Improving the Provision of Nutrition Advice and Referral to Dietetics Professionals in the General Practice Setting

Lana J. Mitchell

B HSc (N&D) (Hons)

Submitted for
Doctor of Philosophy (Nutrition & Dietetics)

School of Health Sciences
The University of Newcastle

November, 2009
Statement of Originality

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent to this copy of my thesis, when deposited in the University Library, being made available for loan and photocopying subject to the provisions of the Copyright Act 1968.

....................................................

Lana J. Mitchell
Acknowledgements

I would like to thank all the people who have made this thesis possible. Firstly, my amazing husband and friend, Kane Mitchell, thankyou for your continued love, support and encouragement; I am so glad you have come on this journey with me. Your thesis editing skills and time have also been very much appreciated. To my adorable baby girl Zoe, thankyou for your happy, energetic personality, your beautiful ‘tuddles’ and for both the welcome and unwelcome distractions, which remind me what is important in life.

This thesis would have also not been possible without my supervisors, Lesley MacDonald-Wicks and Sandra Capra. You are both amazing women who have been so generous with your time. Lesley, thankyou for your support and accessibility over the past four years; our debriefing sessions have been so helpful during the highs and lows of the PhD rollercoaster. Sandra, you are an inspiring woman and a wealth of knowledge no matter what the topic.

To my parents (Ross and Katrina Collyer) and in-laws (David and Trudy Mitchell), thank you for believing in me, showing an interest in my work and for your many hours of babysitting; your emotional support has been invaluable. Special thanks must also go to my sisters, Alex, Ellen and Claire, who are also my good friends; thanks for your understanding and support during this time. I would also like to thank my grandparents, who I am so blessed to have in my life. Thanks for always believing in me and showing an interest in my work.

I would like to acknowledge all my friends who have been there for me during the past four years, there are too many of you to mention, but I appreciate you all. In particular I would like to acknowledge Jessica Fedder, for your thorough editing skills and willingness to always lend an ear or a hand.

Thanks must also go to Dimity Pond, for your assistance during the early days of my PhD and your insight into general practice. Also to GP Access staff, specifically Annette Carruthers and Denise Lyons; your support in organising my GP and PN studies was appreciated. Thanks also to the Dietitians Association of Australia
National Office for providing their membership data, in particular, for the efforts of Glennyss Leyne, Sue Cassidy, Elizabeth Ferres and Cedric Bear. I must also acknowledge Medicare Australia for their provision of Allied Health Enhanced Primary Care data.

To the Participants in my studies, including GPs, practice nurse, general practice patients and private practice dietetics professionals, thankyou for your time and willingness to be involved in my research; without you this thesis would not have been possible. Also for the Australian Post-Graduate Award (APA) scholarship which made it feasible for me to undertake this PhD.

I would also like to acknowledge Mead Johnson & Company, the publisher of Splett’s Cascade model used in this thesis. Contact was not able to be made with this company and as a result, permission was obtained from Patricia L. Splett.

Thanks to my PhD peers who have gone before me, Doctors Anne Marly, Michelle Palmer, Tracy Burrows, Alexis Hure, Leanne Brown and Jane Watson, whose research successes and lessons learnt have taught me a lot about the PhD experience. Thanks also to the current PhD students: Melinda Neve, Alison Dodsworth and Michelle Blumfield. I would also like to acknowledge my Nutrition and Dietetics peers who have provided interest and motivation in the research arena: Clare Collins, Lauren Williams, Surinder Baines and Amanda Patterson. A particular thanks needs to go to Caitlin West, who completed her 4th year Nutrition & Dietetics Honours project on part of this research. I would also like to thank the School of Health Sciences administration staff for their practical assistance throughout this time.
# Table of Contents

