R) or APPT3O gt "

Did you answer the care delivery questions based on your most recent appointment/s?

SINGLE CHOICE - CATI VERSION

OPEN 1 400  APPT5O 1
OVERALL
APPT4=4
Can you please tell me what 'other' is?

Care reported most recently?

SINGLE CHOICE - CATI VERSION

OPEN 1 400  APPT5O 1
OVERALL
APPT4=4
Can you please tell me what 'other' is?

Prev Care reported for other

SINGLE CHOICE - CATI VERSION

MULT 1 10  APPT6 4
OVERALL
DEMOGRAPHICS
APPT1=1 or APPT4 in (1 2 3 .R) or APPT5O gt "

How long ago was the appointment/s you have answered about?

(Prompt: can select multiple options for multiple appointments. If having difficulty remembering try to tease out between options 5, 6 and 7 before selecting Don't know.)

1 Less than a week ago
2 1-2 weeks ago
3 3 weeks ago
4 1 month ago
5 2-3 months ago
6 4-6 months ago
7 7-11 months ago
8 A year or more ago
9 Don't know
.R Refused

Appointments How long ago
Less than a week ago
1-2 weeks ago
Given that it may have been some time ago that you had an appointment with team, how confident are you with your answers for everything we’ve talked about today?

1. Very confident
2. Confident
3. Don’t know
4. Not very confident
5. Refused

Recall confidence

We would now like to ask you how acceptable it is for the community health clinician to talk with you about all the health habits we’ve mentioned today. For example talking with you about smoking, nutrition, physical activity and alcohol during one visit. The response options for the following statements are strongly agree, agree, unsure, disagree and strongly disagree.

(PROMPT: If you have read the response options before you may just want to say 'The response options are the same as before')

It is acceptable for community health clinicians to ask you if you are at risk for all the health habits we’ve discussed today.

1. Strongly disagree
2. Disagree
3. Unsure
4. Agree
5. Strongly agree
6. Refused

Overall acceptable ask
It is acceptable for community health clinicians to advise you to change all the health habits we’ve discussed today.

1. Strongly disagree
2. Disagree
3. Unsure
4. Agree
5. Strongly agree
.R Refused

Overall acceptable advise

It is acceptable for community health clinicians to arrange further support for you to help change all the health habits we’ve discussed today.

1. Strongly disagree
2. Disagree
3. Unsure
4. Agree
5. Strongly agree
.R Refused

Overall acceptable arrange

We would now like to ask you about referrals to the Quitline and Get Healthy telephone services that have been offered to you by any health professional.

Have you ever been offered a referral to the Quitline or Get Healthy telephone service by any health professional?

1. Quitline
2. Get Healthy
-3 None of the above
.R Refused

Referrals ever
Quitline
Get Healthy
None of the above
Refused

Referrals ever
substr(OVN1,1,1)='1'

Who offered you a referral to the Quitline?

1  GP
2  Other Doctor
3  Nurse
4  Dentist
5  Psychologist or counsellor
6  Physiotherapist, occupational or exercise therapist
7  Dietician, nutritionist
8  Health promotion worker
9  Other
.R  Refused

Referral Quitline who appropriate

GP
Other Doctor
Nurse
Dentist
Psychologist or counsellor
Physiotherapist, occupational or exercise therapist
Dietician, nutritionist
Health promotion worker
Other
Refused

**************************MULTIPLE CHOICE - CATI VERSION**************************

OPEN 1 600 OVN2AN 1 LABEL
OVERALL
substr(OVN2,9,1)='1'

Can you please tell me what 'other' is?

Referral Quitline other

************************** OPEN ENDED ENTRY ITEM ********************************

MULT 1 10 OVN3 2 9 mltlb
OVERALL
ovn2an gt " or substr(OVN2,9,1)='0' and OVN2 gt '0000000000'

Which types of health professionals do you believe would be appropriate to offer you a referral to the Quitline? [Prompt: Read out all options]

1  GP
2  Other Doctor
3  Nurse
4  Dentist
5  Psychologist or counsellor
6  Physiotherapist, occupational or exercise therapist
7  Dietician, nutritionist
8  Health promotion worker
9  Other
.R  Refused

Referral Quitline who appropriate

GP
Other Doctor
Nurse
Dentist
Psychologist or counsellor  
Physiotherapist, occupational or exercise therapist  
Dietician, nutritionist  
Health promotion worker  
Other  
Refused

*******************MULTIPLE CHOICE - CATI VERSION***************************
OPEN 1 600 OVN3AN 1 LABEL OVERALL
substr(OVN3,9,1)='1'
Can you please tell me what 'other' is?
Referral Quitline arrange other

****************** OPEN ENDED ENTRY ITEM ***********************************
CHCE 1 6 OVN4 3 MAKE_ LABEL OVERALL
ovn3an gt '' or substr(OVN3,9,1)='0' and OVN3 gt '0000000000'
Please tell me your agreement with the following statement.
It would be acceptable for a telephone interviewer, such as myself,
to offer you a referral to the Quitline.
1 Strongly disagree
2 Disagree
3 Unsure
4 Agree
5 Strongly agree
.R Refused
Quitline interviewer arrange

***************** SINGLE CHOICE - CATI VERSION **************************
MULT 1 10 OVN5 1 9 mltlb OVERALL
substr(OVN1,1,2)='01' or OVN4 gt . and substr(OVN1,2,1)='1'
Who offered you a referral to the Get Healthy telephone service?
1 GP
2 Other Doctor
3 Nurse
4 Dentist
5 Psychologist or counsellor
6 Physiotherapist, occupational or exercise therapist
7 Dietician, nutritionist
8 Health promotion worker
9 Other
.R Refused
Referral Get Healthy who
GP
Other Doctor
Nurse
Dentist
Psychologist or counsellor
Physiotherapist, occupational or exercise therapist
Dietician, nutritionist
Health promotion worker
Other
Refused

***************************MULTIPLE CHOICE - CATI VERSION***************************
OPEN 1 600 OVN5AN 1
OVERALL
substr(OVN5,9,1)='1'
Can you please tell me what 'other' is?
Referral Get Healthy other

*************************** OPEN ENDED ENTRY ITEM *********************************
MULT 1 10 OVN6 3
OVERALL
ovn5an gt " or substr(OVN5,9,1)='0' and OVN5 gt '0000000000'
Which types of health professionals do you believe would be appropriate
to offer you a referral to the Get Healthy Service?
[Prompt: Read out all options]
1  GP
2  Other Doctor
3  Nurse
4  Dentist
5  Psychologist or counsellor
6  Physiotherapist, occupational or exercise therapist
7  Dietician, nutritionist
8  Health promotion worker
9  Other
.R  Refused
Referral Get Healthy arrange
GP
Other Doctor
Nurse
Dentist
Psychologist or counsellor
Physiotherapist, occupational or exercise therapist
Dietician, nutritionist
Health promotion worker
Other
Refused

***************************MULTIPLE CHOICE - CATI VERSION***************************
OPEN 1 600 OVN6AN 1
OVERALL
substr(OVN6,9,1)='1'
Can you please tell me what 'other' is?
Referral Get Healthy arrange other

*************************** OPEN ENDED ENTRY ITEM *********************************
CHCE 1 6 OVN7 3
_OVERLA_MAKE_ LABEL
OVERALL
ovn6an gt " or substr(OVN6,9,1)='0' and OVN6 gt '0000000000'
Please tell me your agreement with the following statement.
It would be acceptable for a telephone interviewer, such as myself,
to offer you a referral to the Get Healthy.
1  Strongly disagree
2       Disagree
3       Unsure
4       Agree
5       Strongly agree
.R      Refused

Get Healthy interviewer arrange

***************** SINGLE CHOICE - CATI VERSION *******************************
INFO  2         OVLINF  4                      _MAKE_                 NOLAB
OVERALL
substr(OVN1,3,2) gt '00' or
ovn7 gt . or ovn4 gt . and substr(OVN1,2,1)='0'
Finally, We have a couple of questions on your overall impression of
the care you received from ^team^: Remember, your individual answers
will not be used to assess your clinician individually, and will NOT
be reported back to ^team^.

***************** INFORMATION SCREEN ITEM *********************************
CHCE  1 6       OVLCR   1                      _MAKE_                 LABEL
OVERALL
OVLINF=1
Overall, how would you rate the care you received from ^team^?
1       Poor
2       Fair
3       Good
4       Very good
5       Excellent
.R      Refused

Rate care received

***************** SINGLE CHOICE - CATI VERSION *******************************
CHCE  1 4       OVLRC   1                      _MAKE_                 LABEL
OVERALL
OVLCR gt .
Did you feel comfortable during your appointment with ^team^?
1       Yes, completely
2       Yes, somewhat
3       No
.R      Refused

Comfortable during appointment

***************** SINGLE CHOICE - CATI VERSION *******************************
CHCE  1 4       OVLRF   1                      _MAKE_                 LABEL
OVERALL
OVLC gt .
Would you recommend ^team^ to your family and friends?
1       Yes, definitely
2       Yes, probably
3       No
.R      Refused

Recommend service

***************** SINGLE CHOICE - CATI VERSION *******************************
OPEN  1 200     OVLRFO  1                                             LABEL
OVERALL
OVLRF=3
Could you please tell me why not?
Reason no recommendation

*************** OPEN ENDED ENTRY ITEM ****************************
CHCE 1 5 OVLRS 1 _MAKE_ LABEL
OVERALL
OVLRF in (1 2 .R) or OVLRS gt "
How well did ^team^ listen to and address any concerns you may have had?
1 Had nothing to discuss
2 Yes, completely
3 Yes, somewhat
4 No
.R Refused
Listened and addressed concerns

*************** SINGLE CHOICE - CATI VERSION ****************************
OPEN 1 200 OVLCS 1 LABEL
OVERALL
OVLLS gt .
What is the one thing you would change about ^team^?
One change to make

*************** SINGLE CHOICE - CATI VERSION ****************************
INFO 1 AUDIN 9 NOLAB
AUDIT
ovlcs gt "
There is one more thing I would like to talk to you about before we
finish. As a part of this project, to improve health care, we would also
like to check clients' medical records to see if the notes that are
recorded by community health staff agree with what clients say about the
care they receive.
The audit will only include information about the care we talked about
today. NO other medical information will be recorded. Remember, your
individual answers will not be used to assess your clinician individually,
and will NOT be reported back to ^team^.

*************** INFORMATION SCREEN ITEM ****************************
CHCE 1 4 AUDMR 3 _MAKE_ LABEL
AUDIT
audin=1
To see whether community health clinicians are recording the care they
provide around health habits, would it be ok if we include your medical
records for appointments you have had with ^team^ in this audit?
1 Yes
2 No
3 Don't know
.R Refused
Ok to do Audit

*************** SINGLE CHOICE - CATI VERSION ****************************
CHCE 1 4 AUDCON 4 _MAKE_ LABEL
AUDIT
audmr=1
That's great. It's a requirement of the Hunter New England Ethics
committee that we have written consent to conduct an audit of your medical records. Would it be ok for us to send you a consent letter?
1 Yes  
2 No  
3 Don't know  
.R Refused
Audit consent

********************** SINGLE CHOICE - CATI VERSION **********************
INFO 1 AUDAD 3 NOLAB
AUDIT
audcon=1
Thanks for that. Can I please confirm that your address details are ^address^ [PROMPT: Change details on log sheet if incorrect]

********************** INFORMATION SCREEN ITEM **********************
INFO 1 AUDAD 3 NOLAB
AUDIT
audad=1
When you receive the consent letter please read it and then if you are willing to consent, sign it and return it in the reply paid envelope provided.

********************** INFORMATION SCREEN ITEM **********************
INFO 2 AUDFI 1 NOLAB
AUDIT
audmr in (2,3,.R) or
audcon in (2,3,.R)
That's fine.

********************** INFORMATION SCREEN ITEM **********************
CHCE 2 4 INFEND1 3 _MAKE_ _MAKE_ LABEL
INFO END
audfi=1 or
audrc=1
That's the end of the survey. Thankyou very much for talking with us today. Is there anything else you would like to tell me before we finish?
1 Yes  
2 No  
3 Don't know  
.R Refused
End any other comments

********************** SINGLE CHOICE - CATI VERSION **********************
OPEN 1 600 INENDC 4 LABEL
INFO END
INFEND1=1
Can you please specify.
[NOTE TO INTERVIEWERS: If participant mentions a complaint – e.g. specific negative comment around access or quality of care – please also mark this on the logsheet]
End comments specify
If you want to contact someone regarding this survey, you can call Megan Freund. I can give you her details (phone 4924 6374) or Dr Freund’s name and contact details are also listed on the bottom of the information letter.
APPENDIX FOUR: Additional material for chapters 2, 5 and 7

STAT 1        STAT_CB 1        NOLAB
CB stat
(intro8=1 or intro14=1) and T_END=.
Callback
CB
***************************************************************************
STAT 1        STAT_RM 1        NOLAB
RM stat
intr18=1 and T_END=.
Respondent moved
RM
***************************************************************************
STAT 1        STAT_D3 1        NOLAB
D3 stat
intr8a=1 and T_END=.
Refused by third party
D3
***************************************************************************
STAT 2        STAT_OS 1        NOLAB
OS stat
(intro9a=1 or intro9b=1 or INTR11e=1 or INTRO2=14 or
intro2=17 or INTRO3 gt '') and T_END=.
incapable or NESB
OS
***************************************************************************
STAT 1        STAT_RS 1        NOLAB
RS stat
intro9=1 and T_END=.
Respondent sick
RS
***************************************************************************
STAT 1        STAT_RD 1        NOLAB
RD stat
intr9c=1 and T_END=.
respondent dead
RD
***************************************************************************
INFO 3        TERM    2        NOLAB
END Term
stat_cq='CQ' or STAT_CB='CB' or STAT_DR='DR' or STAT_DF='DF' or
STAT_WN='WN'
or STAT_D3='D3' or STAT_OS='OS' or STAT_RD='RD' or
STAT_RM='RM' or STAT_RS='RS' or STAT_UL='UL' or STAT_OP='OP'
INTERVIEWER TERMINATION INSTRUCTION, PRESS STOP
AND RECORD OUTCOME OF INTERVIEW ON LOG
***************************************************************************
INFORMATION SCREEN
***************************************************************************
APPENDIX FIVE:
ADDITIONAL MATERIAL FOR CHAPTERS 3 AND 4

APPENDIX 5.1:
CLINICIAN SURVEY INFORMATION LETTER

xx XX

XXXX

Hunter New England Health

SUBURB NSW postcode

Dear Xxx

Hunter New England Health is committed to improving the health of people living within the Hunter New England region. As such, Hunter New England Health is working to increase the number of Hunter New England Health clinicians who provide preventive care. Of particular interest is preventive care regarding physical activity, fruit and vegetable intake, smoking, alcohol consumption, immunisations and falls prevention. A first step in this initiative will be interviews with community health staff. The interview will ask about the current situation regarding preventive care delivery in community health.

Please note these interviews are different to the staff surveys currently being undertaken by Hunter New England Health that ask about your general experience with HNE Health (that is the “2 weeks to have your say” survey).

Why is the research being done?
The information gathered in this interview will help to inform strategies to enhance the preventive care delivered to clients in community health. It will also provide an estimate of the level of preventive care currently delivered in Community Health. Similar interviews will be conducted over the next 3 years time to understand the effectiveness and acceptability of the preventive care initiative.

What is the phone interview about?
The interview will ask questions about your perceptions of preventive care, the organisational supports (e.g. training, prompts and resources) that can help you provide preventive care, and your best estimates of the level of preventive care you currently provide. The interview will also ask you about your own health behaviours. All questions are voluntary, if at any time you feel uncomfortable answering the questions you are able to decline to respond.
Who can participate in the interview?
All staff employed by Hunter New England Community Health, and who have provided care to clients in the past two months, are eligible to participate in the interview. A random sample of staff has been selected to participate.

Is participation voluntary?
Participation in this interview is voluntary, and you do not have to complete the interview if you do not want to. If you decide not to participate in or decide to withdraw from the interview at any time, it will not affect your employment or relationship with the Hunter New England Area Health Service. It is not a condition of your employment to participate in this interview.

What would you be asked to do?
You will be contacted by phone by a trained interviewer. The interviewer will ask if you would like to participate in the interview. If you agree to participate, you will be invited to complete a telephone interview at that time or the interviewer can arrange another time that is convenient to you. Completing the telephone interview should take approximately 25 minutes. Management has approved the completion of interviews during work time. Interviews are also able to be arranged to take place out of work time if it is more convenient for you.

What will happen to the information you give us?
All the answers you provide us will be treated in STRICT CONFIDENCE. These answers will be entered onto our computer and stored securely. Only researchers will have access to the information given in the interview. Other HNE staff and managers will NOT have access to responses. Your name and personal information will not be stored in the same place as the answers you give to the interview. When the interview is completed for all staff, the names and contact details of all participating staff will be destroyed. Reports that are based on the interview information will only refer to the entire group of staff interviewed. Individual staff or their answers will not be identified. The data collected in this interview is intended to be used by Hunter New England Health for the purposes of quality assurance and improving service provision. Results will not be used as an appraisal of your clinical performance.

What happens now?
In the next 4 weeks, an interviewer from Hunter New England Health will contact you by phone. The interviewer will ask you if you would like to participate in the interview. You may refuse to participate at this point. If you do agree to participate the interviewer will ask you if it is convenient to talk and if not arrange a suitable time to call back.
Further Information
If you would like further information regarding this study, please do not hesitate in contacting Dr Megan Freund, on (02) 49246374.

Thank you for your time and consideration of this invitation.

Yours sincerely

Assoc/Prof John Wiggers
Hunter New England (HNE) Population Health
Ph: (02) 4924 6247
Fax: (02) 4924 6048

Quality Assurance Team:
Assoc/Prof John Wiggers            Dr Megan Freund            Ms Jenny Knight            Ms Karen Gillham
Director                            Research Fellow               Program Manager               Service Director
HNE Population Health               HNE Population Health         HNE Population Health         HNE Population Health

Dr Elizabeth Campbell                Assoc/Prof Jenny Bowman
Program Manager                        Associate Professor – School of Psychology
HNE Population Health                 University of Newcastle

This project has been approved by the Hunter New England Human Research Ethics Committee of Hunter New England Health, Reference 09/06/17/4.03.

Should you have concerns about your rights as a participant in this research, or you have a complaint about the manner in which the research is conducted, it may be given to the researcher, or, if an independent person is preferred, to Dr Nicole Gerrand, Professional Officer (Research Ethics), Hunter New England Human Research Ethics Committee, Hunter New England Area Health Service, Locked Bag 1, New Lambton NSW 2305 or Telephone (02) 4921 4950, email Hnehrec@hnehealth.nsw.gov.au
APPENDIX 5.2:
CLINICIAN SURVEY: COMPUTER ASSISTED TELEPHONE INTERVIEW SCRIPT

Prev Care Community Health Staff

Guidelines/procedure telling how to comply with Preventive Care Policy
Any prompts in CHIME to assess a client's health risk behaviour
A screening tool in CHIME to assess a client's health risk behaviour
Real time reminders of best practice preventive care for the client
Specific place in CHIME to record preventive care provided
Paper screening tool to assess clients risk behaviour away from computer
Generic client handout (eg. Pamphlets, quit packs)
Tailored client handout with client specific risks and advice provided
Automated production of referral letter for GP
List of available referral services (face to face or telephone)
Fax referral forms for Helplines
Training in preventive care for all health risk behaviours
Feedback on the level of preventive care provided in your service
Nominated staff member to support your provision of preventive care
Resource pack of relevant forms and handouts

TIME 1 T_start 1 LABEL
TIME Start
Splist1 gt "
This records duration to current point
Start time of interview

INFO 1 INTRO1 3 NOLAB
Intro
discip gt "
Hello, my name is ^_INTVR_^ and I am calling about a staff 
terview that Hunter New England Population Health is conducting.
I am calling to speak to ^_RNAME_^.

CHCE 1 12 INTRO2 1 _MAKE_ NOLAB
Intro
INTRO1=1
Is ^_RNAME_^( available?
1 speaking to that person
2 person called to phone
3 person not at work today (record on log sheet)
4 person on sick leave (record on log sheet)
5 person on leave (other than sick leave)
6 someone in household recently died (record on log sheet)
7 person has died (record on log sheet)
8 person has ceased employment with HNE AHS (record on log sheet)
9 ineligible (Olga only to select after consultations with PO)
10 other (record on log sheet)
11 person is working – unable to come to phone
.R Refused
*************** SINGLE CHOICE - CATI VERSION ***********************
OPEN 1 200 INTRO3 2 NOLAB
intro
INTRO2=10
OK, thank you for your time.
[Record reason- if no reason given, record as no reason)
*************** OPEN ENDED ENTRY ITEM ***********************
INFO 1 INTR18 1 NOLAB
Intro
INTRO2=8
OK, thanks for your help
*************** INFORMATION SCREEN ITEM ***********************
INFO 1 INTRO4 2 NOLAB
intro
INTRO2=2
Hello. My name is ^INTRV^ and I'm calling from HNE Population Health
about a staff interview that you would have received a letter about.
*************** INFORMATION SCREEN ITEM ***********************
INFO 1 INTRO5 2 NOLAB
Intro
INTRO2=1
You should have received a letter from us recently letting
you know that we would call.
*************** INFORMATION SCREEN ITEM ***********************
CHCE 1 3 INTRO6 2 _MAKE_ NOLAB
Intro
INTRO2=5
Are they back at work soon?
[Prompt Do you know if they will return to work before the end July?]
1 Yes (will be back to participate)
2 No (will be on leave beyond survey dates)
.R Refused
*************** SINGLE CHOICE - CATI VERSION ***********************
CHCE 1 3 INTRO7 2 _MAKE_ NOLAB
Intro
INTRO2=4
I'm sorry to hear they are not feeling well. Are they expected back
at work before the end of July?
1 Yes
2 No (on extended sick leave)
.R Refused
APPENDIX FIVE: Additional material for chapters 3 and 4

A93

*************** SINGLE CHOICE - CATI VERSION ****************************************
INFO  1         Qloss1  4                                             NOLAB
Intro
INTRO2=7
I am so sorry to hear. Please accept my apology for not being aware of the fact and phoning. We were ringing regarding a staff feedback interview on preventive care in community and mental health. Once again, I am sorry to have bothered you.

************* INFORMATION SCREEN ITEM **********************************************
CHCE  1 3       Qloss2  4                     _MAKE_                  NOLAB
Intro
INTRO2=6
I'm so sorry for your loss, please accept my apology for calling at such a difficult time. Of course you are welcome to complete the interview but I understand if you would prefer not to. Once again I'm sorry to have bothered you. Thank you for your time.
1       Would like to organise another time to do the survey
2       Would prefer not to do the survey
.R      Refused

*************** SINGLE CHOICE - CATI VERSION ****************************************
INFO  4         INTRO8  3                                             NOLAB
Intro
INTRO2=3 or
INTRO2=11 or
INTRO6=1 or
INTRO7=1
When would be a good time to call back to talk with them?
Would ...... at........... be convenient.
Great, I'll call back then. Thankyou.