- Statement of Originality ................................................................. ii
- Acknowledgements ....................................................................... iii
- Table of Contents ............................................................................... v
- List of Tables ................................................................................... x
- List of Figures ................................................................................... xv
- List of Appendices ............................................................................ xvii
- List of Appendices ............................................................................. xvii
- List of Appendices ............................................................................ xxi
- List of Appendices ............................................................................. xxi
- Publications arising from this thesis ................................................ xxiii
- Abstract ........................................................................................... 1
- Chapter 1 General introduction ............................................................. 3
  - 1.1 Delivery of nutrition advice in general practice .......................... 3
  - 1.2 Thesis Summary .......................................................................... 3
  - 1.3 Thesis Aims and Hypotheses ...................................................... 6
- Chapter 2 Introduction & Literature review ............................................. 8
  - 2.1 The Australian Health Care Setting .............................................. 8
  - 2.2 Divisions of General Practice ...................................................... 9
    - 2.2.1 GP Access (Hunter Urban Division of General Practice) .......... 10
  - 2.3 Dietitians Association of Australia .............................................. 12
  - 2.4 Evaluating the delivery of nutrition advice in the general practice setting using Splett's Cascade Model ........................................... 12
  - 2.5 Importance of preventive health activities in general practice ........ 14
  - 2.6 Importance of good nutrition ...................................................... 16
  - 2.7 Sources of nutrition information for the general population ......... 16
  - 2.8 Sources of nutrition information for GPs .................................... 19
  - 2.9 Access to nutrition advice in the general practice setting ............ 21
    - 2.9.1 Access to nutrition advice by GPs ......................................... 21
      - 2.9.1.1 Benefit of GPs providing nutrition advice ...................... 21
      - 2.9.1.2 Rates of nutrition advice by GPs .................................. 26
      - 2.9.1.3 Barriers to providing nutrition advice in the general practice setting 37
    - 2.9.2 Access to nutrition advice by PNs ........................................ 41
      - 2.9.2.1 Benefit of PNs in the general practice setting ................ 41
      - 2.9.2.2 Role of PNs in the general practice setting .................... 43
  - 2.10 Implementation of nutrition advice in the general practice setting ... 47
    - 2.10.1 Lifescripts© .......................................................................... 48
      - 2.10.1.1 Evaluations of Lifescripts© ........................................ 49
    - 2.11 Implementation of nutrition advice by dietetics professionals .... 53
      - 2.11.1 Benefit of dietetics professionals .................................... 53
      - 2.11.2 GP referral to dietetics professionals ............................... 56
        - 2.11.2.1 Rates of GP referral to dietetics professionals .......... 56
        - 2.11.2.2 Factors influencing GP referral to dietetics professionals ... 61
        - 2.11.2.3 Barriers to referral to dietetics professionals ........... 64
2.12 Suggested strategies to increase delivery of nutrition advice in the general practice setting

2.12.1 Strategies to improve implementation of nutrition advice in general practice

2.12.1.1 Increased nutrition training for GPs

2.12.1.2 Increased nutrition training for PNs

2.12.1.3 Increased system supports

2.12.1.4 ‘One-minute message’

2.12.1.5 Increased utilisation of PNs

2.12.2 Strategies to improve implementation of nutrition advice by dietetics professionals

2.12.2.1 Increasing dietetics professionals working in PP

2.12.2.2 Enhancing dietetics professional partnerships with GPs

2.12.2.3 Medicare Enhanced Primary Care (EPC) Program

2.12.2.4 Onsite dietetic services

2.13 Summary of the literature review

Chapter 3 Methods & Response Rates

3.1 Introduction

3.2 GP Study

3.2.1 Participants

3.2.2 Recruitment

3.2.2.1 Intervention group

3.2.2.2 Control group

3.2.3 Study design

3.2.3.1 Questionnaires

3.2.3.2 Training in the use of Lifescripts®

3.2.3.3 Implementation of Lifescripts®

3.2.4 Ethics

3.3 PN Study

3.3.1 Participants

3.3.2 Recruitment

3.3.3 Study design

3.3.3.1 Questionnaires

3.3.3.2 Training in the use of Lifescripts®

3.3.3.3 Implementation of Lifescripts®

3.3.4 Ethics

3.4 Patient Study

3.4.1 Participants

3.4.2 Recruitment

3.4.3 Study design

3.4.4 Ethics

3.5 PP Dietetics Professionals’ Telephone Interviews

3.5.1 Participants

3.5.2 Recruitment

3.5.3 Study design

3.5.4 Ethics

3.6 PP Dietetics Professionals’ Online Survey
7.3 Methods.............................................................................................................. 222
7.4 Results............................................................................................................... 222
7.4.1 Comparison of Medicare EPC and DAA membership data .................... 222
  7.4.1.1 DAA private practice workforce ......................................................... 222
  7.4.1.2 Allied Health EPC consultations ....................................................... 226
  7.4.1.3 Dietetics professional EPC consultations ....................................... 229
  7.4.1.4 EPC consultations per provider ....................................................... 232
7.4.2 Implementation of nutrition advice via EPC dietetic services – dietetics
    professionals’ views and practices ......................................................... 233
  7.4.2.1 Participation in the EPC Program ................................................... 233
  7.4.2.2 Medicare EPC patients seen per week .......................................... 234
  7.4.2.3 Number of EPC consultations normally allocated ....................... 235
  7.4.2.4 Impact of EPC Program on clientele ............................................. 236
  7.4.2.5 Length of EPC consultations ......................................................... 241
  7.4.2.6 Cost of EPC consultations ............................................................ 242
  7.4.2.7 Bulk billing EPC patients .............................................................. 244
  7.4.2.8 EPC consultations as an opportunity to build business ................. 248
  7.4.2.9 Perceived benefits of the EPC Program ....................................... 249
  7.4.2.9.1 Allied Health Group Services under Medicare for patients with type 2
           diabetes ............................................................................................... 252
  7.4.2.10 Suggested improvements to the Medicare EPC Program .......... 252
7.5 Discussion ....................................................................................................... 255
  7.5.1 Limitations .............................................................................................. 267
7.6 Conclusions .................................................................................................... 267
Chapter 8 Final Discussion .................................................................................. 269
8.1 Future directions .............................................................................................. 276
8.2 Conclusion ....................................................................................................... 276
List of References ................................................................................................. 278
Appendices ............................................................................................................ 293
List of Tables

Table 2-1 Importance of preventive health activities in general practice ........................................ 15
Table 2-2 Sources of nutrition information for the general population ........................................... 17
Table 2-3 Sources of nutrition information for GPs ........................................................................ 20
Table 2-4 Benefit of a GP providing nutrition advice ................................................................. 22
Table 2-5 Measured rates of nutrition advice by GPs .................................................................... 27
Table 2-6 Self reported rates of nutrition advice by GPs ................................................................. 30
Table 2-7 Patient reported rates of nutrition advice by GPs ........................................................... 36
Table 2-8 Barriers to providing nutrition advice in the general practice setting ............................. 38
Table 2-9 Benefit of PNs in the general practice setting ................................................................. 42
Table 2-10 Role of PNs in delivering nutrition advice in the general practice setting .................... 44
Table 2-11 Evaluations of Lifescripts© in the general practice setting ........................................ 50
Table 2-12 Predecessors to Lifescripts© ....................................................................................... 51
Table 2-13 Benefit of dietetics professionals ................................................................................. 54
Table 2-14 Rates of referral to dietetics professionals – Measured ................................................. 57
Table 2-15 Rates of referral to dietetics professionals – Self report ............................................... 58
Table 2-16 Factors influencing referral to dietetics professionals .................................................. 62
Table 2-17 Barriers to referral to dietetics professionals ............................................................... 65
Table 2-18 Improved access to nutrition advice via increased nutrition training for GPs ............... 68
Table 2-19 Improved access to nutrition advice via increased nutrition training for PN .............. 71
Table 2-20 Improved access to nutrition advice via increased system supports ............................ 73
Table 2-21 Improved access to nutrition advice via brief nutrition interventions by GPs .............. 74
Table 2-22 Benefits of working in private practice ................................................................. 76
Table 2-23 Barriers of working in private practice ................................................................. 78
Table 2-24 Preparation required for establishing a private practice business .................................. 80
Table 2-25 Improving access to dietetics professionals through PP in rural areas ....................... 82
Table 2-26 Improved partnerships between GPs and dietetics professionals ............................... 84
Table 2-27 Benefits of participation in the Enhanced Primary Care (EPC) initiative .................... 85
Table 2-28 Barriers to the uptake of the Enhanced Primary Care (EPC) Program ....................... 87
Table 5-12 Factors related to PN Study Participants referral to a dietetics professional at baseline and follow-up ................................................................. 144