************* INFORMATION SCREEN ITEM **********************************************
INFO  2         INTRO9  1                                             NOLAB
Intro
INTRO6 in (2 .R) or
INTRO7 in (2 .R)
OK, thanks for your time

************* INFORMATION SCREEN ITEM **********************************************
INFO  1         INTRO9c  1                                             NOLAB
Intro
qloss1=1
Thanks for your time

************* INFORMATION SCREEN ITEM **********************************************
CHCE  1 4       INTROX  1                      _MAKE_                 LABEL
Intro
INTRO4=1 or INTRO5=1
Is this a good time to talk?
1       Yes
2       No
3       What's this about?
.R      Refused
Participate now

*************** SINGLE CHOICE - CATI VERSION ****************************************
CHCE  1 3       INTROY  7                     _MAKE_                  LABEL
Intro
INTROX in (1 3)
So, as the letter explained we are currently conducting a staff interview about the provision of preventive care to adult clients
in Community Health.
In the last 2 months, have you seen any new adult clients, that is clients 18 years or over?
[NOTE TO INTERVIEWERS: by NEW we mean on a New Service Request, and by SEEN we mean had an attended face to face appointment.]
  1   Yes
  2   No
 .R   Refused

Seen adult clients
****************** SINGLE CHOICE - CATI VERSION *****************************
INFO  1        INTROZ  4                       NOLAB
Intro
INTROY=2
Ok, We seem to have selected you incorrectly for our survey, as we are only interested in preventive care delivered to ADULT clients.
So, my apologies and thank you for your time.
[NOTE TO INTERVIEWERS: Mark as Out of Scope]
******************* INFORMATION SCREEN ITEM *******************************
INFO  1        INTRO10  8                       NOLAB
Intro
INTROY=1 and INTROX=1
Great! So, The interview takes around 25 minutes to complete.

[NOTE TO INTERVIEWERS: We will ask you some questions about what you think of preventive care delivery in Community and Mental health, the supports that might help you to deliver preventive care and your best estimates of the current levels of preventive care delivered in Community and Mental Health settings. We will also ask about your own health behaviours.]
******************* INFORMATION SCREEN ITEM *******************************
INFO  1        INTRO11a7                       NOLAB
Intro
INTROY=1 and INTROX=3
Great! When we say preventive care we mean assessment of client health risk behaviour, brief advice to change behaviour, and ensuring the client has ongoing support to change their health behaviour.

We are interested in preventive care related to smoking, nutrition, alcohol, physical activity, immunisations and falls for adult clients.
******************* INFORMATION SCREEN ITEM *******************************
INFO  1        INTRO11b7                       NOLAB
Intro
INTRO11a=1 and INTROX=3 and INTROY=1
The interview takes around 25 minutes to complete.

[NOTE TO INTERVIEWERS: We will ask you some questions about what you think of preventive care delivery in Community and Mental health, the supports that might help you to deliver preventive care and your best estimates of the current levels of preventive care delivered in Community and Mental Health settings]
All information that you provide will be kept confidential and stored securely. Results will NOT be used as an appraisal of your clinical performance.

[NOTE TO INTERVIEWERS: Your name and responses will be stored separately and individual or team results will not be included in any reports including those to health service managers.

The information gathered in this interview will help to inform strategies to enhance the preventive care delivered to clients in Community and Mental Health.

******************* INFORMATION SCREEN ITEM ***********************
CHCE 13 INTRO13 1 _MAKE_ LABEL
Intro
INTRO12=1
Is this an OK time for you to do the interview?
1 Yes
2 No
.R Refused to participate
Participate now

***************** SINGLE CHOICE - CATI VERSION ****************************
INFO 2 INTRO14 3 NOLAB
Intro
Qloss2=1 or
INTROX=2
When would be a good time to call back to talk.
Would ...... at............ be convenient.
Great, I'll call back then. Thankyou.

******************* INFORMATION SCREEN ITEM ******************************
INFO 1 INTRO15 3 NOLAB
Intro
INTRO13=2
When would be a good time to call back and complete the interview?
Would ...... at............ be convenient.
Great, I'll call back then. Thankyou.

******************* INFORMATION SCREEN ITEM ******************************
INFO 1 INTRO16 10 NOLAB
Barriers
INTRO13=1
Great. Just to give you some background there is a new HNE health initiative soon to commence that will introduce routine Preventive care into all Community health services including Mental Health and Drug and Alcohol.

We want to get a picture of current service, as a baseline, so we can then see any change of practice as services are assisted to increase the Preventive Care they provide. So it is normal to not be doing all the things we will be asking about as not many staff currently work across all these areas.

******************* INFORMATION SCREEN ITEM ******************************
INFO 1 INTRO17 12 NOLAB
Barriers
INTRO16=1
First we want to know what you think of preventive care in Community and Mental Health. When we are talking about preventive care we mean care related to smoking, fruit and vegetable consumption, alcohol,
physical activity, immunisations and falls.

The questions ask you how strongly you agree or disagree with some statements about the delivery of preventive care in Community Health (including Mental Health and Drug and Alcohol services). When answering these questions, please think about your clients generally, rather than specific clients.

[Prompt: Please answer using the scale strongly agree, agree, disagree, or strongly disagree.]

******************* INFORMATION SCREEN ITEM ***********************

CHCE 16 BAR1 6 _MAKE_ LABEL

INTRO17=1

Clients find it acceptable for me to talk with them about ALL their health risk behaviours.

[NOTE TO INTERVIEWERS: If staff are having difficulty answering – try re-phrasing as: Hypothetically or IF you were to talk with them about ALL their health risk behaviours, would clients find it acceptable?]

1 Strongly agree
2 Agree
3 Unsure
4 Disagree
5 Strongly disagree
.R Refused

Assessment Acceptable

***************** SINGLE CHOICE - CATI VERSION ***************************

MULT 18 BAR2 2 6 mltlb

BAR1 in (3 4 5 .R)

Which preventive care risk factors do clients find it acceptable for you to talk with them about?

1 Fruit and Vegetables
2 Smoking
3 Alcohol
4 Physical Activity
5 Immunisations
6 Falls
-1 None
.R Refused

Confident to ask
Fruit and Vegetables
Smoking
Alcohol
Physical Activity
Immunisations
Falls
None
Refused

*******************MULTIPLE CHOICE - CATI VERSION**************************

CHCE 26 BAR4 2 _MAKE_ LABEL

Barriers
BAR1 in (1 2) or
BAR2 gt '00000000'

I feel confident to talk with clients about ALL their health risk behaviours.
1. Strongly agree
2. Agree
3. Unsure
4. Disagree
5. Strongly disagree
.R. Refused

Confident to talk about

*************** SINGLE CHOICE - CATI VERSION *******************************
MULT 18 BAR5 2 6 mltlb

Barriers
BAR4 in (3 4 5 .R)

Which preventive care risk factors do you feel confident talking with a client about?
1. Fruit and Vegetables
2. Smoking
3. Alcohol
4. Physical Activity
5. Immunisations
6. Falls
-1. None
.R. Refused

Confident talk about which

Fruit and Vegetables
Smoking
Alcohol
Physical Activity
Immunisations
Falls
None
Refused

*************MULTIPLE CHOICE - CATI VERSION****************************
CHCE 26 BAR6 2 _MAKE_ LABEL

Barriers
BAR4 in (1 2) or BAR5 gt '00000000'

There are services I can refer my clients to that provide support to change ALL their health risk behaviours.
1. Strongly agree
2. Agree
3. Unsure
4. Disagree
5. Strongly disagree
.R. Refused

Referral service available

*************** SINGLE CHOICE - CATI VERSION *******************************
MULT 18 BAR7 2 6 mltlb

Barriers
BAR6 in (3 4 5 .R)

For which preventive care risk factors are there services to provide support for your clients?
1. Fruit and Vegetables
2. Smoking
3. Alcohol
4. Physical Activity
5. Immunisations
6. Falls
Referral available for which
Fruit and Vegetables
Smoking
Alcohol
Physical Activity
Immunisations
Falls
None
Refused

Clients will not change ALL their health risk behaviours because of the care I can provide them.
1 Strongly agree
2 Agree
3 Unsure
4 Disagree
5 Strongly disagree
.R Refused

Clients won't change

For which preventive care risk factors will clients change their behaviour because of the care you can provide?
1 Fruit and Vegetables
2 Smoking
3 Alcohol
4 Physical Activity
5 Immunisations
6 Falls
-1 None
.R Refused

Change due to care for which
Fruit and Vegetables
Smoking
Alcohol
Physical Activity
Immunisations
Falls
None
Refused

My manager believes the provision of preventive care is important.
1 Strongly agree
2 Agree
4. Management support

*************** SINGLE CHOICE - CATI VERSION ***********************

CHCE  1 6       BAR10   2                      _MAKE_                 LABEL

Barriers

BAR9 gt .

I have the knowledge and skills to provide preventive care to clients regarding health risk behaviours.

1. Strongly agree
2. Agree
3. Unsure
4. Disagree
5. Strongly disagree

.R  Refused

Knowledge and skills

*************** SINGLE CHOICE - CATI VERSION ***********************

MULT  1 8       BAR11   2                                     6       mltlb

Barriers

BAR10 in (3 4 5 .R)

For which health risk behaviours do you have the knowledge and skills to provide preventive care for your clients?

1. Fruit and Vegetables
2. Smoking
3. Alcohol
4. Physical Activity
5. Immunisations
6. Falls
-1 None

.R  Refused

Referral available for which

Fruit and Vegetables
Smoking
Alcohol
Physical Activity
Immunisations
Falls
None
Refused

********************MULTIPLE CHOICE - CATI VERSION****************************

CHCE  2 6       BAR12   2                      _MAKE_                 LABEL

Barriers

BAR10 in (1 2) or
BAR11 gt '00000000'

It is part of my role in community health to provide preventive care to clients.

1. Strongly agree
2. Agree
3. Unsure
4. Disagree
5. Strongly disagree

.R  Refused

PC part of my role

*************** SINGLE CHOICE - CATI VERSION ***********************
APPENDIX FIVE: Additional material for chapters 3 and 4

Barriers

**Clients I see are generally too old to benefit from changing their health risk behaviours.**

1. Strongly agree
2. Agree
3. Unsure
4. Disagree
5. Strongly disagree

.R Refused

Too old to change

*************** SINGLE CHOICE - CATI VERSION ****************************

Barriers

**Addressing health risk behaviours with clients jeopardises my relationship with the client.**

1. Strongly agree
2. Agree
3. Unsure
4. Disagree
5. Strongly disagree

.R Refused

Jeopardise relationship

*************** SINGLE CHOICE - CATI VERSION ****************************

Barriers

**Providing preventive care for health risk behaviours leaves me little time to undertake acute care of the client.**

[NOTE TO INTERVIEWERS: if having difficulties (i.e. staff don't currently provide care so can't answer) try re-phrasing: Hypothetically IF you did provide preventive care.....then.. it leaves little time to undertake acute care of the client]

1. Strongly agree
2. Agree
3. Unsure
4. Disagree
5. Strongly disagree

.R Refused

PC leaves little time for acute

*************** SINGLE CHOICE - CATI VERSION ****************************

Barriers

**Clients I see are interested in changing their health risk behaviours.**

1. Strongly agree
2. Agree
3. Unsure
4. Disagree
5. Strongly disagree

.R Refused

Clients interested in change

*************** SINGLE CHOICE - CATI VERSION ****************************
INFO 1   CRINTR 8   NOLAB
Intro
BAR16 gt.

The next section asks about the preventive care you usually provide.

The questions ask you to estimate the proportion of new adult clients in the last 2 months that you provided care to for health risk behaviours, NOT including clients who are contraindicated.

[NOTE TO INTERVIEWERS: Please remember answers are confidential and results will NOT be used as an appraisal of your clinical performance.]

******************* INFORMATION SCREEN ITEM ***********************
INFO 1   CRINTR1 2   NOLAB
CRINTR=1

The first set of questions asks about client fruit and vegetable consumption.

******************* INFORMATION SCREEN ITEM ***********************
NUM 1   CRN1 8 MM
CRINTR1=1

Thinking back over the last 2 months, what proportion of new adult clients did you ask about their fruit and vegetable intake?

[NOTE TO INTERVIEWER: I know it can be difficult to think of your clients in terms of a proportion or percentage, We are interested in your BEST estimates.]

[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]
[Please enter .R for "Refused"]
0 100
0 9999

Talk about f & v

**************** NUMERIC OR DATE ENTRY - CATI VERSION ****************
NUM 1   CRN1a 4 MM
CRN1 in (0 9999 .R)

What proportion of new adult clients did you read about their fruit and vegetable intake in their client files.

[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]
[Please enter .R for "Refused"]
0 100
0 9999

Read about f & v

**************** NUMERIC OR DATE ENTRY - CATI VERSION ****************
NUM 2   CRN4 6 MM
CRN1<=100 or
CRN1a<=100

Of your clients who didn't eat enough fruit or vegetables, what proportion did you advise to eat more fruit or vegetables?

[NOTE TO INTERVIEWER: Please enter 3333 for NO 'at risk' clients seen]
in the last 2mnths Please enter 9999 for "Don't know"]
[Please enter .R for "Refused"]
0 100
0 9999
Advise to eat more f&v

******************** NUMERIC OR DATE ENTRY - CATI VERSION ********************
NUM 2  CRN5  8  MM  LABEL
NUTRITION
0<CRN4<=100 or
CRN4 in (0 9999 .R)
Of your clients who didn't eat enough fruit or vegetables, what proportion did you speak to about the Get Healthy support service?

[NOTE: Get Healthy is a free telephone service aimed at supporting adults to make lifestyle changes including healthy eating & physical activity.] [NB: This estimate is for referrals for healthy eating]
[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"
[    Please enter .R for "Refused"]
0  100
0  9999
Talk about Get Healthy

******************** NUMERIC OR DATE ENTRY - CATI VERSION ********************
NUM 1  CRN6  6  MM  LABEL
NUTRITION
0<CRN5<=100
Of your clients who didn't eat enough fruit or vegetables, what proportion did you arrange for the Get Healthy support service to call them?
[NB: This estimate is for referrals for healthy eating]
[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"
[    Please enter .R for "Refused"]
0  100
0  9999
Arrange Get Healthy

******************** NUMERIC OR DATE ENTRY - CATI VERSION ********************
NUM 2  CRN7  6  MM  LABEL
NUTRITION
CRN6 gt . or
CRN5 in (0 9999 .R)
Of your clients who didn't eat enough fruit or vegetables, and had a GP in private practice or at an AMS, what proportion did you advise to talk to their GP about increasing consumption of fruit and vegetables?
[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"
[    Please enter .R for "Refused"]
0  100
0  9999
Refer to GP or AMS

******************** NUMERIC OR DATE ENTRY - CATI VERSION ********************
NUM 1  CRN8  8  MM  LABEL
NUTRITION
CRN7 gt .
Of your clients who didn't eat enough fruit or vegetables, what proportion did you advise to use other types of support to help them increase their intake?

[NOTE TO INTERVIEWERS: Other types of support may include referral to other health professionals, websites or written resources(brochures)]
[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"
[    Please enter .R for "Refused"]
Advise other types support

******************** NUMERIC OR DATE ENTRY - CATI VERSION ***********************
CHCE 1.3 CRN8a 4 _MAKE_ LABEL
NUTRITION
CRN8 in (0 9999 .R)
One of the reasons staff may not advise clients to use other types of support is because in their role they provide the advanced ongoing care required in that area. Is this the case for your clients who didn't eat enough fruit or vegetables?
1 Yes
2 No
.R Refused
No referral as provided support f&v

******************** SINGLE CHOICE - CATI VERSION ****************************
MULT 1 9 CRN9 1 8 MLTLB
NUTRITION
0<CRN8<=100
What other types of support did you advise or provide?
1 Dietician HNE
2 Dietician other
3 Support group HNE
4 Support group other
5 Internet website
6 Booklet/pamphlet
7 Personalised client info (e.g. notes)
8 Other
.R Refused
Other support advise f&v
Dietician HNE
Dietician other
Support group HNE
Support group other
Internet website
Booklet/pamphlet
Personalised client info
Other
Refused

********************MULTIPLE CHOICE - CATI VERSION*******************************
OPEN 400 CRN10 1 LABEL
NUTRITION
substr(CRN9,8,1)='1'
Can you please tell me what 'other' is?
Other support advise f&v

******************* OPEN ENDED ENTRY ITEM ***********************************
INFO 5 CRPINF 1 NOLAB
PHYSICAL ACTIVITY
CRN1a in (0 9999 .R) or
CRN4= 3333 or
CRN8a gt . or
substr(CRN9,8,1)="0" and CRN9 gt '000000000' or
CRN10 gt "
The next questions ask you about client physical activity.

******************** INFORMATION SCREEN ITEM *******************************
PHYSICAL ACTIVITY
CRPINF=1
Over the past 2 months, what proportion of clients did you ask about their current physical activity levels?

[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]
[Please enter .R for "Refused"]

0 100
0 9999

Ask about PA

******************** NUMERIC OR DATE ENTRY - CATI VERSION **********************
NUM 1 CRP1a 4 MM LABEL
PHYSICAL ACTIVITY
CRP1 in (0 9999 .R)
What proportion of new adult clients did you read about their current physical activity levels in their client files.

[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]
[Please enter .R for "Refused"]

0 100
0 9999

Read about pa

******************** NUMERIC OR DATE ENTRY - CATI VERSION **********************
NUM 2 CRP3 6 MM LABEL
PHYSICAL ACTIVITY
0<CRP1<=100 or
0<CRP1a<=100
Of your clients who were doing inadequate levels of physical activity, what proportion did you advise to increase their physical activity levels?

[NOTE TO INTERVIEWER: Please enter 3333 for NO 'at risk' clients seen]
- in the last 2mnths Please enter 9999 for "Don't know"]

[Please enter .R for "Refused"]

0 100
0 9999

Advise to increase PA

******************** NUMERIC OR DATE ENTRY - CATI VERSION **********************
NUM 2 CRP4 6 MM LABEL
PHYSICAL ACTIVITY
0<CRP3<=100 or
CRP3 in (0 9999 .R)
Of your clients who were doing inadequate levels of physical activity, what proportion did you speak to about the Get Healthy support service?

[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]

[Please enter .R for "Refused"]

0 100
0 9999

Talk about Get Healthy PA

******************** NUMERIC OR DATE ENTRY - CATI VERSION **********************
NUM 1 CRP5 6 MM LABEL
PHYSICAL ACTIVITY
0<CRP4<=100
Of your clients who were doing inadequate levels of physical activity, what proportion did you arrange for the Get Healthy service to call them?
[NB: This estimate is for referrals for healthy eating]
NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"
[Please enter .R for "Refused"]

0 100
0 9999

Arrange Get Healthy PA

 ****************** NUMERIC OR DATE ENTRY - CATI VERSION ******************

NUM 2 CRP6 6 MM

PHYSICAL ACTIVITY

CRP4 in (0 9999 .R) or CRP5 gt .

Of your clients who were doing inadequate levels of physical activity
and who had a GP in private practice or at an AMS, what proportion
did you advise to talk to their GP about increasing their physical
activity levels?

[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"
[Please enter .R for "Refused"]

0 100
0 9999

Refer to GP AMS PA

 ****************** NUMERIC OR DATE ENTRY - CATI VERSION ******************

NUM 1 CRP7 8 MM

PHYSICAL ACTIVITY

CRP6 gt .

Of your clients who were doing inadequate levels of physical
activity, what proportion did you advised to use other types of
support to help them be more active?

[NOTE TO INTERVIEWERS: Other types of support may include referral to
other health professionals, websites or written resources(brochures)]
[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"
[Please enter .R for "Refused"]

0 100
0 9999

Advise other types support PA

 ****************** NUMERIC OR DATE ENTRY - CATI VERSION ******************

MULT 1 3 CRP7a 4 _MAKE_ mltlb

PHYSICAL ACTIVITY

CRP7 in (0 9999 .R)

One of the reasons staff may not advise clients to use other types of
support is because in their role they provide the advanced ongoing
care required in that area. Is this the case for your clients who
were doing inadequate physical activity?

1 Yes
2 No
.R Refused

No referral as provided support pa

 ****************** SINGLE CHOICE - CATI VERSION ******************

0<CRP7<=$100

What other types of support did you advise or provide?

1 Physiotherapist at the health service
2 Physiotherapist in private practice
3 Physiotherapist location unknown
4 Community Exercise Group at health service
5  Community Exercise Group at community venue/facility
6  Internet website
7  Booklet/pamphlet
8  Personalised client info (e.g. notes)
9  Other
.R  Refused

Other types support advised PA
Physiotherapist at the health service
Physiotherapist in private practice
Physiotherapist location unknown
Community Exercise Group at health service
Community Exercise Group at community venue/facility
Internet website
Booklet/pamphlet
Personalised client info (e.g. notes)
Other
Refused

**************************MULTIPLE CHOICE - CATI VERSION**************************
OPEN 1 400  CRP9  1  
PHYSICAL ACTIVITY
substr(CRP8,9,1)='1'
Can you please tell me what 'other' is?
Other support PA

************************** OPEN ENDED ENTRY ITEM *******************************
INFO 5  CRSINF  1  
SMOKING
CRP1a in (0 9999 .R) or
CRP3= 3333 or
CRP7a gt . or
substr(CRP8,9,1)='0' and CRP8 gt '0000000000' or
CRP9 gt 
The next questions ask you about client smoking.

************************** INFORMATION SCREEN ITEM ***************************
NUM 1  CRS1  4  MM  
SMOKING
CRSINF=1
Over the past 2 months, what proportion of clients did you ask if they smoke?
[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]
[ Please enter .R for "Refused"]
0  100
0  9999
Ask about SM

************************** NUMERIC OR DATE ENTRY - CATI VERSION ********************
NUM 1  CRS1a  4  MM  
SMOKING
CRS1 in (0 9999 .R)
What proportion of new adult clients did you read about their smoking status in their client files?
[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]
[ Please enter .R for "Refused"]
0  100
0  9999
Read about smoking

************************** NUMERIC OR DATE ENTRY - CATI VERSION ********************
NUM 2  CRS5  5  MM  

SMOKING
0<CRS1<=100 or
0<CRS1a<=100
Of your clients who smoked, what proportion did you advise to
quit smoking?
[NOTE TO INTERVIEWER: Please enter 3333 for NO 'at risk' clients seen]
-in the last 2 months Please enter 9999 for "Don't know"
[Please enter .R for "Refused"]
0 100
0 9999
Advise to quit SM
******************** NUMERIC OR DATE ENTRY - CATI VERSION ***************
NUM 2 CRS6 8 MM LABEL
SMOKING
0<CRS5<=100 or
CRS5 in (0 9999 .R)
Of your clients who smoked and were nicotine dependent (ND), what
proportion did you advise to use Nicotine Replacement Therapy (NRT),
such as patches and gum, or other medications to help them quit smoking?
[NOTE TO INTERVIEWER: ND smokers are typically defined as those who
smoke 10 or more a day and/or smoke within the first 30 mins of waking]
[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]
[Please enter .R for "Refused"]
0 100
0 9999
Advise NRT
******************** NUMERIC OR DATE ENTRY - CATI VERSION ***************
NUM 1 CRS7 6 MM LABEL
SMOKING
CRS6 gt .
Of your clients who smoked, what proportion did you speak to about the
Quitline?
[NOTE TO INTERVIEWER: Quitline is a confidential free telephone
service providing information, support & advice for smoking cessation]
[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]
[Please enter .R for "Refused"]
0 100
0 9999
Talk about Quitline
******************** NUMERIC OR DATE ENTRY - CATI VERSION ***************
NUM 1 CRS8 4 MM LABEL
SMOKING
0<CRS7<=100
Of your clients who smoked, what proportion did you arrange for the
Quitline service to call them?
[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]
[Please enter .R for "Refused"]
0 100
0 9999
Arrange Quitline
******************** NUMERIC OR DATE ENTRY - CATI VERSION ***************
NUM 2 CRS9 5 MM LABEL
SMOKING
CRS7 in (0 9999 .R) or
CRS8 gt .
Of clients who smoked and who had a GP in private practice or at an AMS, what proportion did you advise to talk to their GP about quitting smoking?

[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]

Please enter .R for "Refused"

0                       100
0                       9999

Refer to GP AMS SM

Of your clients who smoked, what proportion did you advise to use other types of support to help them quit?

[NOTE TO INTERVIEWERS: Other types of support may include referral to other health professionals, websites or written resources(brochures)]

[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]

Please enter .R for "Refused"

0                       100
0                       9999

Advise other types support SM

One of the reasons staff may not advise clients to use other types of support is because in their role they provide the advanced ongoing care required in that area. Is this the case for your clients who smoked?

1       Yes
2       No
.R      Refused

No referral as provided support smoking

What other types of support did you advise or provide?

1       Pharmacist
2       Support group HNE
3       Pharmacist
4       Internet website
5       Quit Kit
6       Booklet/pamphlet
7       Personalised client info (e.g. notes)
8       Other
.R      Refused

Other types support SM

Pharmacist
Support group HNE
Support group other
Internet website
Quit Kit
Booklet/pamphlet
Personalised client info (e.g. notes)
APPENDIX FIVE: Additional material for chapters 3 and 4

Other
Refused

******************* MULTIPLE CHOICE - CATI VERSION ********************

OPEN 1 400 CRS12 1 LABEL
SMOKING
substr(CRS11,8,1)='1'
Can you please tell me what 'other' is?
Other support advised SM

INFO 5 CRAINF 1 NOLAB
ALCOHOL
CRS1a in (0 9999 .R) or
CRS5= 3333 or
CRS10a gt . or
substr(CRS11,8,1)='0' and CRS11 gt '000000000' or
CRS12 gt "
The next questions ask you about client alcohol use.

******************* INFORMATION SCREEN ITEM ********************

NUM 1 CRA1 4 MM LABEL
ALCOHOL
CRAINF=1
Over the past 2 months, what proportion of clients did you ask about their alcohol consumption?
[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]
[ Please enter .R for "Refused"]
0 100
0 9999
Talk about AL

******************* NUMERIC OR DATE ENTRY - CATI VERSION ********************

NUM 1 CRA1a 4 MM LABEL
ALCOHOL
CRA1 in (0 9999 .R)
What proportion of new adult clients did you read about their alcohol consumption in their client files?
[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]
[ Please enter .R for "Refused"]
0 100
0 9999
Read about alcohol

******************* NUMERIC OR DATE ENTRY - CATI VERSION ********************

NUM 2 CRA5 8 MM LABEL
ALCOHOL
0<CRA1<=100 or
0<CRA1a<=100
Of your clients who drank at risky levels, what proportion did you advise to reduce their alcohol consumption?

[NOTE TO INTERVIEWER: Risky levels are considered by guidelines as drinking >2drinks per day and/or drinking >4 drinks on one occasion]
[NOTE TO INTERVIEWER: Please enter 3333 for NO 'at risk' clients seen]
-in the last 2mnths Please enter 9999 for "Don't know"
[ Please enter .R for "Refused"]
0 100
0 9999
Advise to reduce AL

******************* NUMERIC OR DATE ENTRY - CATI VERSION ********************
APPENDIX FIVE: Additional material for chapters 3 and 4

NUM 2  CRA6  5  MM  LABEL
ALCOHOL
0<CRA5<=100 or
CRA5 in (0 9999 .R)
Of your clients who drank at risky levels, what proportion did you
undertake further assessment of their alcohol risk (for example
using the AUDIT tool)?
[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]
[Please enter .R for "Refused"]
0                       100
0                       9999
Advise self assess eg AUDIT AL
******************** NUMERIC OR DATE ENTRY - CATI VERSION ******************
NUM 1  CRA7  8  MM  LABEL
ALCOHOL
CRA6 in (0 9999 .R)
Of your clients who drank at risky levels, what proportion did you
advise to undertake a self-assessment of their alcohol risk
(for example discussing the AUDIT tool)?
[NOTE: The AUDIT tool is the Alcohol Use Disorders Identification Test
developed by the World Health Organisation]
[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]
[Please enter .R for "Refused"]
0                       100
0                       9999
Advise self assess eg AUDIT AL
******************** NUMERIC OR DATE ENTRY - CATI VERSION ******************
NUM 2  CRA8  6  MM  LABEL
ALCOHOL
0<CRA6<=100 or
CRA7 gt .
Of your clients who drank at risky levels, and who had a GP in
private practice or at an AMS, what proportion did you
advise to talk to their GP about reducing their alcohol consumption?
[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]
[Please enter .R for "Refused"]
0                       100
0                       9999
Advise GP AMS AL
******************** NUMERIC OR DATE ENTRY - CATI VERSION ******************
NUM 1  CRA9  8  MM  LABEL
ALCOHOL
CRA8 gt .
Of your clients who drank at risky levels, what proportion did
you advise to use other types of support to help them reduce
their alcohol consumption?
[NOTE TO INTERVIEWERS: Other types of support may include referral to
other health professionals, websites or written resources(brochures)]
[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]
[Please enter .R for "Refused"]
0                       100
0                       9999
Advise other support AL
One of the reasons staff may not advise clients to use other types of support is because in their role they provide the advanced ongoing care required in that area. Is this the case for your clients who drank at risky levels?

1. Yes
2. No

Response: 
- Refused

No referral as provided support alc

What types of support did you advise or provide?

1. Drug and Alcohol Counsellor HNE
2. Drug and Alcohol Counsellor Other
3. Detox clinic HNE
4. Detox clinic Other
5. Phone-based support
6. Support group HNE
7. Support group Other eg Alcoholics Anonymous
8. Internet website
9. Booklet/pamphlet
10. Personalised client info (e.g. notes)
11. Other

Response: 
- Refused

Other support advised AL
- Drug and Alcohol Counsellor HNE
- Drug and Alcohol Counsellor Other
- Detox clinic HNE
- Detox clinic Other
- Phone-based support
- Support group HNE
- Support group Other eg Alcoholics Anonymous
- Internet website
- Booklet/pamphlet
- Personalised client info (e.g. notes)
- Other
- Refused

Can you please tell me what ‘other’ is?
- Other advised AL

******* OPEN ENDED ENTRY ITEM *******

INFO 5 CRIINFa 3 NOLAB
The next questions ask about the care you provide your clients 'at risk' of vaccine preventable diseases. These questions will focus on the seasonal influenza and pneumococcal vaccinations.

*************** INFORMATION SCREEN ITEM ***********************
INFO 1 CRIINFb 8 NOLAB
IMMUNISATION
CRIINFa=1
'At risk' groups for pneumococcal include Aboriginal & Torres Strait Islander clients aged 50 years and over and non-Indigenous clients aged 65 years and older.

'At risk' groups for the influenza vaccination, which should be provided annually in the risk period of February to September, include all adult Aboriginal and Torres Strait Islander clients and non-Indigenous clients aged 65 years and over.

*************** INFORMATION SCREEN ITEM ***********************
NUM 1 CRI2 6 MM LABEL
IMMUNISATION
CRIINFb=1
Of your clients 'at risk', what proportion did you ask whether they had received their pneumococcal and influenza vaccinations?

[NOTE TO INTERVIEWER: Please enter 3333 for "No 'at risk' clients seen"]
[Please enter 9999 for "Don't know"]
[Please enter .R for "Refused"]
0 100
0 9999
Assess Imms

******************** NUMERIC OR DATE ENTRY - CATI VERSION ***********************
NUM 1 CRI2a 4 MM LABEL
IMMUNISATION
CRI2 in (0 9999 .R)
What proportion of new adult clients did you read about their pneumococcal and influenza vaccinations in their client files?
[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]
[Please enter .R for "Refused"]
0 100
0 9999
Read about imms

******************** NUMERIC OR DATE ENTRY - CATI VERSION ***********************
NUM 2 CRI3 5 MM LABEL
IMMUNISATION
0<CRI2<=100 or 0<CRI2a<=100
Of your 'at risk' clients, who had not had their vaccinations, what proportion did you advised to be vaccinated?

[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]
[Please enter .R for "Refused"]
0 100
0 9999
Advise vaccination

******************** NUMERIC OR DATE ENTRY - CATI VERSION ***********************
NUM 1 CRI4 5 MM LABEL
IMMUNISATION
CRI3 gt .
Of your 'at risk' clients, who had not had their vaccinations, what proportion did you advise on where to be vaccinated?

[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]
[  
  Please enter .R for "Refused"]

Advise where Imms

************************** MULTIPLE CHOICE - CATI VERSION **************************
OPEN 1 400 CRI10 1 LABEL
IMMUNISATION
substr(CRI8,5,1)='1'

Can you please tell me what 'other' is?

Other location IM

************************** OPEN ENDED ENTRY ITEM ******************************
NUM 3 CRI11 6 MM LABEL
IMMUNISATION
CRI4 in (0 9999 .R) or
substr(CRI8,5,1)=0' and CRI5 gt '00000' or
CRI10=0

Of clients who had not had the pneumococcal and influenza vaccinations to what proportion did you provide information resources about the vaccinations?

[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]
[  
  Please enter .R for "Refused"]

Provide info resources IM

************************** MULTICLASS OR DATE ENTRY - CATI VERSION **********
MULT 1 4 CRI12 1 3 MLTLB
IMMUNISATION
0<CRI11<=100
What information resources did you provide?
1 Booklet/pamphlet
2 Personalised client info (e.g. notes)
3 Other
APPENDIX FIVE: Additional material for chapters 3 and 4

.R Refused
Info resources provided IM
Booklet/pamphlet
Personalised client info (e.g. notes)
Other
Refused

***********************MULTIPLE CHOICE - CATI VERSION***********************
OPEN 1 400 CRI13 1
IMMUNISATION
substr(CRI12,3,1)='1'
Can you please tell me what ‘other’ is?
Other resources provided IM

******************* OPEN ENDED ENTRY ITEM *********************************
INFO 5 CRFINF 8
FALLS
CRI2= 3333 or
CRI2a in (0 9999 .R) or
CRI11 in (0 9999 .R) or
substr(CRI12,3,1)='0' and CRI12 gt '0000' or
CRI13 gt 
The next questions ask you about client falls risk.

Adults 50 years and over are considered to be at increased risk of having a fall. When answering these next questions consider the care that you provided clients aged 50 years or over.

[NOTE TO INTERVIEWER: All FALLS QUESTION REFER TO CLIENTS>=50yrs ONLY. Record care for these clients only. If care provided for other reason, please provide details if necessary in OPEN feedback question]

******************* INFORMATION SCREEN ITEM ******************************
NUM 1 CRF1 6 MM
FALLS
CRFINF=1
In the last 2 months, what proportion of your clients 50 years and over did you assess for their risk of having a fall?

[NOTE TO INTERVIEWER: Please enter 3333 for "No 50+years clients seen]
[ Please enter 9999 for "Don't know"
[ Please enter .R for "Refused"
0 100
0 9999
Assess risk FL

******************** NUMERIC OR DATE ENTRY - CATI VERSION ******************
NUM 1 CRF1a 4 MM
FALLS
CRF1 in (0 9999 .R)
What proportion of new adult clients 50 years and over did you read about their risk of having a fall in their client files?

[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"
[ Please enter .R for "Refused"
0 100
0 9999
Read about falls

******************** NUMERIC OR DATE ENTRY - CATI VERSION ******************
NUM 2 CRF7 8 MM
FALLS
0<CRF1<=100 or
Of your clients at risk of having a fall, what proportion did you recommend that a Quickscreen test should be completed?

[NOTE TO INTERVIEWER: Quickscreen is a clinical falls risk assessment consisting of eight measures including previous falls, touch sensation and the sit to stand test.]

[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]

0 < CRF1a <= 100
0 9999

Recommend Quickscreen FL

Of your clients at risk of having a fall, what proportion did you undertake the Quickscreen testing with?

[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]

0 9999

Undertake QScreen FL

Of your clients at risk of having a fall, what proportion did you refer to a community clinician or care provider for a Quickscreen test?

[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]

0 9999

Refer to Nurse for QScreen FL

Of your clients at risk of having a fall, what proportion did you advise to use other types of support to help reduce their risk of having a fall?

[NOTE TO INTERVIEWERS: Other types of support may include referral to other health professionals, websites or written resources(brochures)]

0 < CRF8 <= 100
0 9999

Advise other types support FL
One of the reasons staff may not advise clients to use other types of support is because in their role they provide the advanced ongoing care required in that area. Is this the case for your clients who were at risk of having a fall?

1. Yes
2. No
.R Refused

No referral as provided support Falls

*************** SINGLE CHOICE - CATI VERSION ***********************

MULT 1 14 CRF12 1 13 mlilb FALLS
0<CRF11<=100

What support did you advise or provide?

1. General Practice
2. Aboriginal Medical Service
3. Physiotherapist at the health service
4. Physiotherapist in private practice
5. Physiotherapist location unknown
6. Community Exercise Group at health service
7. Community Exercise Group at community venue/facility
8. Falls clinic
9. Get Healthy phone line
10. Internet website
11. Booklet/pamphlet
12. Personalised client info (e.g. notes)
13. Other
.R Refused

Other types support advised FL

General Practice
Aboriginal Medical Service
Physiotherapist at the health service
Physiotherapist in private practice
Physiotherapist location unknown
Community Exercise Group at health service
Community Exercise Group at community venue/facility
Falls clinic
Get Healthy phone line
Internet website
Booklet/pamphlet
Personalised client info (e.g. notes)
Other
.R Refused

***************MULTIPLE CHOICE - CATI VERSION***************

OPEN 1 400 CRF13 1

FALLS

substr(CRF12,13,1)='1'

Can you please tell me what 'other' is?

Other support FL

********** OPEN ENDED ENTRY ITEM **********

INFO 5 CROVINF 5 NOLAB

OVERALL CARE
CRF1= 3333 or
CRF1a in (0 9999 .R) or
CRF11a gt . or
substr(CRF12,13,1)='0' and CRF12 gt '00000000000000' or
The next few questions ask about care for all the health risk behaviours we have asked about.

[NOTE TO INTERVIEWER: That is for Smoking, Nutrition, Alcohol, Physical Activity, Immunisation and Falls.]

******************** INFORMATION SCREEN ITEM ********************

NUM 1 CROV1 7 MM  
OVERALL CARE  
CROVINF=1  

In the last 2 months, what proportion of new adult clients did you provide with a written summary about their specific health risk behaviours including information on what they could do to improve these? For example a 'How healthy are your habits handout'.

[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]

0 100  
0 9999  
Provide handout

******************** NUMERIC OR DATE ENTRY - CATI VERSION ********************

NUM 1 CROV2 6 MM  
OVERALL CARE  
CROV1 gt .  

Of clients' who had a GP in private practice or at an AMS, or another nominated health worker, for what proportion did you send a summary of the client's preventive care health risk behaviours to their GP?

[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]

0 100  
0 9999  
Send GP AMS letter

******************** NUMERIC OR DATE ENTRY - CATI VERSION ********************

INFO 1 CROV3 6  
OVERALL CARE  
CROV2 gt .  

Preventive care advice for Aboriginal and Torres Strait Islander clients may vary from advice for non-Indigenous clients.

[NOTE TO INTERVIEWER: E.g. It is recommended that the influenza vaccination be giving to all clients 65 years and over and Aboriginal and Torres Strait Islander clients 15 years and over.]

******************** INFORMATION SCREEN ITEM ********************

NUM 1 CROV4 5 MM  
OVERALL CARE  
CROV3 gt .  

What proportion of clients do you routinely ask if they are of Aboriginal or Torres Strait Islander origin?

[NOTE TO INTERVIEWER: Please enter 9999 for "Don't know"]

0 100  
0 9999  
Ask Identity question

******************** NUMERIC OR DATE ENTRY - CATI VERSION ********************
INFO 1 SPINF 7 NOLAB
Support
CROV4 gt .
Moving on to the next part of the survey: The following questions ask about the organisational support, things like policies, training and other resources that may assist you to provide clients preventive care.

[NOTE TO INTERVIEWER: Remember, when we refer to preventive care we mean care related to smoking, nutrition, alcohol, physical activity, immunisation and falls.]

CHCE 1 3 SPAWR 2 _MAKE_ LABEL
Support
SPINF=1
Are you aware Hunter New England Area Health Service has a policy regarding Preventive Care?
1 Yes
2 No
. R Refused
Aware of PC Policy

INFO 1 SPINF2 3 NOLAB
Support
SPAWR gt .
I will now go through a list of resources and would be interested in knowing if they are currently available to support you in delivering preventive care to clients and how useful they are.

DO 1 15 loopA 0 NOLAB
MODULE SUBMODUL
SPINF2=1
*********** INFORMATION SCREEN ITEM **********************
NULL 1 FrstA 0 NOLAB
MODULE SUBMODUL
lastA[-1]=1
*********** NULL ITEM - DOES NOTHING **********************
CHCE 1 4 SPAV 3 _MAKE_ LABEL
MODULE SUBMODUL
FrstA[0]=1
Is there (a) ^Spist[0]^ available to you?
1 Yes
2 No
3 Don't know
. R Refused
Put label text here [max 40 char]
*********** SINGLE CHOICE - CATI VERSION **********************
CHCE 1 4 SUSF 5 _MAKE_ LABEL
Support
SPAV[0]=1
How useful is/are (the)
^Spist[0]^
in assisting you to provide preventive care?

[NOTE TO INTERVIEWER: Using the scale: Very useful, Somewhat Useful, or Not at all useful]

1   Very Useful
2   Somewhat Useful
3   Not at all useful
.R   Refused

As I mentioned earlier, one of the purposes of this survey is to gain feedback from you about the delivery of preventive care in community health.

Is there anything else you would like to add?
[NOTE TO INTERVIEWER: Please only record comments specific to preventive care.
NOTE TO INTERVIEWER: By community health we mean including mental health and drug and alcohol services]
Other Support needed

The last set of questions asks about you, they include questions about your work history, and your own health.

[NOTE TO INTERVIEWER: Please remember that all information that you provide will be kept confidential and stored securely and individual results will NOT be included in any reports including those to health service managers. Results will in NO way be used as an appraisal of your clinical performance.]

First of all, what is your age in years?
[Prompt with age brackets]
APPENDIX FIVE: Additional material for chapters 3 and 4

1 20-29
2 30-39
3 40-49
4 50-59
5 60-64
6 65-69
7 70+
.R Refused
Age

*************** SINGLE CHOICE - CATI VERSION ***********************

CHCE 15 DEMOa 2 _MAKE_ LABEL
DEMOGRAPHICS
DEMO1 gt .
Are you of Aboriginal or Torres Strait Islander origin?
(PROMPT: Read out response options if required)
1 Yes, Aboriginal origin
2 Yes, Torres Strait Islander origin
3 Yes, both Aboriginal and Torres Strait Islander origin
4 No
.R Refused
Aboriginal/Torres Strait Origin

*************** SINGLE CHOICE - CATI VERSION ***********************

CHCE 16 DEMO2 3 _MAKE_ LABEL
DEMOGRAPHICS
DEMOa gt .
How many years have you been a ^discip^?
[NOTE TO INTERVIEWERS: If clinician role has changed, please mark on
log sheet and select below the years in new role]
1 < 1 year
2 1-2 years
3 3-4 years
4 5-9 years
5 10 or more years
.R Refused
Years in discipline

*************** SINGLE CHOICE - CATI VERSION ***********************

CHCE 16 DEMO3 3 _MAKE_ LABEL
DEMOGRAPHICS
DEMO2 gt .
How many years have you been working in community health?
[NOTE TO INTERVIEWERS: That is community or mental health or drug and
alcohol]
1 < 1 year
2 1-2 years
3 3-4 years
4 5-9 years
5 10 or more years
.R Refused
Years in community health

*************** SINGLE CHOICE - CATI VERSION ***********************
What is your employment status currently?
1. Full time
2. Part time
3. Casual
4. Other
.R Refused

Employment status

****************** SINGLE CHOICE - CATI VERSION ******************

In the last month how many serves of vegetables did you usually eat each day?
[NOTE TO INTERVIEWER: A serve is half a cup of cooked vegetables or 1 cup of salad vegetables]
1. 0
2. 1
3. 2
4. 3
5. 4
6. 5 or more
7. Don't know
8. Can't for health or treatment reasons [Do not read out]
.R Refused

Daily serves Vegetables

****************** SINGLE CHOICE - CATI VERSION ******************

In the last month how many serves of fruit did you usually eat each day?
[NOTE TO INTERVIEWER: A serve is 1 medium piece or 2 small pieces of fruit or 1 cup of diced pieces]
1. 0
2. 1
3. 2
4. 3 or more
**APPENDIX FIVE: Additional material for chapters 3 and 4**

5       Don't know
6       Can't for health or treatment reasons [Do not read out]
.R      Refused

**Daily serves Fruit**

*************** SINGLE CHOICE - CATI VERSION **********************

CHCE 1 11 HBV3 5 _MAKE_ LABEL
HEALTH BEHAVIOURS
HBV2 gt .
In the past month how many days a week did you usually do 30 minutes or more of physical activity?
[NOTE TO INTERVIEWER: We mean any activity that increases your heart rate or makes you breathe harder than normal. This can include brisk walking, swimming, team sports or even things like gardening.]

1       0
2       1
3       2
4       3
5       4
6       5
7       6
8       7
9       Don't know
10      Can't for health or treatment reasons [Do not read out]
.R      Refused

**Weekly PA levels**

*************** SINGLE CHOICE - CATI VERSION **********************

CHCE 1 11 HBV4 6 _MAKE_ LABEL
HEALTH BEHAVIOURS
HBV3 gt .
In the past month how many days a week did you do 30 minutes or more of exercise that aim to challenged your balance? By this I mean exercises, like Tai Chi/yoga/pilates, in which you are standing with your feet close together or on one leg and using minimal arm support.
[NOTE TO INTERVIEWER: Specific exercises may include heel to toe standing, side leg raises, sideways walking or heel raises]

1       0
2       1
3       2
4       3
5       4
6       5
7       6
8       7 or more
9       Don't know
10      Can't for health or treatment reasons [Do not read out]
.R      Refused

**Weekly balance levels**

*************** SINGLE CHOICE - CATI VERSION **********************

CHCE 1 5 HBV5 1 _MAKE_ LABEL
HEALTH BEHAVIOURS
Have you ever smoked any tobacco products?
1 yes, current smoker
2 no, have never smoked
3 no, quit less than 4 months ago
4 no, quit more than 4 months ago
.R Refused

Ever smoked

*************** SINGLE CHOICE - CATI VERSION ***************

In the last month how many cigarettes per day do you usually smoke?
1 < 1 per day
2 1 – 4
3 5 – 10
4 11 – 20
5 21 – 30
6 > 30
7 Smoke pipes
8 Smoke cigars
9 Don't know
.R Refused

Daily cigarettes

*************** SINGLE CHOICE - CATI VERSION ***************

In the last month how many pipes per day did you usually smoke?
1 < 1 per day
2 1
3 2 or more
4 Don't know
.R Refused

Daily pipes

*************** SINGLE CHOICE - CATI VERSION ***************

In the last month how many cigars per day did you usually smoke?
1 < 1 per day
2 1
3 2 or more
4 Don't know
.R Refused

Daily cigars

*************** SINGLE CHOICE - CATI VERSION ***************


HBV8 gt.
In the last month how soon after waking did you usually have your first smoke?
1       Within 5 minutes
2       6 to 30 minutes
3       31 to 60 minutes
4       More than 60 minutes
5       Don't know
.R      Refused
Time to first
******************** SINGLE CHOICE - CATI VERSION ***********************

CHCE 2 7       HBV10   1       _MAKE_       LABEL
HEALTH BEHAVIOURS
HBV5 in (2 3 4 .R) or HBV9 gt.
How often do you have an alcoholic drink?
1       Never
2       Monthly or less
3       2 to 4 times a month
4       2 to 3 times a week
5       4 or more times a week
6       Don't know
.R      Refused
Alcohol Freq
******************** SINGLE CHOICE - CATI VERSION ***********************

CHCE 1 7       HBV11   3       _MAKE_       LABEL
HEALTH BEHAVIOURS
HBV10 in (2 3 4 5 6 .R)
How many standard drinks would you have on a typical drinking day? [A standard drink is 1 schooner of light beer, 1 middy of full strength beer, 1 100ml glass of wine or 1 30ml nip of spirits]
1       1 or 2
2       3 or 4
3       5 or 6
4       7 to 9
5       10 or more
6       Don't know
.R      Refused
Drink one occasion
******************** SINGLE CHOICE - CATI VERSION ***********************

CHCE 1 7       HBV12   2       _MAKE_       LABEL
HEALTH BEHAVIOURS
HBV11 gt.
In the last month how often did you have four or more standard drinks on one occasion?
1       Never
2       Less than monthly
3       Monthly
4       Weekly
5       Daily or almost daily
6       Don't know
.R      Refused
Freq four or more

*************** SINGLE CHOICE - CATI VERSION ****************************

CHCE 2 4  HBV13  2  _MAKE_  LABEL
HEALTH BEHAVIOURS
HBV10=1 or
HBV12 gt .
In the 2009 flu season (February - September) did you receive an influenza vaccination?
1   Yes
2   No
3   Don't know
.R   Refused
Influenza vac

*************** SINGLE CHOICE - CATI VERSION ****************************

CHCE 1 4  HBV14  6  _MAKE_  LABEL
HEALTH BEHAVIOURS
HBV13 gt .
Lastly, have you had the pneumococcal vaccination?
[NOTE TO INTERVIEWERS: Yes, if had at least one dose and not due for second dose at the moment. No, if presently due for a dose but hasn’t received it]
[NOTE TO INTERVIEWERS: We are asking everyone. However this vaccine is not compulsory for health staff]
1   Yes
2   No
3   Don't know
.R   Refused
Pneumococcal vac

*************** SINGLE CHOICE - CATI VERSION ****************************

CHCE 1 4  ENDINFa 2  _MAKE_  LABEL
INFO END
HBV14 gt .
Ok, That's the end of the survey. Thank you very much for participating.
Is there anything else you would like to tell me before we finish?
1   Yes
2   No
3   Don't know
.R   Refused
End any other comments

*************** SINGLE CHOICE - CATI VERSION ****************************

OPEN 1 600  ENDO 1  LABEL
INFO END
ENDINFa=1
Can you please specify.
End comments specify

*************** OPEN ENDED ENTRY ITEM ****************************

INFO 2  ENDINFb 4  NOLAB
INFO END
ENDO gt ” or
ENDINFa in (2,3,.R)
If you want to contact someone regarding this survey, you can call Megan Freund. I can give you her details (phone 4924 6374) or
Dr Freund's name and contact details are also listed on the bottom of the information letter.

*************** INFORMATION SCREEN ITEM ***********************

TIME 1 T_END 0 LABEL
end time
ENDINFb=1
Recording end time

*************** GET DURATION ITEM ***********************

STAT 1 STAT_CQ 1 NOLAB
end stat
T_END NE.
Completed
CQ

*************** SET EXIT STATUS ITEM ***********************

STAT 1 STAT_DR 1 NOLAB
DR stat
(INTRO13=.R or INTROX=.R or INTROY=.R) and T_END=.
Refused
DR

*************** SET EXIT STATUS ITEM ***********************

STAT 1 STAT_CB 1 NOLAB
CB stat
(intro8=1 or INTRO14=1 or intro15=1) and T_END=.
Callback
CB

*************** SET EXIT STATUS ITEM ***********************

STAT 1 STAT_OT 1 NOLAB
OT stat
intro3 gt " and T_END=.
Other reason
OT

*************** SET EXIT STATUS ITEM ***********************

STAT 2 STAT_OS 1 NOLAB
OS stat
(INTRO2=9 or Qloss2 in (2 .R) or INTROZ=1 or intr18=1 or
INTRO9=1 or INTRO6=2) and T_END=.
Extended leave
OS

*************** SET EXIT STATUS ITEM ***********************

STAT 1 STAT_RD 1 NOLAB
RD stat
INTR9c=1 and T_END=.
Respondent dead
RD

*************** SET EXIT STATUS ITEM ***********************

INFO 2 TERM 2 NOLAB
END Term
stat_cq='CQ' or STAT_CB='CB' or STAT_DR='DR' or
STAT_OT='OT' or STAT_OS='OS' or STAT_RD='RD'
INTERVIEWER TERMINATION INSTRUCTION, PRESS STOP
AND RECORD OUTCOME OF INTERVIEW ON LOG

*************** INFORMATION SCREEN ***********************
APPENDIX SIX:  
ADDITIONAL MATERIAL FOR CHAPTERS 3 AND 4

APPENDIX 6.1: 
SUPPLEMENTARY TABLE: CHI-SQUARED ASSOCIATIONS

Supplementary Table 1: p-values for the chi-squared associations between diagnostic variables and number of appointments with receipt of assessment and complete care variable

<table>
<thead>
<tr>
<th>Variable</th>
<th>Smoking Assessment</th>
<th>Nutrition Assessment</th>
<th>Alcohol Assessment</th>
<th>Physical Assessment</th>
<th>Smoking Complete Care</th>
<th>Nutrition Complete Care</th>
<th>Alcohol Complete Care</th>
<th>Physical Activity Complete Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>.96</td>
<td>.44</td>
<td>.12*</td>
<td>.82</td>
<td>.29</td>
<td>.67</td>
<td>.85</td>
<td>.76</td>
</tr>
<tr>
<td>Bi-polar disorder</td>
<td>.80</td>
<td>.40</td>
<td>.56</td>
<td>.61</td>
<td>.69</td>
<td>.72</td>
<td>.11*</td>
<td>.53</td>
</tr>
<tr>
<td>Schizophrenia / other</td>
<td>.51</td>
<td>.63</td>
<td>.13*</td>
<td>.52</td>
<td>.56</td>
<td>.35</td>
<td>.002*</td>
<td>.64</td>
</tr>
<tr>
<td>psychotic illness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety disorder</td>
<td>.40</td>
<td>.38</td>
<td>.79</td>
<td>.37</td>
<td>.16*</td>
<td>.98</td>
<td>.26</td>
<td>.98</td>
</tr>
<tr>
<td>Other mental illness</td>
<td>.88</td>
<td>.42</td>
<td>.69</td>
<td>.12*</td>
<td>.30</td>
<td>.46</td>
<td>.001*</td>
<td>.43</td>
</tr>
<tr>
<td>Heart diseases / stroke</td>
<td>.24*</td>
<td>.69</td>
<td>.17*</td>
<td>.17*</td>
<td>.30</td>
<td>.86</td>
<td>.70</td>
<td>.16*</td>
</tr>
<tr>
<td>Diabetes</td>
<td>.66</td>
<td>.05*</td>
<td>.73</td>
<td>.99</td>
<td>.34</td>
<td>.02*</td>
<td>1.00</td>
<td>.005*</td>
</tr>
<tr>
<td>Cancers</td>
<td>.66</td>
<td>.59</td>
<td>.51</td>
<td>.45</td>
<td>.35</td>
<td>.02*</td>
<td>.29*</td>
<td>.86</td>
</tr>
<tr>
<td>Respiratory</td>
<td>.66</td>
<td>.69</td>
<td>.43</td>
<td>.06*</td>
<td>.77</td>
<td>.03*</td>
<td>.67</td>
<td>.97</td>
</tr>
<tr>
<td>Number of appointments</td>
<td>.10*</td>
<td>.06</td>
<td>.71</td>
<td>&lt;.001*</td>
<td>.11*</td>
<td>.36</td>
<td>.003*</td>
<td>.12*</td>
</tr>
</tbody>
</table>
in last 12 months                |                    |                      |                    |                     |                       |                        |                       |                                 |

* Variable entered into backwards stepwise regression model
APPENDIX SEVEN: ADDITIONAL MATERIAL FOR THE INTERVENTION [CHAPTERS 6 AND 7]

APPENDIX 7.1: POLICY GUIDELINES

Preventive Care Policy HNEH Pol 10_01

Document Registration Number: HNEH Pol 10_01

Preventive Care

Sites where policy applies: All Hunter New England Health Sites (HNE Health)
Target audience: All HNE Health Clinicians undertaking curative or intervention activities with patients
Description: To facilitate routine delivery of preventive care to every individual patient/visit by every clinician at every curative and intervention contact with HNE Health.
Subject: Preventive Care
Keywords: Prevention, Best Practice, Screening, Brief Advice, Referral, Chronic Disease, Smoking, Immunisation, Falls, Physical Activity, Nutrition
Replaces Existing Policy?: No
Registration Numbers of Superseded docs.: N/A

Related Legislation, Australian Standards, NSW Health Policy or Circular, other HNE Health Documents, Professional Guidelines, Codes of Practice or Ethics:
- Australia's healthiest country by 2020 - National Preventative Health Strategy
- NSW Health Smoke Free Workplace Policy PD2006-372
- Smoke-free Health Service Policy - Managing Non-Tobacco Dependent Inpatients and Prospective Aged Care Residents PD2006-572 PEP-3
- Nursing & Midwifery Clinical Guidelines - Identification & Resilience to Drug & Alcohol Issues GL2008_001
- Fall Injury Among Older People - Management Policy to Reduce in NSW Health PD2006_355
- Assessment of Falls Among Older People on Admission to Acute Inpatient Facilities PD2006_353: POP HNE Health Aboriginal Health Plan 2007-2011, NSW State Plan, NSW Health Plan HNE Clinical Guidelines - Managing Sarcopenia Obesity; the Aboriginal Chronic Disease Framework; Chronic Disease Prevention Framework HNE Health Strategic Plan HNE Health Obesity Plan

Portfolio Executive Director responsible: Dr Nigel Lyons, Chief Executive
Policy Contact Person: Associate Professor John Wiggers, Director, Population Health
Contact Details: Ph (02) 492 46247, john.wiggers@hneh.health.nsw.gov.au

Aboriginal Health Impact Statement: Yes, and approved by Leona Quinnell 9 October 2009
Aboriginal Health Advisory C. Approval?: No

Summary:
- This policy is designed to increase the provision of routine preventive care to HNE Health patients.
- The care aims to reduce the prevalence of risk behaviours that contribute to vaccine preventable disease, chronic diseases and falls among the elderly.
- The preventive care model will focus on a limited number of risk factors: smoking, alcohol, fruit and vegetable consumption, physical activity, immunisation and falls prevention in adult patients and environmental tobacco smoke exposure (ETS), fruit and vegetable consumption, breast milk infant formula milks consumption, physical activity and small screen recreation and immunisation in children.
- The care will involve screening for these risk behaviours, provision of brief advice and referral to community and other health services.
- A comprehensive organisational change approach will support the introduction of the policy and the implementation of the model of care. The approach will involve the modification of CHIME and other clinical software and clinical forms, the provision of training and support services, and the auditing and feedback of adherence to the policy.
- The policy seeks to promote the provision of culturally appropriate preventive care.
- Policy compliance procedures will be developed for the provision of preventive care in hospital and community-based care settings.

The roll out of preventive care will be staged. Each stage will include training and support.

Distribution: HNE Health Intranet, CE newsletter, All Clinical Operations managers and Clinical Managers
Date Authorised by HNE Health Chief Executive: 14 December 2009
Date of Issue: 20 January 2010
Review Due Date: December 2012
TRIM Number: 10/26-1.1

Version One: January 2010
Area Policy Statement

1.0 Title: Hunter New England Area Preventive Care Policy

2.0 Background / Rationale / Problem Statement

Clinician delivery of preventive care can be effective in reducing behavioural risk factors, particularly when it is delivered by multiple providers on multiple occasions. When delivered on a large scale, preventive care has the potential to reduce the population prevalence of vaccine preventable and chronic disease risk factors, leading to a long term reduction in morbidity and mortality and a reduced burden on the health care system.

A policy to mandate routine preventive care delivery within HNE Health is required to meet the obligations of:
- The NSW State Plan
- The NSW Health plan
- The Key performance indicators of the NSW Health Performance agreement
- The Hunter New England’s Balanced Scorecard

There are a number of existing preventive care initiatives in HNE Health but no standardised approach for routine provision of preventive care. Thus, the HNE Health Preventive Care Taskforce was formed in 2008 to guide the delivery of preventive care within the region.

The Preventive Care model will complement existing preventive care practices and initiatives. It is designed to place limited demand on clinicians and its implementation will be supported by training, helpline support, on-line information and monitoring and feedback.

3.0 Purpose

To facilitate the delivery of preventive care by all clinicians.

4.0 Definitions

(see Appendix 1)

5.0 Policy Statement

Scope

This policy applies to all clinical patient/client services within HNE Health including those based in inpatient settings (including ED, outpatients and inpatients) and those based in the community (including community health, drug and alcohol services, community mental health services and Aboriginal Health). It applies to all clinicians at all curative or intervention patient/client contacts. Policy compliance procedures for the inpatient setting and the community based setting will be developed to support the implementation of the policy.

Expected outcomes

Direct – Short term outcomes
- Routine delivery of preventive care as part of everyday business by all HNE Health clinicians to all patients/clients.
- Increased in client uptake of referrals to Quitline, Get Healthy Information & Coaching Service, GPs, Drug & Alcohol services and local referral options.

Indirect – Long term outcomes
- Increased public awareness of chronic disease risk behaviours.
- Reduced prevalence of risk behaviours.
- Reduced prevalence of preventable chronic disease, falls injuries and vaccine preventable diseases.
- Reduced health service use.

Compliance with this Policy is Mandatory

Date endorsed by AET and authorised by CE:
14 December 2009

Hunter New England
NSW Health

Version One
January 2010
Page 2
APPENDIX SEVEN: Additional material for the intervention [Chapters 6 and 7]

Preventive Care Policy HNEH Pol 10_01

**Area Policy Statement**

**Document Registration Number:**
HNEH Pol 10/01

**HUNTER NEW ENGLAND**

**NSW HEALTH**

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**Target audience**
All HNE Health Clinicians and their Managers, All HNE Health patients/clients.

**Key Stakeholders**
- Chief Executive
- Director of Clinical Operations
- Director, Operations - Primary and Community Networks
- Director Operations - Acute Network
- Director of Nursing and Midwifery Services
- Director of Population Health, Planning and Performance
- Director, Aboriginal Health
- All Hunter New England Clinicians, Acute and Primary and Community Networks, Clinical Network and Clinical Stream leaders

**Best practice / Industry standards**
- NSW State Plan and NSW Performance agreement indicators.
- Routine implementation of preventive care as part of clinical care is ahead of best practice.

**Evidence**
Reviews have concluded that smoking cessation care should be provided on multiple occasions, by multiple providers using multiple delivery modalities (e.g. written, face to face, telephone). A Cochrane Review of 33 hospital smoking cessation trials concluded that interventions delivered at two points of contact (as an inpatient and following the hospital stay) increases the odds of a patient not smoking 6-12 months later by 65%. It has been reported that hospital patients felt that it was appropriate for hospital staff to provide smoking cessation advice and counselling.

Evidence suggests that interventions targeting other behavioural risk factors are also effective. In light of this, the United States Preventive Services Task Force has recommended clinician screening for: tobacco use, alcohol use, physical inactivity and poor nutrition; brief counselling for tobacco and alcohol misuse; intensive behavioural dietary counselling for adult patients at high risk; and intensive counselling and behavioural interventions for obese patients. Such recommendations are considered the “gold standard” for clinical preventive services. For all behaviour risk factors, the importance of repeated and sustained support through referral to specialists or telephone counselling is emphasised.

Given the high prevalence of multiple, clustered behavioural risk factors, there are potentially considerable benefits to addressing multiple risks at the same time, using an integrated screening and care delivery approach. Through such an approach small reductions in risk, if sustained over time, are likely to have an effect on population risk prevalence and well being.

The specific risk factors selected for Preventive Care in HNE Health are those that HNE Health and its units are required to report on: smoking, alcohol, fruit and vegetable consumption, physical activity, immunisation and falls prevention in adult patients and environmental tobacco smoke exposure (ETS), fruit and vegetable consumption, breast milk/infant formula/milk consumption, physical activity and small screen recreation and immunisation in children. Fruit and Vegetable consumption is acknowledged as having a protective effect against a range of non communicable diseases.
Health Impact Assessment/ Equity-Focused Health Impact Assessment
(see Appendix 3)

Implementation Plan
Under the direction of the Preventive Care Taskforce, HNE Population Health will lead the rollout of the Preventive Care model and the development of ongoing compliance activities. Implementation will include:
- Modification of area wide systems, including CHIME and paper forms
- Training and support including IT competency based training, phone, email and collaborative space and face to face visits.
- Performance monitoring and feedback.

Proposed Actions
Stage 1: Community-based clinicians
2010
The model will be rolled out to community based clinicians in one HNE Health cluster. The policy will be supported by the placement of preventive care items in CHIME and the training of clinicians.
2011-2012
The model will then be rolled out sequentially to community based clinicians across remaining clusters.

Stage 2: Inpatient, Outpatient and ED-based clinicians
A strategy will be developed to support the implementation of the model in acute services.

Impact on service delivery
The policy is designed to enhance the quality of care provided to all patients. The role of clinical staff will be to screen, provide brief advice and refer patients to other providers for more extensive preventive care. Given this, and the development of supportive IT and clinical processes it is intended that there will be limited negative impact on current service delivery.
Additionally during the roll out phase any overlaps in assessment and care provision will be identified and a solution developed to avoid repeated assessment and care. The potential exists for a positive impact on the referral of patients to existing secondary prevention services.

Organisational Responsibility
The Preventive Care Taskforce is responsible for overseeing the introduction of the Preventive Care Policy. The Chief Executive will lead and support the organisation and its employees in the delivery of preventive care and the modification of systems and work processes to support the provision of preventive care. The Director of Clinical Operations, the Director Operations - Primary and Community Networks and the Director Operations - Acute Network are responsible for their staff delivering preventive care.

Management Responsibility
The Director for Population Health is responsible for overseeing the roll out of the Preventive Care Policy. Directors of Mental Health and Aboriginal Health, and Senior Managers in Primary and Community Networks and Acute Network are responsible for ensuring that the policy for preventive care delivery is implemented.

Employee Responsibility
All clinical staff will deliver preventive care as part of routine clinical care.
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Communication Strategy
- Information about the Preventive Care Policy will be included in HNE Health internal communication channels.
- IT based training will be available for all clinicians.
- Training and supporting documents will be available on HNE Health Intranet.
- Face to face visits by the Population Health implementation team will occur at the beginning of each phase of the roll out and continue during the 12 month implementation period for each phase.
- Ongoing consultation will occur with Clinical Networks and Streams, Clinical Operations Networks and IT user groups during the development and implementation of procedures to support the introduction of the policy to ensure integration with current business practices.

6.0 Monitoring, Evaluation & Review

Monitoring
Policy Compliance Procedures (PCPs) will be developed to identify key performance indicators, targets, collection and reporting methods and responsibilities. This will ensure sustainability of the policy. During the roll out phases, Population Health will work with services to monitor provision of preventive care and to provide performance feedback to managers.

Evaluation
Population Health will monitor and conduct evaluation of the roll out of the policy. A key measure will be the patient/client report of receipt of preventive care. A repeated time series design will be used. Data will be collected from a randomly selected sample of discharged patients and clients via a computer assisted telephone interview. Baseline data collection has begun for Community Health clients. Clinician cross sectional surveys will be conducted to evaluate the implementation and acceptability of the policy.

7.0 References


8.0 Appendices
Appendix 1 – Definitions
Appendix 2 – Aboriginal Health Impact Statement
Appendix 3 – Health Impact Assessment/ Equity-Focused Health Impact Assessment
Appendix 1 - Definitions

**Brief Advice**
Short, clear and direct advice (this is not counselling and does not require extensive knowledge about each risk factor).

**CHIME**
Community Health Information Management Enterprise. CHIME is a clinical information system (an electronic medical record) designed to improve service delivery, outcome measurement and productivity through improved capture and management of community-based service information.

**Client/patient**
A person receiving a service from the HNE Health system is referred to as a client in CHIME. Community Health and a patient in inpatient or outpatient services.

**Clinician**
A health practitioner or health service provider regardless of whether the person is registered under a health registration act.

**Curative or intervention contacts**
Client/patient contact aimed to provide remedy (of disease) or to influence or alter client/patient behaviour.

**ETS**
Environmental Tobacco Smoke is a combination of side-stream smoke and exhaled mainstream smoke. Side-stream smoke is emitted directly into the atmosphere from burning cigarettes, pipes and cigars. Mainstream smoke is drawn through the smouldering tobacco into the smoker's mouth and lungs and then exhaled. ETS is also referred to as second-hand tobacco smoke and tobacco smoke pollution.

**HNE Health**
Hunter New England Area Health Service

**KPI**
Key Performance Indicator

**Preventive care**
Measures taken to prevent the occurrence and effects of illness or injury. This takes place at primary, secondary and tertiary prevention levels.
1. **Primary prevention** avoids the development of a disease. Most population-based health promotion activities are primary preventive measures.
2. **Secondary prevention** activities are aimed at early disease detection, thereby increasing opportunities for interventions to prevent progression of the disease.
3. **Tertiary prevention** reduces the negative impact of an already established disease by restoring function and reducing disease-related complications.

**Referral**
To refer a patient/client is to transfer their care from one care provider/facility to another.

**Service contact**
Each time a patient/client comes into contact with the health service.

**Service request**
Definition used in CHIME to describe the type of care that the patient is registered to receive when presenting to the health service. The care can be delivered at one service contact or across several service contacts.

**Screening**
A process of identifying who may be at increased risk of a disease or condition. They can then be offered information, further tests, referral and appropriate treatment to reduce their risk and/or any complications arising from the disease or condition or risk factors.

**Equity focused health impact assessment (EFHIA)**
See HNE Health Policy Development and Management Framework: HNE Policy 09/01 and NSW Public Health Bulletin, July 2005
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Appendix 2 – Aboriginal Health Impact Statement – Checklist

Aboriginal Health Impact Statement Checklist

This Checklist should be used when preparing an Aboriginal Health Impact Statement for new health policies, as well as review health strategies and programs. To complete the checklist and to fully understand the meaning of each checklist item, it is essential to refer to the Text in Part 3 of the Aboriginal Health Impact Statement.

Development of the policy, program or strategy

1. Did there happen to be appropriate representation in local communities in the development of the policy, program or strategy? ✔️ Yes ☐ No

2. Have Aboriginal members been invited from the early stages of policy, program or strategy development? ✔️ Yes ☐ No

Policy provides a brief description

The Aboriginal and Torres Strait Islander Health Impact Statement is part of the preventative care frame in the planning process. Continuous liaison with Director Aboriginal Health throughout the planning process. Aboriginal Advisory Group was involved in the planning phase to advise on general issues, issues related to the implementation and evaluation of the program (three development in policy) and to ensure cultural considerations.

Consultation/integration processes occurred with Aboriginal community?

Yes ☐ No ☐ N/A

How these processes been effective?

1. Policy making at patient numbers with Aboriginal groups in Panasonic 2. ANMAC consulted regarding needs of specific applications and the ownership of the data.

5. Has this been done with relevant existing mainstream and/or Aboriginal specific policies, programs or strategies?

X Yes ☐ No ☐ N/A

Implementation


5. Fall among Elderly People - Management Policy to Reduce in NSW Health P2002_370. Yes ☐ No ☐ N/A

Contents of the policy, program or strategy

Has the policy or sector identified the effects it will have on Aboriginal health outcomes and health services?

X Yes ☐ No ☐ N/A

Environment

Programs and policies do not target Aboriginal and Torres Strait Islander peoples specifically. Some components of program include the identification of care for Aboriginal people, the ANMAC referral services co-ordination and monitoring interventions and the year under the 'Ends' options for Indigenous peoples training services culturally acceptable care. By screening everyone for the risk factors included in the program it is envisaged that gains in health status of Indigenous people compared to the general population, associated with these risk factors, will be reduced.

7. Have these effects been adequately addressed in the policy, program or strategy?

X Yes ☐ No ☐ N/A

The training and evaluation of the program will cover the area where the Indigenous identification question and risk assessments will be used. The Aboriginal Advisory Group will be directed to ensure cultural appropriateness during the training and evaluation of the program. Aboriginal service providers have been consulted regarding the content and wording of the patient handout. Screening has been modified for Indigenous people to reduce immunisations that are free under the PBS scheme for Indigenous people.
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6. Are the identified effects on Aboriginal health outcomes and health services sufficiently different for Aboriginal people compared to the general population to warrant the development of a separate policy, program or strategy?  
  ☐ Yes  ☐ No  ☐ NA

Effect:
The program covers all patients of HIE Health and does not specifically target Aboriginal and Torres Strait Islander people.

Implementation and evaluation of the policy, program or strategy:

5. Will implementation of the policy, program or strategy be supported by an adequate allocation of resources specifically for its Aboriginal health aspect?  
  ☐ Yes  ☐ No  ☐ NA

NOTE:
The preventive care tool is to be embedded in everyday practice for all clients in practice. It should be used as part of everyday consultations. Consultation will take place to ensure resources are culturally appropriate and that Indigenous-specific resources need to be developed.

- The Aboriginal Advisory Group does not require extra funding.

10. Will the initiative build the capacity of Aboriginal people/organisations through participation?  
  ☐ Yes  ☐ No  ☐ NA

in what way and capacity builds?

Although the Aboriginal Advisory Group may increase their skills in relation to planning, implementing, and monitoring, the initiative, Indigenous Health officials, preventive care skills and knowledge will be increased. Aboriginal service providers involved as mental health services may increase capacity in delivering preventive care.

Will the policy, program or strategy be implemented in partnership with Aboriginal stakeholders?  
  ☐ Yes  ☐ No  ☐ NA

Briefly describe the intended implementation process:

Continuous consultation with Director Aboriginal Health through Area Preventive Care Taskforce. Establishment of Aboriginal Advisory Group during planning phase to provide guidance on cultural appropriateness through implementation and evaluation phase. Focus testing of patient handout with Aboriginal focus group in Tamworth. Two Aboriginal and Torres Strait Islander project officers and one Indigenous Primary Health Care Advisor part of Preventive Care team during planning phase. Consultation will occur with Indigenous organisations and service providers at each stage of the program’s rollout.

12. Does an evaluation plan exist for this policy, program or strategy?  
  ☐ Yes  ☐ No  ☐ NA

13. Has it been developed in conjunction with Aboriginal stakeholders?  
  ☐ Yes  ☐ No  ☐ NA

Briefly describe Aboriginal stakeholder involvement in the evaluation plan:

Two Aboriginal and Torres Strait Islander Project Officers part of Preventive Care team during planning phase, including development of evaluation strategy. Liaison with AHWRC regarding need of ethics, cultural and leadership of data. Continuous liaison with Director Aboriginal Health through Area Preventive Care Taskforce. Establishment of Aboriginal Advisory Group & guide on cultural appropriateness and general issues.
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Appendix 3 – Equity-Focused Health Impact Assessment

Health inequities have been considered as part of the development of this policy and program, although no formal prospective Health Impact Assessment has taken place.

Screening

The provision of preventive care is a directive from NSW Health and the HNE Health Area Preventive Care Policy is developed as a result of this directive and is supported by the HNE Health Chief Executive.

The Area Preventive Care Taskforce is the main Steering Committee guiding the policy and program. It is chaired by the HNE Health Chief Executive and includes Directors of each clinical stream. Other committees have been established during the planning phase like the Aboriginal Advisory Group and the CHIME Advisory Group. All HNE Health clinicians and patients/clients are stakeholders. Key stakeholders include HNE Health Chief Executive, all HNE Health Clinicians, Directors of Acute and Primary and Community Networks, Clinical Network and Clinical Stream leaders.

The population health focus of the policy aims to make positive health impacts on the HNE population as a whole through the routine delivery of preventive care as part of everyday business by all HNE Health clinicians to all clients/patients regardless of the client’s/patient’s age, gender and socio-economic status. By including preventive care as part of routine care, it is envisaged that a larger population will benefit from the care, compared to current preventive care initiatives which often focus on a specific target group, chronic disease group, clinical area or community. Public health services such as those provided by HNE Health provide good reach to disadvantaged and rural and remote residence compared to other private health services. The governance of such services also ensures system wide change to support the delivery of such services, increasing the likelihood that these will actually reach disadvantaged, rural and remote residents of Hunter New England area.

The Aboriginal Advisory Group was established during the planning phase to provide advice on general and specific preventive care issues and to ensure cultural appropriateness throughout policy and program development and implementation. The call back services offered by the Quilina and the Get Healthy Information & Coaching Service aim to reduce barriers including client/patient motivation, cost, reach, service availability, physical barriers and transport. If currently identified call back services are not appropriate for alternate referral options will be investigated through existing services. Indigenous clients/patients will be notified of available immunisations that are free of charge for Indigenous people through the PBS.

Scoping

Although there has been no formal EFHIA process, the details relating to the EFHIA is considered an intermediate EFHIA. Information regarding possible inequities has been identified through literature reviews, cultural appropriateness considerations, consultation processes, partnerships with other areas within HNE and medical record audits.

IT platforms and the development of PCPs will be used to generate reports on policy compliance. Existing committees and groups will be consulted to improve equity and cultural appropriateness throughout the preventive care program. It is envisaged that care will be delivered in a standardised best practice way throughout urban, regional and remote HNE Health settings.

All HNE Health clinicians and clients will have access to preventive care and the model is based on referrals to other providers. Quilina and Get Healthy Information & Coaching

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Service referrals can be accessed by all clients that have access to a phone (own or someone else’s phone). To breach the gap for clients with no or little access to a GP or AMS, the GP/AMS letter will be printed out and given to the client for discussion with the next clinician they see. Alternatively, the letter could be faxed to the client’s regular clinician. The main client/patient resource is the client handout, which is accessible to all HNE Health clients. This handout has been reviewed for cultural appropriateness and is based on best practice.

Impact identification

Literature reviews have been undertaken to identify best practice at all three stages of the model – screening, brief advice and referral. Processes have been established for reviewing existing and new paper based forms and IT platforms relevant to preventive care.

The model includes a question relating to identification of Indigenous status. This data is collected based on HNE Health policy requirements and best practice. Consultations have been held with AHMRC regarding the ownership of such data and the Aboriginal Advisory Group will be consulted regarding further advice. The Aboriginal Advisory group has provided and will continue to provide advice on how to ensure the process of delivering preventive care is culturally appropriate thus increasing the likelihood that it will be effective for Aboriginal and Torres Strait Islander clients/patients of HNE Health.

Local variations of the policy will be outlined in PCPs. Clinical judgement and local processes should be used to determine what clients are not eligible for preventive care (eg unconscious patient).

Consultation has occurred throughout the planning phase with presentations at regular meetings, liaison within each risk factor group included in the model, liaison with IT regarding suitable platforms and liaison with HNE Health Area Forms Committee with a process established for new and existing forms to be reviewed in relation to preventive care items.

Directors of Acute and Primary and Community networks are key stakeholders and part of the Preventive Care Taskforce. Meetings have been held with HNE Health clinicians and other government and non-government organisations that will be impacted by the policy, for example GPs, Drug & Alcohol, Regional Health Service Program, Child & Family Health, HealthONE, Aboriginal Health,Quitline and Get Healthy Information & Coaching Service.

Assessment of impact

By embedding preventive care into everyday business, existing IT systems and forms, it is envisaged there will be a limited impact on clinician time and demand. It will however increase the likelihood that infrequent users of the Health Service will receive preventive care as this will be a part of all contacts with the Health Service.

Recommendations

Further equity and health considerations will be taken into account based on the feedback during the roll phases, the development of PCPs and evaluation results.

Monitoring and Evaluation

IT platforms, CATI interviews with clients, clinicians and managers, KPIs and local procedures will be used to monitor and evaluate equity, cultural appropriateness and policy compliance.
APPENDIX 7.2:
SNAPSHOT EXAMPLES OF TOOL INCORPORATED INTO ELECTRONIC MEDICAL RECORD SYSTEM

Preventive Care - SNAPIF
Version 2.0

Client and Assessment Tool Details

SNAPIF

Drugs and Alcohol Only

Client Demographic

Fruit / Veg / Milk

Physical Activity

Smoking

Alcohol

Immunisation

Falls

GP / (Other Provider)

Save  Close
Advisory text: It’s important that you eat fruit and vegetables as part of a balanced diet to help you be healthy now and throughout life. You are not currently meeting the national guidelines of 5 serves of vegetables and 2 serves of fruit each day. I recommend talking to the Get Healthy service. They can provide free advice about eating more fruit and vegetables and/or send you an information kit. I can arrange for them to call at a time that suits you. Your GP or AMS staff can also help you with finding ways to include more fruit and vegetables into your daily diet.
APPENDIX 7.3:
EXAMPLE OF CLIENT INFORMATION SHEET

How healthy are your habits?

<table>
<thead>
<tr>
<th>Client Name:</th>
<th>SNAPIF, Client</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Birth:</td>
<td>01-Jan-1975</td>
</tr>
</tbody>
</table>

Age on the Date of 35 Years

Service Provider: CLINICIAN, Name

Administration Date: 19-Aug-2010

As part of our regular service we asked you some questions about your lifestyle. Your answers helped us to see whether you might be at risk of getting a chronic illness or infectious disease in the future.

WHAT YOU’RE DOING WELL

Doing at least 30 minutes of physical activity at least 5 days a week

EASY STEPS TO A HEALTHIER LIFESTYLE

A chronic illness can restrict your lifestyle and enjoyment of living. Your answers showed what you could change to reduce your risk of chronic illness and improve your health.

EAT MORE FRUIT AND VEGIES

Fruit and vegies can help you avoid or better manage things like high blood pressure, heart disease, stroke, cancers, diabetes and obesity.

Each day, aim for
- 5 serves of vegies (including salads)
- 2 serves of fruit
A 'serve' is
- 1 medium piece or 2 small pieces of fruit
- 1 cup of cut up pieces
- 1/2 a cup of cooked vegetables
- 1 cup salad vegetables
Fresh, frozen or canned will do the job.

Call the Get Healthy Information & Coaching Service on 1300 806 258 to get ideas on how to eat more fruit and vegies.
Or go online at www.gethealthynsw.com.au or www.gofor2and5.com.au

STUB OUT THE SMOKES / DITCH THE DURRIES
The best thing you can do for your health is to quit smoking. When you quit you reduce your risk of cancer, heart disease and many other illnesses. It can even improve your fitness, your sense of taste and smell and slow down the wrinkles.

Nicotine Replacement Therapy (NRT), such as patches or gum, can double your chance of quitting for good. It also cuts down your cravings. You can get NRT from supermarkets or chemists.

- Try other medications - talk to your doctor or chemist about which one might work best for you
- Call the NSW Quitline on 137848 for information or expert help to quit. Or look online at www.quitcoach.org.au or www.quitnow.info.au

DROP THE DRINKS
You can avoid long term health problems from too much alcohol if you drink no more than 2 standard drinks a day. If you limit yourself to no more than 4 standard drinks on any occasion you can reduce the chance of short term harm and injuries.

Try to
- Drink less often
- Have fewer drinks when you do drink
- Keep track of how many standard drinks you have

<table>
<thead>
<tr>
<th>Standard drink sizes</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5 425ml Schooner Low Strength 2.7% Alc.</td>
</tr>
</tbody>
</table>
AN IMMUNISATION TIP FOR EVERYONE

It is recommended that all people from 6 months of age get a flu shot every year. It is best to get the shot as early as possible in the risk period (February to September).

The flu shot is free for all people 65 years and over, Aboriginal and Torres Strait Islander people 15 years and over, pregnant women and people over 6 months of age who have certain medical conditions.

You can get the flu shot from your doctor.

For more information visit www.immunise.health.gov.au.
APPENDIX 7.4:  
EXAMPLE OF LETTER TO PRIMARY CARE PROVIDER

Clinician  
Service  
Address  
13 July 2014

Dear Dr [DOCTOR]  
Reference: 469521 / 6886133  
SNAPIF, Client, Miss  
Address  
DOB: 24-Sept-1950  
Date of Administration: 13-Jul-2014  
Age on the Date of Administration: 59 years  
Aboriginality Status: Aboriginal Origin

The above client indentified you as their GP/(Care provider). As a routine part of the care that the Hunter New England Area Health Service provides, this client has been screened for some of the risk factors for chronic and vaccine preventable infectious diseases. The client:
- Has had an influenza vaccination in the last 12 months. Advised to continue having the vaccination annually.
- Has had the pneumococcal vaccination. Please assess whether the 5 year booster was provided.

However the client:
- Is a smoker  
  Advised to quit
- Is nicotine dependent  
  - Brief advice to use NRT to quit was provided  
  - NRT is available on the PBS for Aboriginal and Torres Strait Islander patients
- Is not eating the recommended 2 serves of fruit a day  
  - Advised to increase number of serves a day
- Is not eating the recommended 5 serves of vegetables a day  
  - Advised to increase number of serves a day
- Is not doing at least 30 minutes of physical activity 5 or more days a week  
  - Advised to increase time doing moderate or vigorous physical activity

Based on the above results a personalised handout with information, advice, referral websites and phone numbers was provided to the client.

The client has accepted referral to:
- The Quitline

At this visit the client did not accept a referral to:
- The Get Healthy Information and Coaching Service

No information was given by the client regarding:
- Alcohol Use
- Falls Risk

I hope this information is useful for your continuing care of this patient.  
Sincerely,  
Clinician
APPENDIX 7.5:  
ONLINE EDUCATIONAL TRAINING MODULE EXAMPLES

Note that online training modules had voiceovers

Module 1: Introduction
Module 2: Process
Module 3: Delivering preventive care to adults
Module 4: Delivering preventive care to children (not presented, as not related to thesis)
Module 5: CHIME guide (refer to appendix 7.10, B)
Module 6: Preventive care for Aboriginal clients
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### Preventive Care Module 2 Adults 19+

**What can clients expect from Quitline?**
- Advisors will ask questions about client’s smoking to tailor a quit plan that suits their needs.
- Almost all people who talk to the Quitline make a quit attempt.
- Takes an average of 7 quit attempts before a person stops smoking.

### Preventive Care Module 3 Adults 18+

**What are the alcohol questions?**
- Q1. How often do you have a drink containing alcohol?
- Q2. How many drinks would you have on a typical drinking day?
- Q3. How often do you have four or more drinks on any one occasion?

### Preventive Care Module 3 Adults 18+

**What referral should I make?**
- Clients who are identified as at risk will be advised to speak with their GP or AHS.
- Those scoring high will be advised to complete the self-administrative alcohol assessment which is printed on the client handout.

### Preventive Care Module 3 Adults 18+

**Why does preventive care address alcohol?**
- Alcohol is the second leading cause of drug related death and hospitalisation in Australia.
- Early alcohol consumption has many long term effects, such as on health of the liver, mental illness, cancer, congenital and fetal growth retardation.

### Preventive Care Module 3 Adults 18+

**What are the guidelines?**
- To reduce the risk of alcohol related disease over a lifetime – no more than 2 standard drinks a day.
- To avoid injuring oneself or others – no more than 4 standard drinks on any one occasion.

### Preventive Care Module 3 Adults 18+

**Why do we address immunisation?**
- Vaccinations are the safest and most effective way of giving protection against influenza and pneumococcal disease.
- In 2009 influenza and pneumonia were rated as the underlying cause of death for 2,534 persons in Australia.
- Pneumococcal infection causes a range of diseases (meningitis, pneumonia and middle ear infections).
- Vaccine fees of change.
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Acknowledgements

Thank you to all the staff who contributed their time and expertise to the development of this module:
Aboriginal health, community mental health, and alcohol and other drug service.

References


30/07/2015
APPENDIX 7.6: MANAGER TRAINING

Overview
Aim: To enhance preventive care delivery in our community health services.

How?
1. Identifying and addressing barriers to Preventive Care
2. Feedback Reports
   a) Understanding and interpreting reports
   b) Using the reports to support staff to increase delivery of care

Evidence for Audit and Feedback
- Increases adoption and adherence to health policies
- Is the second most effective strategy to change clinical behaviour (second only to leadership)
- Accounts for up to 15% of behaviour change (Jainkiveti et al., 2018)

Feedback is more effective when:
- Provided by a respected person (Van der Meer & Orl, 2005)
- Benchmark and KPIs provided (Van der Meer, 2005)
- Delivered with a practical and local approach (Jainkiveti et al., 2018)
- When clinicians do not realise their practice is less than required (Van der Meer & Orl, 2005)
- Delivered in small group meetings with peers (Van der Meer & Orl, 2005)
- Delivered frequent, intensively and in a timely manner (Graves & Taylor-Vaughn, 1997; Jainkiveti et al., 2018; Kyung, 2000; Van der Meer & Orl, 2005)
- There are low levels of baseline compliance (Jainkiveti et al., 2018)

Performance reports
Background
- Data for reports extracted from CHIME
- Reports created in Business Objects by Preventive Care team
- Reports developed through consultation with Phase 1 managers
- Report targets and KPIs set by Director of P&C
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Feedback Report

- Process
  - Cluster report emailed to GM and Facility leaders reports emailed to managers early in the month
  - Follow up visits/phone call by Support Officers with Facility/leaders managers to support interpretation and identify strategies
  - Managers responsible for feedback to staff and implement strategies to increase care delivery

Targets and KPI

<table>
<thead>
<tr>
<th>Targets</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation of eligible clients with a completed ESCAP</td>
<td>80% final</td>
</tr>
<tr>
<td>Preparation of at-risk clients given Brief Advice</td>
<td>80%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>KPI</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation of at-risk adult clients offered a referral</td>
<td>45%</td>
</tr>
</tbody>
</table>

What's next

- Reports sent monthly with follow-up visits/phone call from Support Officer
- Support Officers to support managers to identify strategies to drive performance
- Support Officer will help staff resolve barriers, problems (face to face / phone)
- PC team to provide updates at Cluster Executive meetings
- Email: PreventiveCare@nnehealth.nsw.gov.au

“What you can measure you can manage”

Thank You

Learning from other manager’s experiences

1. Clear, concise, consistent messages
2. Relating preventive care to our clients
3. Supporting staff who struggle
4. Reinforcing through good news stories
5. Listening & understanding service issues
6. Getting routine care provided

Break
### Clear, concise, consistent messages

- Get all the relevant information out in the open
  - Including criticism and resistance
- Acknowledging the challenge
- Reinforcing the importance & relevance
  Reinforcing early adopters

### Clear, concise, consistent messages

- We need to provide preventive care consistently to all eligible clients (routine)
- We need to provide preventive care in an appropriate, caring manner (effective)
- If we value preventive care, so will our clients

### Relating preventive care to our clients

- Understanding the ‘why’...
- Reinforcing commitment to the health of clients and community... the big picture
- The benefits of a shift in our health system to keeping people well

### Supporting staff who struggle

- Looking for fight or flight responses
- Understanding the issues early
- Small incremental changes
- Using your influence/authority
- Hold staff accountable
- Celebrate progress

### Reinforcing through good news stories

![Image 1]

### Reinforcing through good news stories

![Image 2]
APPENDIX SEVEN: Additional material for the intervention [Chapters 6 and 7]

Listening & understanding service issues

- Where is it clunky?
- What can we do to help?
- Newsletters, tips and hints, support
- We need to understand your service better, so we can find the correct solutions
- Phone
- PreventiveCare@hnehealth.nsw.gov.au

Getting routine care provided

- Making it sustainable
- Changing staff attitudes
- Ensuring the system supports you
- Understanding the reports
- Relaying feedback to staff
- Encouragement, reinforcement
- Agenda item for staff meetings
- Agenda item on executive meetings

Thank you

Is there more we can do to help?
Interpretation of Preventive Care Performance Reports for Managers

The standard table shown below is used in the reports to summarise data for an org unit, or across a group of org units, a facility or a cluster (as labelled in reports)

<table>
<thead>
<tr>
<th>All Selected Clients - Overall SNAPIF Report for January 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aboriginal:Non Aboriginal</td>
</tr>
<tr>
<td>1. Clients who required a SNAPIF (out of all clients who had a SNAPIF eligible appointment)</td>
</tr>
<tr>
<td>2. Abandoned SNAPIFs (out of Clients who required a SNAPIF)</td>
</tr>
<tr>
<td>3. Clients who had a SNAPIF Completed (out of Clients who required a SNAPIF)</td>
</tr>
<tr>
<td>4. Clients at risk for at least 1 Risk Factor (out of completed SNAPIFs)</td>
</tr>
<tr>
<td>5. Clients Given Brief Advice for all Risk Factors (out of Clients At Risk)</td>
</tr>
<tr>
<td>6. Estimate of clients offered recommended referral for all risk factors (out of At Risk for SNPFF) - ADULTS ONLY</td>
</tr>
<tr>
<td>7. Clients who accepted recommended referral for all risk factors (out of At Risk for SNPFF) - ADULTS ONLY</td>
</tr>
<tr>
<td>8. Clients who refused recommended referral for all risk factors (out of At Risk for SNPFF) - ADULTS ONLY</td>
</tr>
<tr>
<td>9. Clients at risk who Consented to a GP Letter (out of completed SNAPIFs for clients at risk)</td>
</tr>
<tr>
<td>10. GP letter produced (out of clients at risk who consented to GP letter)</td>
</tr>
</tbody>
</table>

The blue highlighted rows of this table indicate the items which have a minimum performance requirement. Each report includes a copy of the table below, which indicates the minimum value required for each of the items highlighted, eg item 3 has a minimum requirement of 55%. If this target is met a green square with a tick appears beside that item in the status column. Otherwise a red square with a cross is shown, or the square is left clear if the requirement does not apply, eg when there are no clients at risk.

In the example above, for item 3 a value of 5% did not meet the minimum requirement of 55%, so the status of this item is shown as red with a cross. For item 5, a value of 86% did meet the minimum requirement of 80%, so the status is a green square with a tick. For item 6, a value of 23% does not meet the requirement of 65%, so the status is red with a cross.
APPENDIX SEVEN: Additional material for the intervention [Chapters 6 and 7]

<table>
<thead>
<tr>
<th>Overall Performance Report Status Minimum Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. SNAPIFs Completed</td>
</tr>
<tr>
<td>55%</td>
</tr>
<tr>
<td>![x]</td>
</tr>
<tr>
<td>Does not meet minimum performance requirement</td>
</tr>
</tbody>
</table>

Definition of the items in the standard report table:

Each table is for a particular month and only relates to clients who were eligible during that month and SNAPIFs that were completed or abandoned in that month, according to the administration date on the assessment.

**Item 1**

Clients are only counted in the report if they had an eligible appointment in the month of the report. They need to have been seen as an individual client in a community health (CH) setting that month. Clients do not require a Preventive Care assessment if they have already had a SNAPIF completed in the last 6 months in any CH service or if they are under 6 months of age. If a SNAPIF is started then the clinician is given 6 weeks to complete that assessment before they are again included in the number of clients requiring a SNAPIF. This allows for assessments to be completed over more than one occasion without the client being counted as still needing a SNAPIF.

Definition of item 1 is given below:

Numerator = Clients who required a SNAPIF
- Clients who had a SNAPIF eligible appointment AND
- Were 6 months of age or older (as of their last appointment in the month) AND
- Did not have a SNAPIF completed within the last 6 months (as of the last day of the month, 6 months after the previous completed SNAPIF) AND
- Did not have a SNAPIF started within the last 42 days (as of the last day of the month, 42 days after the previous started SNAPIF)

Denominator = Clients who had an eligible appointment.
- All new and existing clients who had an occurred, direct, face to face appointment or client proxy appointment AND
- The appointment did not have an inpatient Dohrs code AND
- The client was an individual client participant (not a group participant) AND
- The client was not seen by a confidential or excluded org unit
The number of clients with a completed or abandoned SNAPIF is then measured as a proportion out of the number of clients who required a SNAPIF (numerator item 1)

Item 2
Numerator = Clients whose SNAPIF assessment was marked as abandoned
The assessment can be abandoned if for some valid reason the client was unable to do the assessment on this occasion. The client will still be counted as requiring an assessment on subsequent eligible occasions until the assessment has been completed.
Denominator = Clients who required a SNAPIF (numerator item 1)

Item 3
This item shows the proportion of clients who had a SNAPIF completed, out of those clients who still required a SNAPIF this month. (Only clients with an eligible appointment that month will be included in the number of clients who required a SNAPIF.) The status of the SNAPIF assessment must be changed to complete for the assessment to be included. Clinicians need to be mindful of changing the status of an assessment once it is finalised.
Numerator = Clients whose SNAPIF assessment has a status of complete
Denominator = Clients who required a SNAPIF (numerator item 1)

From this point the report is concerned with clients who had a SNAPIF completed, so the denominator changes.

Item 4
This item shows the proportion of the clients who had at least one risk factor out of the clients who had a SNAPIF completed. If, during the assessment, the client gave an ‘at risk’ response to any of risk factors, ie any of smoking, nutrition, alcohol, physical activity, immunisation or falls, they will be counted here.
Numerator = Number of clients with at least 1 risk factor
Denominator = Number of clients with a completed SNAPIF assessment

Item 5
When the client has a SNAPIF risk factor the clinician is asked if they gave the client brief advice concerning their risk. This item shows the proportion of clients who were given brief advice out of those who had at least one risk factor.
Numerator = Number of clients who were given brief advice for every risk factor they had
Denominator = Number of clients with at least one risk factor
**Item 6**

There are recommended referral pathways for adult clients for each of the SNPF risk factors, ie for smoking, nutrition, physical activity and falls prevention. This item only looks at adult clients who are at risk for at least one of the SNPF risk factors. It measures the proportion of clients who were offered a recommended referral for every SNPF risk factor they had, out of the number of clients who had at least one SNPF risk factor and, therefore, could have been offered a referral. Clients are still counted if they do not accept the referral.

Numerator = Number of adult clients who were offered a recommended referral for every SNPF risk factor they had  
Denominator = Number of adult clients who had at least one SNPF risk factor

**Item 7**

There are recommended referral pathways for adult clients for each of the SNPF risk factors, ie for smoking, nutrition, physical activity and falls prevention. This item only looks at adult clients who are at risk for at least one of the SNPF risk factors. It measures the proportion of clients who accepted a recommended referral for every SNPF risk factor they had, out of the number of clients who had at least one SNPF risk factor.

Numerator = Number of adult clients who accepted a recommended referral for every SNPF risk factor that they had  
Denominator = Number of adult clients who had at least one SNPF risk factor

**Item 8**

This item only looks at adult clients who are at risk for at least one of the SNPF risk factors. It measures the proportion of clients who refused a recommended referral for every SNPF risk factor they had, out of the number of clients who had at least one SNPF risk factor.

Numerator = Number of adult clients who refused a recommended referral for every SNPF risk factor that they had  
Denominator = Number of adult clients who had at least one SNPF risk factor

**Item 9**

Clients are asked if they consent to the sending of a letter concerning their risk factors to their GP. This measure shows the proportion of clients who consented to a GP letter being produced out of the clients who were at risk.
Numerator = Number of clients with at least one risk factor who consented to the sending of a letter to their GP
Denominator = number of clients with at least one risk factor

**Item 10**
If clients consent, then a letter concerning their risk factors can be producing and sent to their GP. This measure shows the proportion of clients who had a GP letter produced out of the clients who were at risk and consented to a letter.
Numerator = Number of clients with at least one risk factor who had a letter produced for sending to their GP
Denominator = number of clients with at least one risk factor who consented to the sending of a letter to their GP (numerator item 9)
APPENDIX SEVEN:
Additional material for the intervention [Chapters 6 and 7]

APPENDIX 7.7:
EXAMPLE OF A MONTHLY PERFORMANCE REPORT

Preventive Care Performance Report – Community Mental Health Services - May 2013

1. Preventive Care performance report for all clients

<table>
<thead>
<tr>
<th>Overall Preventive Care Targets and KPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. SNAPfI completed</td>
</tr>
<tr>
<td>55%</td>
</tr>
<tr>
<td>✗</td>
</tr>
<tr>
<td>✓</td>
</tr>
</tbody>
</table>

All Selected Clients - Overall SNAPfI Report for May 2013

<table>
<thead>
<tr>
<th>Aboriginal/Non Aboriginal</th>
<th>n/N</th>
<th>%</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Clients who Required a SNAPfI assessment (out of all clients who had a SNAPfI Eligible Appointment)</td>
<td>3068/3832</td>
<td>80%</td>
<td>-</td>
</tr>
<tr>
<td>2. Clients who had a SNAPfI assessment Abandoned (out of clients who Required a SNAPfI assessment)</td>
<td>33/3068</td>
<td>1%</td>
<td>-</td>
</tr>
<tr>
<td>3. Clients who had a SNAPfI assessment Completed (out of clients who Required a SNAPfI assessment)</td>
<td>343/3068</td>
<td>11%</td>
<td>✓</td>
</tr>
<tr>
<td>4. Clients At Risk for at least 1 risk factor (out of clients with a Completed SNAPfI assessment)</td>
<td>289/343</td>
<td>83%</td>
<td>-</td>
</tr>
<tr>
<td>5. Clients given Brief Advice for all risk factors (out of Clients At Risk)</td>
<td>230/289</td>
<td>80%</td>
<td>✓</td>
</tr>
<tr>
<td>6. Estimate of adult clients Offered Recommended Referral for all identified risk factors (SNPfI) (out of clients At Risk for SNPfI)</td>
<td>155/238</td>
<td>66%</td>
<td>✓</td>
</tr>
<tr>
<td>7. Adult clients who Accepted Recommended Referral for all identified SNPfI risk factors (out of clients at risk for SNPfI)</td>
<td>19/236</td>
<td>8%</td>
<td>-</td>
</tr>
<tr>
<td>8. Adult clients who Refused Recommended Referral for all identified SNPfI risk factors (out of clients at risk for SNPfI)</td>
<td>12/236</td>
<td>6%</td>
<td>-</td>
</tr>
<tr>
<td>9. Clients at risk who Consented to a GP Letter (out of completed SNAPfI assessments for clients at risk)</td>
<td>88/289</td>
<td>31%</td>
<td>-</td>
</tr>
<tr>
<td>10. GP letter produced (out of clients at risk who Consented to GP letter)</td>
<td>0/88</td>
<td>0%</td>
<td>-</td>
</tr>
</tbody>
</table>
2. Preventive Care performance report for Aboriginal clients only

<table>
<thead>
<tr>
<th>Overall Preventive Care Targets and KPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. SNAPIFs Completed</td>
</tr>
<tr>
<td>55%</td>
</tr>
<tr>
<td>✗</td>
</tr>
<tr>
<td>✓</td>
</tr>
</tbody>
</table>

All Selected Clients - Overall SNAPIF Report for May 2013

<table>
<thead>
<tr>
<th>Aboriginal</th>
<th>n/N</th>
<th>%</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Clients who Required a SNAPIF assessment (out of all clients who had a SNAPIF Eligible Appointment)</td>
<td>269/329</td>
<td>82%</td>
<td>-</td>
</tr>
<tr>
<td>2. Clients who had a SNAPIF assessment Abandoned (out of clients who Required a SNAPIF assessment)</td>
<td>2/269</td>
<td>1%</td>
<td>-</td>
</tr>
<tr>
<td>3. Clients who had a SNAPIF assessment Completed (out of clients who Required a SNAPIF assessment)</td>
<td>32/269</td>
<td>12%</td>
<td>✗</td>
</tr>
<tr>
<td>4. Clients At Risk for at least 1 risk factor (out of clients with a Completed SNAPIF assessment)</td>
<td>29/32</td>
<td>91%</td>
<td>-</td>
</tr>
<tr>
<td>5. Clients given Brief Advice for all risk factors (out of Clients At Risk)</td>
<td>16/29</td>
<td>55%</td>
<td>✗</td>
</tr>
<tr>
<td>6. Estimate of adult clients Offered Recommended Referral for all identified risk factors (SNIF) (out of clients At Risk for SNIF)</td>
<td>9/19</td>
<td>47%</td>
<td>✗</td>
</tr>
<tr>
<td>7. Adult clients who Accepted Recommended Referral for all identified SNIPF risk factors (out of clients at risk for SNIPF)</td>
<td>1/19</td>
<td>5%</td>
<td>-</td>
</tr>
<tr>
<td>8. Adult clients who Refused Recommended Referral for all identified SNIPF risk factors (out of clients at risk for SNIPF)</td>
<td>8/19</td>
<td>42%</td>
<td>-</td>
</tr>
<tr>
<td>9. Clients at risk who Consented to a GP Letter (out of completed SNAPIF assessments for clients at risk)</td>
<td>5/29</td>
<td>17%</td>
<td>-</td>
</tr>
<tr>
<td>10. GP letter produced (out of clients at risk who Consented to GP letter)</td>
<td>0/5</td>
<td>0%</td>
<td>-</td>
</tr>
</tbody>
</table>
3. Preventive Care performance – Delivery over time

Graph 1. Proportion of clients who had a SNAPIF assessment completed (out of clients who required a SNAPIF assessment)

Graph 2. Proportion of clients given brief advice for all risk factors (out of clients at risk)
Graph 3. Proportion of adult clients offered recommended referral for all identified SNPF risk factors (out of clients at risk for SNPF)

Graph 4. Proportion of adult clients who accepted recommended referral for all identified SNPF risk factors (out of clients at risk for SNPF)
APPENDIX 7.8: EXAMPLE OF A MONTHLY NEWSLETTER

Preventive Care News
Creating healthier communities by reducing behavioural risk factors that lead to disease and falls.

Aboriginal Staff now at Quitline!

Quitline has recently employed Lee as their new Aboriginal Coordinator. Quitline now has 2 full time Aboriginal staff under the Aboriginal Quitline Enhancement Project which aims to adapt the current phone based service to encourage more Aboriginal and Torres Strait Islander people to use the service. Quitline has had much success with the addition of John (Aboriginal Quitline Advisor) and will no doubt continue to build on their community engagement with Lee. Both Lee and John work at the Quitline office in Sydney, and while they take phone calls from Aboriginal and non-Aboriginal callers, clients can request an Aboriginal worker to call them back.

Don’t forget to use the flipcharts!
The purpose of the flipchart is to:
1. Act as a visual aid to assist in describing the recommendations. Consultation with the Preventive Care Aboriginal Advisory Group confirmed the flipchart can be very useful in engaging clients.
2. Assist with brief advice and increasing referral acceptance for all clients.

The flipchart uses pictures and simplified language to describe the SNAPIF risk factors and can assist clinicians when completing assessments. The text provides conversation starters and key take home messages for clinicians to give to clients.

Hints and Tips:
If you are using the SNAPIF paper tool make sure you enter the preventive care provided into CHIME as soon as possible. Data for the preventive care reports is extracted from CHIME on the 4th day of each month. This gives clinicians time to enter SNAPIFs that were undertaken in the previous month. Note: Remember to backdate to the date the SNAPIF was completed.

Evaluation of Preventive Care:
What you and your client need to know
The Preventive Care Evaluation Team’s role is to evaluate the rollout of Preventive Care across the district. There is a chance that a client you see face-to-face may be contacted via a letter, and then phoned to participate in a survey. You may like to let your clients know about this possibility. If a client is randomly selected, the letter gives all necessary information and includes an “opt out” 1800 number should they not want to be contacted. The letter also clearly states that this process is completely voluntary and that they can withdraw participation at any time without fear of it affecting their access to services or relationship with any clinicians.

Standout Performers this month...
Well done to Lake Macquarie Community Mental Health team who provided 23% of their eligible clients with a Preventive Care assessment, and to the Centre for Psychotherapy for their continued great performance, providing assessments to 22% of eligible clients!

‘Most improved’ goes to Hunter Valley Community Mental Health with 11% of clients provided an assessment.

If there is a question regarding any aspect of preventive care which you think should be included in the next newsletter, please email us at: preventive@hnehealth.nsw.gov.au

If you have any comments or questions please contact your support officer:
Jay Jones
02 4924 6299 or jay.jones@hnehealth.nsw.gov.au
APPENDIX 7.9:  
EXAMPLE OF A MONTHLY TIP SHEET

Preventive Care (SNAPIF) Helpful Hints  
Update 5 - 27/08/2012

Where can I find Preventive Care resources?  
All preventive care resources can be found on myLink. Resources are located on the same page as the on-line training. Some of things you can find on myLink include:

- Links to related websites (e.g. Active and Healthy, Go for 2 and 5)  
- Lists of local referrals and exercise classes  
- CHIME guide  
- Frequently Asked Questions  
- Role play videos which show a clinician delivering Preventive Care to a client.

You may also find it useful to revisit the training modules, particularly for those who completed the training some time ago.

What clients should I be delivering Preventive Care to?  
Your client will require preventive care if:

- You are delivering a standard non-confidential service  
- Your client is older than 6 months of age  
- Your client has not received preventive care in the last 6 months

For more information on determining a client’s eligibility see the Eligibility Guidelines document on myLink.

The CHIME guide includes step by step instructions on how to determine if your client has had a preventive care assessment in the last 6 months.

Who can I contact if I have a question about Preventive Care?  
For any preventive care questions please send an email to PreventiveCare@hnehealth.nsw.gov.au this email address is monitoring daily and you should receive a response or an acknowledgement within 24 hours.
Tip: Complete the Preventive Care assessment from bottom to top

When completing Preventive Care assessments in CHIME some clinicians have found it useful to start at the bottom and work their way up to the top. By putting in the GP/(Other Provider) details first this will avoid you entering in the assessment details and realising the client does not have their GP information added in their client profile.

1. Start the assessment here.
2. Fill in the clients GP/Other Provider details

3. Fill in the other assessment details that display the yellow warning triangle.

4. You should finish at the top where you will be prompted to change the tool status to Completed – finished.
APPENDIX 7.10:
EXAMPLE OF A RESOURCE PACK ITEMS

A PROCESS FLOWCHART

Preventive Care Process Flow Chart

Determine if your client is eligible for preventive care.

NO

Stop
No further assessment required.

YES

Enter straight into CHIME.

Proceed with preventive care assessment with age appropriate tool if clinically appropriate.

Use Paper SNAPIE tool, and enter into CHIME later.

Introduce and explain preventive care to your client.

CLIENT NOT AT RISK:
Provide positive reinforcement.

Offer client screening for risk for each behaviour:
- Smoking
- Nutrition
- Alcohol consumption
- Physical activity
- Immunisations
- Falls

CLIENT AT RISK:
Provide brief advice and offer referral for each risk behavior.

Client consents to referral

No

Yes

Complete referral and fax to relevant service if required

Print Client Handout
Provide to client during current appointment, next appointment, or post.

Print GP letter
Post to client’s GP
**APPENDIX SEVEN: Additional material for the intervention [Chapters 6 and 7]**

**B CHIME GUIDE**

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**PREVENTIVE CARE - SNAPIF**

**CHIME OPERATION**

- Determining if a client is eligible for Preventive Care SNAPIF
- Completing the Preventive Care SNAPIF assessment form
- Printing the GP/Other Provider Referral Letter
- Printing the Client Handout

---

**USER STEPS**

<p>| SECTION 1. DETERMINING IF A CLIENT IS ELIGIBLE FOR PREVENTIVE CARE SNAPIF |</p>
<table>
<thead>
<tr>
<th>USER STEPS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OPTION ONE – ASSESSMENT LIST</strong></td>
</tr>
<tr>
<td><strong>Note:</strong> You need to select the <strong>Client</strong> and the <strong>Service Request</strong> before you can begin.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Click on the <strong>Service Request</strong> tab</td>
</tr>
<tr>
<td>Click on <strong>Assessment</strong></td>
</tr>
<tr>
<td>Look for any Preventive Care – SNAPIF entries listed under <strong>Name</strong>.</td>
</tr>
</tbody>
</table>
| If there are entries, check whether they have a 
**Tool Status** of ‘Completed – finished’ or ‘Started’.  |
| Check the **Administration Date**  |
| **Client requires a SNAPIF if:**  |
| - There are no SNAPIF entries  |
| - There are entries with a tool status of ‘Completed – finished’ AND an administration date of **more than 6 months ago**  |
| - There are entries with a tool status of ‘Started’ AND an administration date of **more than 6 weeks ago**  |
| **Client does not require a SNAPIF if:**  |
| - There are entries with tool status of ‘Completed – finished’ AND an administration date of **less than 6 months ago**  |
| - There are entries with a tool status of ‘Started’ AND an administration date of **less than 6 weeks ago**  (unless you started the assessment)  |

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APPENDIX SEVEN: Additional material for the intervention [Chapters 6 and 7]
APPENDIX SEVEN: Additional material for the intervention [Chapters 6 and 7]

SECTION 2. COMPLETING THE PREVENTIVE CARE SNAPIF ASSESSMENT FORM

You will need to start from Assessment in the client’s Service Request tab.

Note: You will already be at the right place if you have just completed Section 1 - Option 1 of this guide.

If your client consents to a referral letter for Preventive Care SNAPIF, please ensure that the GP/Other Provider is listed in the client’s professional relationships before you open the assessment form. This is located on the Client Info tab under Professional Relationships.

Click on the Radio button.

Select Add.
APPENDIX SEVEN: Additional material for the intervention [Chapters 6 and 7]

CHIME Guides

Select Preventive Care – SNAPIF from the list

Click OK

If you are asked whether you want to open or save the file, click Open

The assessment form will look like this when you open it.

Leave the form set to SNAPIF – do not change to Drugs and Alcohol Only.

All tabs that have questions to be completed display a yellow warning triangle.

You will know that you have completed all relevant questions in the tab when the yellow warning triangle disappears.

To open a tab press on the expander button.
If you need to abandon the assessment, expand the Client and Assessment Tool Details tab.

Click on the drop down arrow on Tool Status and select Abandoned.

Enter your name into the Administered By Field.

If required, change the Administration Date to the date of the appointment.

Click Save.

Further details on how to complete the Administered by and Administration Date fields are covered on Pages 8 - 9.

If you need help filling out any questions on the assessment form, click on Help.

To return to the assessment, press Form.

Client Demographic Tab
Check Aboriginality Status is recorded correctly.

If Aboriginality status is recorded incorrectly, please contact your local iPM administrator (ext 13860, option 1, option 1), Medical records or PAS team.

DO NOT CHANGE IN CHIME; it needs to be changed in iPM.
APPENDIX SEVEN: Additional material for the intervention [Chapters 6 and 7]

CHIME Guides

Risk Factor Tabs
Fill out each of the relevant risk factor tabs. All questions that are applicable to the client will be enabled.

On the Fruit/Veg/Milk, Physical Activity and Alcohol tabs, there is a Contraindicated response option to some of the questions. Select if the suggested brief advice is inappropriate for the client or you are providing specialised care for that risk factor. You must indicate a reason in the free text box.

Note: Q4 on the physical activity tab is not a mandatory question for Preventive Care SNAPIF. It may be enabled for your client, but you do NOT have to answer it.

6. During the past week, what was the hardest physical activity the client could do for at least 2 minutes?
   - Very hard
   - Hard
   - Medium
   - Light
   - Very light

Suggested brief advice is displayed in the Advisory text box. It will be tailored based on the client’s responses.

On each of the risk factor tabs there is a Client declined to respond button. Select ‘Yes’ if your client declines or is unable to respond to any question.
GP (Other Provider) Tab

Click on the expander button in the provider field.

From the drop-down list, click on the providers name who you want to address the GP/Other Provider referral letter to.

This will auto-populate the Providers details.

Fill in client consent question/s.

If there is no provider listed in the drop down box this means that the client does not have any professional relationships entered.

Check that all the yellow warning triangles have disappeared.
Go back to the top of the form and expand the Client and Assessment Tool Details tab.

Change the tool status to Completed-finished.

Click on the magnifier glass and search for yourself by Provider ID or name.

Click on your name to populate the Administered By field.

Click on the arrow to complete the Mode of administration field.

Choose Self report by client in paper format if you recorded the assessment on the paper tool.

Or, Self report by client computer format if you completed CHIME in real time with your client.
APPENDIX SEVEN: Additional material for the intervention [Chapters 6 and 7]

CHIME Guides

Preventive Care - SNAPIF

If you are entering the results retrospectively, change the Administration Date/Time to when the assessment was completed with the client.

Press Submit

Close the form

A record of all assessment forms are saved under Assessment in the client’s Service Request tab.

Double click on a record to open it

If you want to view a copy of the entry, click on Display.

If you want to copy previous results across to a new Preventive Care - SNAPIF assessment, click on Copy.

If you want to delete the entry, click on Delete.

SECTION 3. PRINTING THE GP/OTHER PROVIDER REFERRAL LETTER

You will need to start from Assessment in the client’s Service Request tab.

Note: The Service Request will still need to be pinned to be able to generate the letter.

Click on the radio button

Press Reports
APPENDIX SEVEN: Additional material for the intervention [Chapters 6 and 7]

Click on Preventive Care SNAPIF Provider Referral
Press Run

Click on the magnifier glass

Select the Preventive Care SNAPIF entry you want to run the GP/Other Provider referral letter on
Press OK

You can type an additional comment to be included on the GP/Other Provider referral letter if you want
Select OK

Print the GP/Other Provider referral letter using your usual process
APPENDIX SEVEN: Additional material for the intervention [Chapters 6 and 7]  

SECTION 4. PRINTING THE CLIENT HANDBOUT

You will need to start from **Assessment** in the client’s **Service Request** tab.  

Note: The Service Request will still need to be pinned to be able to generate the handout.

- Click on the radio button
- Press **Reports**

Click on **Preventive Care SNAPIF Client Handout**

Press **Run**

Click on the magnifier glass

Select the entry you want to run the client handout on

Press **OK**

Select **OK**
How healthy are your habits?

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eating at least 5 servings of vegetables a day</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taking at least 30 minutes of physical activity at least 5 days a week</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not smoking</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not drinking more than 2 alcoholic drinks on a typical day and not drinking it at any occasion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having the pneumococcal vaccination, for some people a booster shot is recommended (please check with your doctor)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taking up to date with your flu vaccination, Please remember to have the vaccination every year or as soon as possible during the flu period (February - September)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ezy steps to a healthier lifestyle

A chronic illness can affect your health and enjoyment of living. Your answers showed what you could change to reduce your risk of chronic illness and improve your health.

Improve your balance

Your risk of getting frail is greatly increased if you have problems with balance. Reduce this risk by doing regular physical activity that challenges your balance. This includes any activity where you stand on one leg or with your feet close together but you do not act your allergies. These exercises are included in the CHIME groups. Active over 50 and healthiness groups and some other gentle exercise groups.

Print the client handout using your usual process
C EXAMPLES OF INFORMATION ON RISK BEHAVIOURS

Fruit and Vegetables
- Are low in fat and calories and are filling, so help with weight control.
- Provide Vitamins A & C which improve wound healing by reducing inflammation, removing toxins and increasing strength of the healing wound.
- Lower the risk of heart disease, stroke, cancers, hypertension and Type 2 diabetes

How many serves of vegies?

This vegetable stir fry = 17 serves. Feeds 6 people so = about 3 serves per person.

Eat 2 serves of fruit and 5 serves of vegetables each day

One serve of vegetables is:
- 1 cup salad
- ½ cup frozen peas
- ½ cup beans
- 8 carrot sticks
- 100g tin of baked beans

One serve of fruit is:
- Small tin of pineapple
- 1 ½ tablespoons of sultanas
- 1 cup of fruit salad
- 1 medium orange
- 1 medium banana
- 2 small pieces of fruit
Physical Activity Advice - Adults

- Builds and maintains bone strength and improves flexibility which reduces the risk of injury.
- Reduces the occurrence of anxiety, stress and depression.
- Prevents heart disease, stroke and high blood pressure.

**Adults aim for 30 minutes of moderate intensity a day.**

- A moderate level of activity noticeably increases your heart and breathing rate. You may sweat, but you are still able to talk.
- Physical activity can be incorporated into your every-day life.
- Try 10 minutes at a time.

$$3 \times 10 \text{ mins} = 30 \text{ mins a day}$$

Physical Activity Advice for Children

**0 - 4 years**

- Limit screen time
- No more than 1 hour a day sitting watching TV or using other electronic media.
- Encourage active indoor or outdoor play.

**5 - 17 years**

- **Aim for 60 Minutes a Day**
- Be active together as a family.
- Try 10 minutes at a time.

**6 x 10 minutes = 60 minutes a day.**
Benefits of Quitting Smoking

- It can often take up to 7-8 attempts to successfully quit smoking. Fantastic for trying. Give it another go when you're ready!

<table>
<thead>
<tr>
<th>Schedule</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate</td>
<td>Easier breathing for clients with COPD. Improved oxygen circulation to aid wound healing</td>
</tr>
<tr>
<td>2 - 12 weeks</td>
<td>Lung function improves.</td>
</tr>
<tr>
<td>1 - 9 months</td>
<td>Coughing and shortness of breath decrease. Circulation improves. Exercise is easier</td>
</tr>
<tr>
<td>After 1 year</td>
<td>Risk of coronary heart disease is halved compared to someone who smokes.</td>
</tr>
<tr>
<td>After 10 years</td>
<td>Risk of developing lung cancer is 50% less than someone who smokes.</td>
</tr>
<tr>
<td>After 15 years</td>
<td>Risk of coronary heart disease and death are almost the same as someone who has never smoked.</td>
</tr>
</tbody>
</table>

How much money could you save by quitting?
(Based on $16 per day for a packet of 25 per day)

<table>
<thead>
<tr>
<th></th>
<th>In 1 week</th>
<th>In 1 month</th>
<th>In 1 year</th>
<th>In 5 years</th>
<th>In 10 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>You could buy</td>
<td>SAVE $128</td>
<td>SAVE $524</td>
<td>SAVE $6288</td>
<td>SAVE $31,440</td>
<td>SAVE $62,880</td>
</tr>
</tbody>
</table>

Pay off

- A week's groceries
- A new television
- A new boat
- A new car
- Large chunk of your mortgage
**APPENDIX SEVEN:** Additional material for the intervention [Chapters 6 and 7]

---

### Alcohol Advice

Excessive alcohol use places you at risk of alcohol-related disease and injury.

- Risky alcohol consumption has many long term effects, such as cirrhosis of the liver, mental illness, cancer and pancreatitis.
- Risky alcohol intake also increases risk of injury through road trauma, violence, falls and accidental death.

**Am I at risk?**

National guidelines advise:

- No more than 2 standard drinks a day
- Never drink more than 4 standard drinks on any one occasion

**A standard drink is:**

<table>
<thead>
<tr>
<th>Drink Type</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middy of Full strength</td>
<td>160ml</td>
</tr>
<tr>
<td>Schooner of light beer</td>
<td>100ml</td>
</tr>
<tr>
<td>100ml glass of wine</td>
<td>30ml nip of spirits</td>
</tr>
</tbody>
</table>

---

### How many standard drinks?

<table>
<thead>
<tr>
<th>Drink Type</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>425ml Schooner Full Strength</td>
<td>1.6</td>
</tr>
<tr>
<td>375ml Full Strength</td>
<td>1.4</td>
</tr>
<tr>
<td>750ml Full Strength</td>
<td>3</td>
</tr>
<tr>
<td>24 x 315ml Full Strength</td>
<td>34</td>
</tr>
<tr>
<td>150ml Average restaurant serving of red wine</td>
<td>1.6</td>
</tr>
<tr>
<td>156ml Average restaurant serving of white wine</td>
<td>1.4</td>
</tr>
<tr>
<td>700ml Bottle of white wine</td>
<td>7.5</td>
</tr>
<tr>
<td>750ml Bottle of red wine</td>
<td>7.6</td>
</tr>
<tr>
<td>2 litre Cask White wine</td>
<td>7.5</td>
</tr>
<tr>
<td>4 litre Cask White wine</td>
<td>19.5</td>
</tr>
<tr>
<td>330ml RTD Full Strength</td>
<td>39</td>
</tr>
<tr>
<td>375ml Full Strength Pre-mixed spirits</td>
<td>1.2</td>
</tr>
<tr>
<td>700ml High Strength Bottle of spirits</td>
<td>1.5</td>
</tr>
<tr>
<td>750ml High Strength Bottle of spirits</td>
<td>22</td>
</tr>
</tbody>
</table>
## D FAX BASED REFERRAL FORMS

**Referral to NSW Quitline**

Fax to: (02) 9361-8011

(If you receive this fax by mistake, please re-tex to above number)

CONFIDENTIAL – PRIVACY WARNING. The information contained in this fax message is intended for Quitline staff only. If you are not the intended recipient you must not copy, distribute, take any action reliant on, or disclose any details of the information in this fax to any other person or organisation.

### Clinician details

**Community Health Centre**

**Clinician’s name**

**Position**

**Telephone**

**Fax**

**Email**

### Client details (please print and tick appropriate boxes)

**Client’s name**

**DOB**

**Contact no’s**

(h) ........................................................ (m) ........................................................ (w) ........................................................

☐ Aboriginal  ☐ Torres Strait Islander  ☐ Both, Aboriginal and Torres Strait Islander  

☐ Neither, Aboriginal or Torres Strait Islander

☐ Interpreter required  Specify language ........................................................

### Preferred date of first call

### Preferred time of call (please circle as many as available)

<table>
<thead>
<tr>
<th>Weekdays</th>
<th>Weekends</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>9am-1pm</td>
</tr>
<tr>
<td>Tuesday</td>
<td>9am-1pm</td>
</tr>
<tr>
<td>Wednesday</td>
<td>9am-1pm</td>
</tr>
<tr>
<td>Thursday</td>
<td>9am-1pm</td>
</tr>
<tr>
<td>Friday</td>
<td>9am-1pm</td>
</tr>
</tbody>
</table>

Does the client consent to Quitline leaving a message?  Yes  No

Does the client consent to Quitline results being sent back to you, the clinician?  Yes  No

Does the client currently use any medication?  Yes  No

Does the client have any health conditions relevant to quitting smoking?

☐ Heart disease  ☐ Respiratory disease  ☐ Diabetes  ☐ Depression/anxiety  ☐ Pregnancy

Other (please specify) ........................................................

I consent to this information being faxed to the Quitline and for Quitline to call me at a time that I have suggested on this form. I understand that persons within the organisation with access to the fax machine, who may not be a Quitline advisor, may view this form. I also consent for the Quitline to contact me at a later date to evaluate the usefulness of the Quitline proactive telephone service to patients and clients.

**Client’s signature** ........................................................ **Date** / /

In response to this fax referral, specialist Quitline staff will call the patient/client as close as possible to the indicated time to provide information, support and advice on smoking cessation. For the cost of a local call from anywhere in NSW, the Quitline telephone service (13 7648) can receive Quit Kit requests 24 hours a day 7 days a week. Recorded information about smoking is available 24 hours.
Health Professional Fax Referral Form

Fax: 1300 013 242
Email: contact@gethealthynsw.com.au

Health Professional Details

- Contact:
- Organisation:
- Address:
- Phone Number: ___________________ Fax Number: ___________________
- Email: _______________________

Patient Details

- Name: _______________________
- Address: _______________________
- Preferred Phone Number: (home): ___________________ (work): ___________________ (mobile): ___________________
- Age: __________________________
- Gender: (please tick) □ Female □ Male
- When is the best time and day for the Get Healthy Information and Coaching Service to call? (please tick)
  □ Monday □ Tuesday □ Wednesday □ Thursday □ Friday
  □ am □ pm

Primary issue for referral:

- □ Healthy eating □ Physical activity □ Weight Management

Body measurements:

- Waist circumference (current): __________ cm
- Weight (current): __________ kg
- Height: __________ cm

Other relevant issues:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Patient Consent and Signature:

□ I consent to the information being sent to the Get Healthy Information and Coaching Service, and consent for the Service staff to call me at a time that has been suggested on this form.

Signature: ________________________ Date: ____________
Information about the Get Healthy Service

The Get Healthy Information and Coaching Service has been designed to help you make some lifestyle changes regarding:

- Healthy eating
- Physically activity
- Achieving and maintaining a healthy weight

At some stage in our lives most of us would like to eat healthier, be more physically active and lose some weight. However making these changes can be difficult.

At the Get Healthy Service qualified health coaches help you develop personal health goals and create an action plan to make your goals become a reality.

Your personal Get Healthy coach will support you to develop and maintain motivation, identify problem areas and create solutions for successful lifestyle change.

As a participant of the Get Healthy Service, you will receive up to 10 telephone-based coaching calls over six months.

Your Get Healthy coach will ring you at times that suit you. You can also receive emails and other reminders, and be provided with access to a secure website. On the website you can keep track of your goals with daily logs and get tips and other tools to help you keep an eye on your progress. The Service will also send you support materials.

The Get Healthy Information and Coaching Service operates five days a week, Monday to Friday during the hours of 8am - 6pm.

It's free and confidential.

If you have any questions about the Service, please call 1300 806 258 or visit www.gethealthynsw.com.au
APPENDIX SEVEN: Additional material for the intervention [Chapters 6 and 7]

E  PAPER-BASED PREVENTIVE CARE ASSESSMENT TOOL

Preventive Care Assessment
Adults 18 years +

Introduce Preventive Care to your client: “Preventive Care is a way for us to explore ways to keep you as healthy as possible. Would you like a Preventive Care assessment?” If Yes:

Date of screening: _____/_____/_____
Client Name: ____________________________________________________________
Address: ______________________________________________________________
_______________________________________________________________
Phone: _________________________________________________________________
DOB: _____/_____/_____

Aboriginal and Torres Strait Islander identification

Closing the gap in health outcomes for our Aboriginal clients is important to us.
Are you of Aboriginal or Torres Strait Islander origin?
☐ Yes, Aboriginal ☐ Yes, Torres Strait Islander
☐ Yes, both Aboriginal and Torres Strait Islander

Client consent for GP referral letter

Your regular GP at a private practice or AMH can provide you with further support around the things we will talk about today. I would like to send this information to them for future follow up. Would it be ok if I sent this to your regular GP? i can also give you a copy to show them when you next visit: ☐ Yes ☐ No

GP details
Name: ____________________________________________ Phone:_________________________
Address: ________________________________________________

Fruit and Vegetables
Q1. Does the client eat the recommended serves of vegetables each day? (A 'serve' is 1/2 cup cooked vegetables or 1 cup of salad). ☐ Yes ☐ No

Q2. Does the client eat the recommended serves of fruit each day? (A 'serve' is 1 medium piece, 2 small pieces or 1 cup of diced fruit). ☐ Yes ☐ No

Brief Advice: The recommendation for a healthy diet is 3 serves of vegetables and 2 serves of fruit per day.

☐ Risk brief advice provided ☐ Yes ☐ No

☐ Client offered referral to:
☐ Recommended service provider -
☐ Get Healthy Information and Coaching Service
☐ Local Health District service provider
☐ Aboriginal Health Education Officer
☐ Other service provider

☐ Referral not required (already receiving care for risk)
☐ Referral not offered, provide reason: ________________________________

Fruit and Vegetables (cont.)

Client accepted referral to:
☐ Recommended service provider -
☐ Get Healthy Information and Coaching Service
☐ Local Health District service provider
☐ Aboriginal Health Education Officer
☐ Other service provider

☐ No referral accepted

Q3. Preferred time of call (only if accepted referral to GHS)
☐ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri
☐ 9am ☐ 11am

☐ Risk assessment clinically judged to be inappropriate
☐ Advice inappropriate for client condition
☐ Client unable to make a behaviour change
☐ Other
☐ Client declined to respond
### Physical Activity

**Q1.** Does the client do at least 30 minutes of moderate physical activity 5 days a week or more? □ Yes □ No

**Brief Advice:** The recommendation is 30 minutes of exercise on most days.

- □ Risk brief advice provided □ Yes □ No
- □ Client offered referral to:
  - □ Recommended service provider -
    - □ Get Healthy Information and Coaching Service
    - □ Local Health District service provider
    - □ Aboriginal Health Education Officer
  - □ Other service provider
- □ Referral not required (already receiving care for risk)
- □ Referral not offered, provide reason:

- □ Client accepted referral to:
  - □ Recommended service provider -
    - □ Get Healthy Information and Coaching Service (go to Q.2)
    - □ Local Health District service provider
    - □ Aboriginal Health Education Officer
  - □ Other service provider
- □ No referral accepted

**Q2.** Preferred time of call (only if accepted referral to GHS)

<table>
<thead>
<tr>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thu</th>
<th>Fri</th>
</tr>
</thead>
<tbody>
<tr>
<td>Am</td>
<td>pm</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- □ Risk assessment clinically judged to be inappropriate
  - □ Advice inappropriate for client condition
  - □ Client unable to make a behaviour change
  - □ Other
- □ Client declined to respond

### Alcohol

**Q1.** How often do you have a drink containing alcohol?

□ Never (STOP - Do not ask Q2 or Q3)
□ Monthly or less □ 2 to 4 times a month
□ 4 to 10 times a week □ 4 or more times a week

**Q2.** How many drinks would you have on a typical drinking day? □ 1 or 2 □ 3 or 4 □ 5 or 6 □ 7-8 or 9 □ 10+

**Q3.** How often do you have 4 or more drinks on any one occasion? □ Never □ Less than monthly □ Monthly □ Weekly □ Daily or almost daily

**Brief Advice:** To protect yourself, your family, and your friends, I recommend you get your free vaccination from your GP or the AMS.

- □ Risk brief advice provided □ Yes □ No
- □ Risk assessment clinically judged to be inappropriate
  - □ Advice inappropriate for client condition
  - □ Client unable to make a behaviour change
  - □ Other
- □ Client declined to respond

### Alcohol (cont.)

**Brief Advice:** The guidelines recommend no more than 2 standard drinks per day and never more than 4 drinks on any one occasion.

- □ Risk brief advice provided □ Yes □ No
- □ Client referred to any service □ No □ Yes (specify)

- □ Risk assessment clinically judged to be inappropriate
  - □ Advice inappropriate for client condition
    - □ Client unable to make a behaviour change
    - □ Other
- □ Client declined to respond

### Immunisation

To be completed for all Aboriginal and Torres Strait Islander clients and for non-Indigenous clients from 65 years of age.

**Q1.** Did you have a flu vaccination in the last 12 months?

An annual flu vaccination is recommended to help protect people against the current strains of influenza.

□ Yes □ No □ Client does not know

To be completed for Aboriginal and Torres Strait Islander clients from 50 years of age and non-Indigenous clients from 65 years of age.

**Q2.** Have you been vaccinated against pneumonia? The pneumococcal vaccination helps protect people against pneumonia (lung infection) and a range of other infections including meningitis (infection of the brain).

□ Yes □ No □ Client does not know

**Brief Advice:** To protect yourself, your family, and your friends, I recommend you get your free vaccination from your GP or the AMS.

- □ Risk brief advice provided □ Yes □ No
- □ Risk assessment clinically judged to be inappropriate
  - □ Advice inappropriate for client condition
  - □ Client unable to make a behaviour change
  - □ Other
- □ Client declined to respond
APPENDIX SEVEN: Additional material for the intervention [Chapters 6 and 7]

**Smoking**
Q1. Have you ever been a smoker?
☐ Smoker (Go to Q3) ☐ Ex-smoker (Go to Q2 AND Q3)
☐ Never smoked (STOP - go to Falls Prevention)

Q2. Approximately when did you cease smoking?
Q3. Have you smoked any tobacco in the last 4 weeks?
This can include cigarettes, roll your own, pipes, cigars or any other tobacco products.
☐ Yes ☐ No (STOP - Do not ask Q4 or Q5)

Q4. Do you currently smoke 10 or more cigarettes (10 roll your own, 2 cigars, or 1 pipe) a day?
☐ Yes ☐ No

Q5. Do you currently smoke within half an hour of waking?
☐ Yes ☐ No

**Falls Prevention**

To be completed for clients from 50 years.
Q1. Have you had a fall in the last 12 months?
☐ Yes ☐ No ☐ Unsure
If yes, approximate number of falls ________

Q2. Do you take 4 or more prescribed medications a day?
☐ Yes ☐ No ☐ Unsure

Q3. Have you ever had a stroke or do you have Parkinson's disease?
☐ Yes ☐ No ☐ Unsure

Q4. Do you have problems with your balance? This could be feeling unsteady on your feet or dizzy and lightheaded at times.
☐ Yes ☐ No ☐ Unsure

Q5. Do you need to use your arms to get up from a chair?
☐ Yes ☐ No ☐ Unsure

If yes or unsure to 2 or less questions: Being active can help reduce your risk of a fall. Would you like a referral to a community-based physical activity provider that includes balance? ☐ Yes ☐ No

If yes or unsure to 3 or more questions: Having a fall can reduce your ability to lead an independent lifestyle. Your answers suggest you may be at risk of a fall-related injury. Would you like further information and/or assessment to reduce your risk of falling? ☐ Yes ☐ No

![Table with options for referrals and advice based on answers to questions related to smoking and falls prevention.](image-url)
APPENDIX 7.11:
PROTOCOL FOR SUPPORT OFFICER (PRACTICE CHANGE SUPPORT PROJECT PERSONNEL) TASKS

Protocol for Support Tasks during the Intervention Period of Preventive Care Roll Out
Updated 7th November 2012

The intervention period is broken into 3 elements;

1) Planning, Training and Support
2) Performance Feedback and Monitoring
3) Promotion and Communication

There will be overlap between each of these sections.

This document sets out the tasks that are the responsibility of the Preventive Care Support Officers and should be seen as your work plan. The tables below will be used during Support Officer’s meetings with their project manager to review progress with the tasks outlined below.

Purpose of Support officers:

• To support site managers in supporting staff to deliver preventive care and meet KPIs
• To provided technical and practical support to staff
• To participate in the evaluation of the project by recording intervention strategies and milestones

Support Officers to record ALL meetings, visits, support calls and distribution of resources in

Site CHECKLIST
1. PLANNING, TRAINING AND SUPPORT

This section outlines the minimum support that is required for sites during the planning and training phase.

<table>
<thead>
<tr>
<th>Task for SO</th>
<th>Detail</th>
<th>Target Person/Group</th>
<th>Timeline</th>
<th>Frequency</th>
<th>Related Protocols/guidelines</th>
<th>Recording Mechanism</th>
</tr>
</thead>
</table>
| 1. Gather Relevant Information | **Staff List**  
  - Obtain list of all teams at each site, all org units that sit under each team and all staff that sit under each org unit  
  - Understand the governance structure of each site/service  
  - Identify Aboriginal staff members + reporting structure (ie AHS or cluster staff) | Site Manager/Team Leader/Admin | July - September | One off | Identifying reporting structure hierarchy and eligible org units | Save in site folder in Site Support |
| | **Disciplines List**  
  - Obtain list of disciplines and staff for Fit with Practice Workshops and for understanding where staff may seek direction/guidance from. | | | | Protocol for Report Hierarchy | Manager Meeting Checklist |
| | **Exemptions**  
  - Identify org units that are exempt from delivering Preventive Care  
  - Assist in organising applications for exemptions | Site Manager/Team Leader | July – September | One off | Exemptions protocol. Includes application for exemption form and an explanation of org unit exemption for CH managers | Save in site folder in Site Support |

Exemption Guidelines  
Prev Care Eligibility Guide
### Local Referral Lists
(N/A for D&A as lists have already been compiled)
- Collate list of local referrals for Aboriginal clients
- In Greater Newcastle, ask staff if they know of any other Tai Chi classes and feedback to Sue Green
- In the Lower Hunter, ask staff if they know of any other PA programs for over 50s in the Area and feedback to Sue Green

<table>
<thead>
<tr>
<th>Health Staff, Aboriginal staff and organisations e.g. AMS</th>
<th>July – November</th>
<th>One off</th>
<th>Aboriginal Referrals Protocol</th>
<th>Save in site folder in Site Support</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aboriginal Referral Template</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GN Referral Template</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>LH Referral Template</td>
<td></td>
</tr>
</tbody>
</table>

### 2. Introduction
Manager and SO to attend CH staff meetings to introduce Preventive Care.
- Introduce PC
- Gain manager agreement (verbally) on implementation and leadership of preventive Care
- Dates for training completion
- Dates for Fit w Practice

<table>
<thead>
<tr>
<th>Site manager/Team Leader and clinicians</th>
<th>September</th>
<th>One off</th>
<th>Manager Meeting Checklist</th>
<th>Save in site folder in Site Support</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

### 3. Provide staff resources
Each staff member to receive hard copies of:
- Staff resource pack (printed externally)
- Local referral lists (with cover sheet)
- Falls referrals list – PA programs for over 50s
- Flip Charts

<table>
<thead>
<tr>
<th>Clinicians</th>
<th>Resource packs and Flip Charts by Oct. Referrals lists by Dec.</th>
<th>One off</th>
<th>Staff Resource Pack</th>
<th>Record distribution of staff resources in Checklist</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
<tr>
<td>Task for SO</td>
<td>Detail</td>
<td>Target Person/Group</td>
<td>Timeline</td>
<td>Frequency</td>
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<tr>
<td>4. Online/or face to face training</td>
<td>• Site managers to send email to staff asking them to set aside 2hrs in their calendars to complete Preventive Care training with deadline for completion. Alternatively SO to book in 2hr meeting times for staff to complete face to face training with SO and Prev Care manager. • Send reminder email at completion of face to face training to remind staff to complete Aboriginal Module and relevant quizzes. • Managers and staff that do not attend face to face training need to be prompted to complete the online training via email.</td>
<td>Site managers to send to clinicians</td>
<td>First email sent by 10th September</td>
<td>One off</td>
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<td></td>
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<td></td>
<td>Training to be complete by end October</td>
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<tr>
<td>5. Produce training reports and send updates of number and proportion of staff who have completed training</td>
<td>• Follow training reports protocol to obtain number and % of staff trained • Record in excel spreadsheet template (TEMPLATE_Combined training as YYMDD CH Service) • Email all relevant managers using the training numbers email template as a guide</td>
<td>Site Manager/Team Leader</td>
<td>October</td>
<td>Weekly</td>
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<tr>
<td>6. Make training phone calls/emails to managers</td>
<td>Make weekly contact with managers (Phone or email) to discuss training numbers and strategies for increasing training rates.</td>
<td>Site Manager/Team Leader</td>
<td>October</td>
<td>Weekly</td>
</tr>
<tr>
<td>Task for SO</td>
<td>Detail</td>
<td>Target Person/Group</td>
<td>Timeline</td>
<td>Frequency</td>
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<tr>
<td>7. Conduct 'Fit With Practice' workshop</td>
<td>Manager and SO to meet with discipline teams to discuss incorporation of SNAPIF into current clinical practice. <strong>Workshop Content:</strong> - Listening to current practices - Discussion on how to fit Prev Care into these current practices. Practical focus. - How performance will be monitored</td>
<td>Clinicians</td>
<td>November</td>
<td>One workshop</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Task for SO</th>
<th>Detail</th>
<th>Target Person/Group</th>
<th>Timeline</th>
<th>Frequency</th>
<th>Related Protocols/guidelines</th>
<th>Recording Mechanism</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Book managers into face to face Managers training</td>
<td>- Ask Cluster Managers for appropriate dates in December to run face to face Managers training. - Make all necessary arrangements-room bookings, catering, book in Prev Care managers to deliver training.</td>
<td>Site Manager/Team Leader</td>
<td>October</td>
<td>One off</td>
<td>Disciplines guideline</td>
<td>Record in Checklist</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Task for SO</th>
<th>Detail</th>
<th>Target Person/Group</th>
<th>Timeline</th>
<th>Frequency</th>
<th>Related Protocols/guidelines</th>
<th>Recording Mechanism</th>
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<tbody>
<tr>
<td>9. Make support phone calls to managers</td>
<td>- Determine manager's preference for mode (telephone or email) and frequency of contact. - Discuss any outstanding clinicians to be trained - Discuss Fit with Practice-any identified barriers to how care will be delivered. - Discuss clinicians commencing Preventive Care delivery and confirm date for commencement - Discuss any concerns or issues from management and/or clinician point of view - Schedule regular meetings for when performance reports are out.</td>
<td>Site Manager/Team Leader</td>
<td>November – January</td>
<td>Weekly is the gold standard. If this is not suitable for the manager then fortnightly contact.</td>
<td>Strategy guide for managing managers Addressing Barriers with Managers</td>
<td>Record in Checklist</td>
</tr>
<tr>
<td>Task for SO</td>
<td>Detail</td>
<td>Target Person/Group</td>
<td>Timeline</td>
<td>Frequency</td>
<td>Related Protocols/guidelines</td>
<td>Recording Mechanism</td>
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</table>
| 10. Make support phone calls to site advocates (ie clinician who will provide on-site support – particularly important if manager does not use CHIME) | - If possible identify a staff advocate for each site. This person should be an “early adopter” or innovator and someone you feel you are able to develop a good relationship with.  
- Up skill advocate in Preventive Care  
- Discuss Fit with Practice  
- Discuss any concerns or issues from clinicians | Site Champion | From November | Fortnightly for first 6 months Monthly for last 6 months | CHIME guide  
Eligibility criteria guide | Record in Checklist |
| 11. Attend face to face Managers training | Prev Care manager and SO to conduct face to face Managers training | Site Manager/Team Leader | December | One Off | | Record in Checklist |
| 12. Site visits | - Provide support  
- Resolve issues  
- Talk through concerns raised  
- Review fit with practice  
- Support CHIME entry  
- Review referral lists | Site Manager/Team leader/Clinicians | From December | Monthly | CHIME guide  
Eligibility criteria guide | Record in Checklist |
| 13. Ongoing Issues identification and resolution | - Record issue on Issues Log  
- Determine if appropriate for inclusion in Helpful Hints or newsletter or FAQ and pass on to nominated PO.  
- Monitor Preventive Care email address | Site Manager / Team leader / Clinicians | From July | Ongoing | Issues log protocol | Record all issues in the Issues Log |
<table>
<thead>
<tr>
<th>Task for SO</th>
<th>Detail</th>
<th>Target Person/Group</th>
<th>Timeline</th>
<th>Frequency</th>
<th>Related Protocols/guidelines</th>
<th>Recording Mechanism</th>
</tr>
</thead>
</table>
| 14. Orientation of new staff and managers to Preventive Care | - Investigate new staff orientation process  
- Work with site/manager to include SNAPIF - include myLink information and resources to be printed for staff pack.  
- Staff and manager orientation may differ - managers training available for new manager orientation | Site manager | From December | One off | Prev Care Staff Orientation Information Sheet | Save in Site Support |
## 2. PERFORMANCE MONITORING AND FEEDBACK

Support Officer to begin tasks as soon as data is available

<table>
<thead>
<tr>
<th>Task for SO</th>
<th>Detail</th>
<th>Target Person/Group</th>
<th>Timeline</th>
<th>Frequency</th>
<th>Related Protocols/guidelines</th>
<th>Recording Mechanism</th>
</tr>
</thead>
</table>
| 1. Send performance reports | • Check report numbers & %  
• Check reporting structure is correct i.e. the right org units have been included under the right team/facility reports  
• Send report and covering to Paula Email to managers  
• In first email include performance reports Interpretation document | Site managers/team leaders | From January | Monthly | | Record in Checklist |
| 2. Make support phone calls or discuss at face to face meeting | • Discuss performance with managers  
• Develop and review strategies with managers for addressing issues in reports  
• Send performance reports | Site managers/team leaders | From January | Monthly | Report Discussion guide  
Increasing PC provision guide  
Strategy guide for managing managers  
Addressing Barriers with Managers  
Strategy recording template | Record in Checklist |
### Task for SO

<table>
<thead>
<tr>
<th>Task for SO</th>
<th>Detail</th>
<th>Target Person/Group</th>
<th>Timeline</th>
<th>Frequency</th>
<th>Related Protocols/guidelines</th>
<th>Recording Mechanism</th>
</tr>
</thead>
</table>
| **3. Support Executive Meetings** | • Prepare agenda and documentation for Preventive Care to attend Exec Meetings  
• Attend, take minutes and follow up any identified actions  
• Gain manager agreement to Preventive Care inclusion to 90 day Action plans and follow up on these strategies | Cluster Manager/Site Managers | From January | Monthly | Protocol for cluster exec meetings  
Agenda template | Record in Checklist |
| **4. Undertake Manager Evaluation Telephone Survey** | Scheduled calls to management will collect data on:  
• Use of resources; support activities undertaken at site; Support actions provided; Problems; Stories;  
• Assess satisfaction with: SO support; Newsletter; Performance reports; CHIME changes | Site managers/team leaders | One off in final 3 months of intervention period | TBA | |
| **5. Ongoing positive congratulatory advice for staff and teams performing well** | • Include good news stories in – Newsletter, Cluster executive meetings. | All | From January | Monthly | | |
### 3. ONGOING PROMOTION AND COMMUNICATION

<table>
<thead>
<tr>
<th>Task for SO</th>
<th>Detail</th>
<th>Target Person/Group</th>
<th>Timeline</th>
<th>Frequency</th>
<th>Related Protocols/guidelines</th>
<th>Recording Mechanism</th>
</tr>
</thead>
</table>
| 1. Send Helpful Hints                           | • Discuss with managers how best to disseminate to staff.  
   • Ask managers to ensure that staff without email still have access e.g. snail mail, noticeboards, print and present at staff meetings                                                                 | Site Manager/Team Leader/Clinicians | From December | Monthly   |                             | Record in Checklist                                      |
| 2. Send newsletter                              | As above                                                                                                                                                                                              | Site Manager/Team Leader/Clinicians | From December | Monthly   |                             | Record in Checklist                                      |
| 3. Promote Preventive Care email address        | Distribute to staff as a permanent contact for the Preventive Care team PreventiveCare@hnehealth.nsw.gov.au  
   • Auto-reply set up to respond initially  
   • Designated Support Officer to check email account daily  
   • Emails are to be responded to ASAP  
   • When responding cc PrevCare address                                                                                                         | Site Manager/Team Leader/Clinicians | From July     | Ongoing   | Email protocol              | Record in Checklist                                      |
| 4. Certificates of acknowledgement               | "Certificate of excellence in Preventive Care delivery", printed on card, laminated, signed by Implementation manager, and mailed to staff performing well at each site. Addressed to manager and asked to present in the most appropriate way eg staff meeting or one on one.  
   Identify reward values                                                                                                                        | Site Manager/Team Leader/Clinicians | From January  | As required |                             | Record in Checklist                                      |

APPENDIX SEVEN: Additional material for the intervention [Chapters 6 and 7]
<table>
<thead>
<tr>
<th>Task for SO</th>
<th>Detail</th>
<th>Target Person/Group</th>
<th>Timeline</th>
<th>Frequency</th>
<th>Related Protocols/guidelines</th>
<th>Recording Mechanism</th>
</tr>
</thead>
</table>
| 5. Promoting Preventive Care in Aboriginal Communities | N/A for D&A as already done in previous roll outs  
- Work with Preventive Care manager to consult with identified Aboriginal staff and/or community members on the most appropriate way to promote Preventive Care in the Community.  
- Take flyer to consultations to see if appropriate to use in cluster | Aboriginal staff and Community members | September – December | Once at roll out and then as required | Consultation protocol  
Flyer used in Phase 2 clusters | Save in Site Support |
| 6. Disseminate SNAPIF posters and workstation reminders |  
- Disseminate posters for waiting rooms etc  
- Ask whether staff would like a workstation reminder | Clinicians | September – December | Once at roll out and then as required | Example Workstation reminder | Record in Checklist |
| 7. Media Release |  
- Support arrangements for Media Release such as identifying local spokesperson and informing staff of release. | Community | December 2012 and May 2013 | Twice | | Record in Checklist |

Other documents that Support Officers need to be aware of:  
Preventive Care Data management protocol  
Preventive Care Aboriginal data protocol  
Monthly Performance Reports protocol  
Preventive Care Policy  
Preventive Care PCP
# APPENDIX 7.12:
# PROJECT PERSONNEL CHECKLIST FOR RECORDING INTERVENTION DELIVERY

<table>
<thead>
<tr>
<th>One off checklist</th>
<th>[Service], (Manager)</th>
<th>Completed [yes,no,n/a]</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial meeting with GM to introduce Preventive Care</td>
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<tr>
<td>Initial meeting with managers/team leaders to introduce Preventive Care</td>
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<tr>
<td>Initial meeting with staff to introduce Preventive Care</td>
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<tr>
<td>Fit with Practice workshop conducted with staff</td>
<td></td>
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<tr>
<td>Manager agreed to take lead role in implementation of Preventive Care</td>
<td></td>
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<tr>
<td>Manager completed face to face training</td>
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<tr>
<td>Manager completed online training</td>
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<tr>
<td>Communication with GPs via Medicare Local</td>
<td></td>
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<tr>
<td>Dissemination of posters</td>
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<td></td>
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<tr>
<td>Dissemination of resource packs</td>
<td></td>
<td></td>
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<tr>
<td>Local referral information collected and passed on to Sue</td>
<td></td>
<td></td>
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<tr>
<td>Preventive Care included in 90 day plan</td>
<td></td>
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<tr>
<td>Local referral lists distributed to staff</td>
<td></td>
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<tr>
<td>Cluster manager is aware of the KPI (65% of clients offered referral)</td>
<td></td>
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<tr>
<td>CE meets CH managers prior to roll-out</td>
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<tr>
<td>Media Release sent out</td>
<td></td>
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<tr>
<td>100% of staff trained in all relevant online modules</td>
<td></td>
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<tr>
<td>Reminder email sent to staff re completion of Module 6 and quizzes</td>
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<tr>
<td>Obtain staff list</td>
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<tr>
<td>Identify Aboriginal staff members</td>
<td></td>
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<tr>
<td>Obtain list of org units and who they are managed by</td>
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<tr>
<td>Identify org units that are exempt from delivering Preventive Care</td>
<td></td>
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<tr>
<td>Preventive Care to be included in orientation of any new staff</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Aboriginal flyer disseminated</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Monthly checklist</th>
<th>[Cluster]</th>
<th>Completed [yes,no,n/a]</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluster specific</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance reports sent to Cluster manager</td>
<td></td>
<td></td>
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<tr>
<td>Update provided at cluster Executive meeting</td>
<td></td>
<td></td>
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<tr>
<td>Any additional communication with Cluster manager? (state method and frequency)</td>
<td></td>
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<table>
<thead>
<tr>
<th>Team specific</th>
<th>[Service], (Manager)</th>
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</thead>
<tbody>
<tr>
<td>Meet with manager face to face</td>
<td></td>
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<tr>
<td>Fortnightly phone/email catch-up with manager</td>
<td></td>
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<tr>
<td>Meet with staff face to face</td>
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<tr>
<td>Performance reports provided to manager</td>
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<tr>
<td>Performance reports discussed with manager</td>
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<tr>
<td>Strategies to increase/maintain provision of Preventive Care discussed with manager</td>
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<tr>
<td>Previous months strategies followed up on - discussed with manager</td>
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<tr>
<td>Communication with staff advocate (state method and frequency)</td>
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<tr>
<td>Monthly newsletter distributed to staff (specify distribution method)</td>
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<tr>
<td>Monthly helpful hints distributed to staff (specify distribution method)</td>
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<tr>
<td>Number and percentage of staff trained</td>
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<tr>
<td>Number and percentage of staff trained in Module 5 - Aboriginal specific</td>
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<tr>
<td>Any additional resources sent to staff? (If yes, what?)</td>
<td></td>
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<tr>
<td>Any additional support to manager/staff? (If yes, what?)</td>
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</table>
APPENDIX 7.13: SUMMARY OF INTERVENTION IMPLEMENTATION

<table>
<thead>
<tr>
<th>Strategy</th>
<th>1 Nov</th>
<th>2 Dec</th>
<th>3 Jan</th>
<th>4 Feb</th>
<th>5 Mar</th>
<th>6 Apr</th>
<th>7 May</th>
<th>8 Jun</th>
<th>9 Jul</th>
<th>10 Au</th>
<th>11 Sep</th>
<th>12 Oct</th>
<th>Avg</th>
<th>Avg %</th>
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<tbody>
<tr>
<td><strong>1 Leadership and consensus</strong></td>
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<tr>
<td>Cluster Manager agree to a cluster Key Performance Indicator (^{a,b})</td>
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<tr>
<td>Group 1</td>
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<td>3/3</td>
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<tr>
<td>Group 2</td>
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<td>na</td>
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<tr>
<td><strong>2 Manager and clinician and training</strong></td>
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<tr>
<td>Managers complete face to face training (leadership/performance reports (^{b,d}))</td>
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<td>Group 1</td>
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<tr>
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<tr>
<td>Managers complete online competency based training (^d)</td>
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<td>6/10</td>
<td>8/10</td>
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<td>1/c</td>
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<td>Existing clinical staff complete online competency based training (%) (^{b,e})</td>
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<td>69/182 =</td>
<td>89/152 =</td>
<td>118/155 =</td>
<td>139/164 =</td>
<td>153/165 =</td>
<td>155/165 =</td>
<td>154/162 =</td>
<td>161/165 =</td>
<td>159/165 =</td>
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<td><strong>3 Manager and clinician support</strong></td>
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<td>Face to face visits with manager (monthly) (^d)</td>
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## Strategy

<table>
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<tr>
<th>Intervention Month</th>
<th>1 Nov</th>
<th>2 Dec</th>
<th>3 Jan</th>
<th>4 Feb</th>
<th>5 Mar</th>
<th>6 Apr</th>
<th>7 May</th>
<th>8 Jun</th>
<th>9 Jul</th>
<th>10 Au</th>
<th>11 Sep</th>
<th>12 Oct</th>
<th>Avg</th>
<th>Avg %</th>
</tr>
</thead>
<tbody>
<tr>
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<td>2/7</td>
<td>4/7</td>
<td>6/7</td>
<td>7/7</td>
<td>7/7</td>
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<td>7/7</td>
<td>7/7</td>
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<td>4/12</td>
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<td>6/12</td>
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<td>3/3</td>
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<td>3/7</td>
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<td>Tips and updates sheets provided</td>
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<td>7/7</td>
<td>7/7</td>
<td>7/7</td>
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<td>12</td>
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<td>65%</td>
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<td>3/7</td>
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<td>7/7</td>
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### 4 Performance monitoring and feedback

#### Performance reports provided to managers

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<tr>
<th>Intervention Month</th>
<th>1 Nov</th>
<th>2 Dec</th>
<th>3 Jan</th>
<th>4 Feb</th>
<th>5 Mar</th>
<th>6 Apr</th>
<th>7 May</th>
<th>8 Jun</th>
<th>9 Jul</th>
<th>10 Au</th>
<th>11 Sep</th>
<th>12 Oct</th>
<th>Avg</th>
<th>Avg %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>0/3</td>
<td>0/3</td>
<td>0/3</td>
<td>0/3</td>
<td>0/3</td>
<td>2/3</td>
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<td>0/3</td>
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<td>47%</td>
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<tr>
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<td>10/10</td>
<td>10/10</td>
<td>10/10</td>
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<td>10/10</td>
<td>10/10</td>
<td>10/10</td>
<td>10/10</td>
<td>7.5</td>
<td>75%</td>
</tr>
<tr>
<td>Total /13</td>
<td>0</td>
<td>0</td>
<td>10</td>
<td>10</td>
<td>12</td>
<td>13</td>
<td>10</td>
<td>13</td>
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<td>13</td>
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<td>13</td>
<td>8.9</td>
<td>68%</td>
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#### Performance discussed with managers

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<th>2 Dec</th>
<th>3 Jan</th>
<th>4 Feb</th>
<th>5 Mar</th>
<th>6 Apr</th>
<th>7 May</th>
<th>8 Jun</th>
<th>9 Jul</th>
<th>10 Au</th>
<th>11 Sep</th>
<th>12 Oct</th>
<th>Avg</th>
<th>Avg %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>0/3</td>
<td>0/3</td>
<td>0/3</td>
<td>0/3</td>
<td>0/3</td>
<td>1/3</td>
<td>3/3</td>
<td>0/3</td>
<td>2/3</td>
<td>2/3</td>
<td>3/3</td>
<td>1/3</td>
<td>1</td>
<td>33%</td>
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APPENDIX SEVEN: Additional material for the intervention [Chapters 6 and 7]
### Strategy

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<th>2 Dec</th>
<th>3 Jan</th>
<th>4 Feb</th>
<th>5 Mar</th>
<th>6 Apr</th>
<th>7 May</th>
<th>8 Jun</th>
<th>9 Jul</th>
<th>10 Au</th>
<th>11 Sep</th>
<th>12 Oct</th>
<th>Avg</th>
<th>Avg %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 2</td>
<td>0/10</td>
<td>0/10</td>
<td>0/10</td>
<td>6/10</td>
<td>10/10</td>
<td>10/10</td>
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<td>10/10</td>
<td>10/10</td>
<td>10/10</td>
<td>10/10</td>
<td>7.2</td>
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<td>0</td>
<td>6</td>
<td>10</td>
<td>11</td>
<td>13</td>
<td>10</td>
<td>12</td>
<td>12</td>
<td>13</td>
<td>11</td>
<td>8.2</td>
<td>63%</td>
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</table>

### 5 Communication and promotion

| Preventive care community health newsletter |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Group 1 | 0/7 | 0/7 | 3/7 | 1/7 | 5/7 | 7/7 | 7/7 | 7/7 | 6/7 | 7/7 | 7/7 | 3/7 | 4.4 | 63% |
| Group 2 | 0/12 | 0/12 | 12/12 | 0/12 | 12/12 | 12/12 | 12/12 | 12/12 | 12/12 | 12/12 | 12/12 | 12/12 | 9 | 75% |
| Total /19 | 0 | 0 | 15 | 1 | 17 | 19 | 19 | 19 | 18 | 19 | 19 | 15 | 13.4 | 71% |

Notes:

Avg = Average services per month that received strategy.

Na=not applicable
## APPENDIX 8:
### ADDITIONAL MATERIAL FOR CHAPTER 8

### APPENDIX 8.1:
#### THEORETICAL DOMAINS FRAMEWORK – THEORETICAL DOMAINS AND CONSTRUCTS

<table>
<thead>
<tr>
<th>Domain and definition</th>
<th>Constructs within the domain</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Knowledge</strong></td>
<td>Knowledge (including knowledge of condition/scientific rationale) Procedural knowledge Knowledge of task environment</td>
</tr>
<tr>
<td>An awareness of the existence of something</td>
<td></td>
</tr>
<tr>
<td>2. Skills</td>
<td>Skills Skills development Competence Ability Interpersonal skills Practice Skill assessment</td>
</tr>
<tr>
<td>An ability or proficiency acquired through practice</td>
<td></td>
</tr>
<tr>
<td>3. Social/professional role and identity</td>
<td>Professional identity Professional role Social identity Identity Professional boundaries Professional confidence Group identity Leadership Organisational commitment</td>
</tr>
<tr>
<td>A coherent set of behaviours and displayed personal qualities of an individual in a social or work setting</td>
<td></td>
</tr>
<tr>
<td>4. Beliefs about capabilities</td>
<td>Self-confidence Perceived competence Self-efficacy Perceived behavioural control Beliefs Self-esteem Empowerment Professional confidence</td>
</tr>
<tr>
<td>Acceptance of the truth, reality, or validity about an ability, talent, or facility that a person can put to constructive use</td>
<td></td>
</tr>
<tr>
<td>5. Optimism</td>
<td>Optimism Pessimism Unrealistic optimism Identity</td>
</tr>
<tr>
<td>The confidence that things will happen for the best or that desired goals will be attained</td>
<td></td>
</tr>
<tr>
<td>6. Beliefs about consequences</td>
<td>Beliefs Outcome expectancies Characteristics of outcome expectancies Anticipated regret Consequents</td>
</tr>
<tr>
<td>Acceptance of the truth, reality, or validity about outcomes of a behaviour in a given situation</td>
<td></td>
</tr>
<tr>
<td>Domain and definition</td>
<td>Constructs within the domain</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>7. Reinforcement</strong></td>
<td>Increasing the probability of a response by arranging a dependent relationship, or contingency, between the response and a given stimulus</td>
</tr>
<tr>
<td><strong>Constructs within the domain</strong></td>
<td>Rewards (proximal/distal, value/not valued, probably/improbable) Incentives Punishment Consequents Reinforcement Contingencies Sanctions</td>
</tr>
<tr>
<td><strong>8. Intentions</strong></td>
<td>A conscious decision to perform a behaviour or a resolve to act in a certain way</td>
</tr>
<tr>
<td><strong>Constructs within the domain</strong></td>
<td>Stability of intentions Stages of change model Transtheoretical model and stages of change</td>
</tr>
<tr>
<td><strong>9. Goals</strong></td>
<td>Mental representations of outcomes or end states that an individual wants to achieve</td>
</tr>
<tr>
<td><strong>Constructs within the domain</strong></td>
<td>Goals (distal / proximal) Goal priority Goal/target setting Goals (autonomous/controlled) Action planning Implementation intention</td>
</tr>
</tbody>
</table>
### Domain and definition

<table>
<thead>
<tr>
<th>Construct within the domain</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>13. Emotion</strong></td>
</tr>
<tr>
<td>A complex reaction pattern, involving experiential, behaviour, and physiological elements, by which the individual attempts to deal with a personally significant matter or event</td>
</tr>
<tr>
<td>Fear</td>
</tr>
<tr>
<td>Anxiety</td>
</tr>
<tr>
<td>Affect</td>
</tr>
<tr>
<td>Stress</td>
</tr>
<tr>
<td>Depression</td>
</tr>
<tr>
<td>Positive/negative affect</td>
</tr>
<tr>
<td>Burn-out</td>
</tr>
<tr>
<td><strong>14. Behavioural regulation</strong></td>
</tr>
<tr>
<td>Anything aimed at managing or changing objectively observed or measured actions</td>
</tr>
<tr>
<td>Self-monitoring</td>
</tr>
<tr>
<td>Breaking habit</td>
</tr>
<tr>
<td>Action planning</td>
</tr>
</tbody>
</table>