Table 5-13 PN Study Participants’ responses to questionnaires relating to Lifescripts© at follow-up .................................................................................................................. 145

Table 5-14 Barriers to referral to a dietetics professional identified by PN Study Participants (n=12) ..................................................................................................................... 146

Table 5-15 Conditions commonly referred - identified through tick box options for Survey Participants and open-ended options for Interview Participants .............................................. 147

Table 5-16 Additional conditions commonly referred - identified through ‘other’ category for Survey Participants and open-ended options for Interview Participants (a) .................................. 148

Table 5-17 Common practice locations for seeing clients reported by Interview and Survey Participants .................................................................................................................. 149

Table 5-18 Reasons why Interview Participants believed being located in a GP surgery made it easier or not to get referrals .......................................................... 150

Table 5-19 Perceived advantages of various practice locations reported by Interview Participants .................................................................................................................. 152

Table 5-20 Perceived disadvantages of various practice locations reported by Interview Participants .................................................................................................................. 153

Table 5-21 Interview Participants perceived quality of their relationships with GPs ............... 154

Table 5-22 Methods used by Interview Participants to initially form relationships with GPs .... 155

Table 5-23 Interview Participants’ reported methods of maintaining relationships with GPs ... 156

Table 5-24 Strategies used by Interview Participants to make referral easier for GPs ............ 157

Table 5-25 Effective activities in building relationships with GPs and increasing referrals reported by Interview Participants .................................................................................. 158

Table 5-26 Potential (Interview Participants) or most effective (Survey Participants) ways of increasing the number of patients receiving nutrition advice – Dietetics professional factors .............................................................. 160

Table 5-27 Patient experiences and views of dietetics professionals ........................................ 161

Table 5-28 Views of dietetics professionals and referral by Patient Study Participants receiving nutrition or weight management scripts .......................................................... 163

Table 6-1 Intervention and control GPs’ views on dietary advice at baseline and follow-up .... 177

Table 6-2 Interview and Survey Participants’ opinions of whether GPs have a role in providing nutrition advice .................................................................................................................. 178

Table 6-3 Reasons provided by Interview and Survey Participants as to why GPs have a role in providing nutrition advice .................................................................................................................. 180

Table 6-4 Reasons provided by Interview and Survey Participants as to why GPs do not have a role in providing nutrition advice .................................................................................................................. 181
Table 6-5 Interview and Survey Participants’ belief as to whether the advice provided by GPs is effective ................................................................. 182
Table 6-6 Perceived barriers to GPs providing nutrition advice reported by Interview and Survey Participants ................................................................. 183
Table 6-7 PN Study Participants’ views on dietary advice at baseline and follow-up .......... 185
Table 6-8 PN Study Participants’ nutrition training at baseline and follow-up ..................... 185
Table 6-9 Interview and Survey Participants’ belief as to whether PN have adequate nutrition training and knowledge to provide brief advice ......................... 187
Table 6-10 Interview and Survey Participants’ opinions of whether, with adequate training, PNs’ have a role in providing brief nutrition advice ................................................................. 187
Table 6-11 Reasons reported by Interview and Survey Participants’ as to why PNs do/do not have a role in providing brief nutrition advice ........................................................................ 189
Table 6-12 Intervention GPs’ opinions of Lifescripts® at follow-up (n=4) .......................... 191
Table 6-13 Number and per cent of total Lifescripts® provided by PN Study Participants (n=11) ........................................................................................................ 193
Table 6-14 PN Study Participants’ responses to questionnaires relating to Lifescripts® at follow-up .............................................................................. 196
Table 6-15 Survey Participants’ reported time between first hearing of Lifescripts® and conducting the Online Survey ......................................................... 197
Table 6-16 Survey Participants’ reported method of hearing about Lifescripts® .............. 197
Table 6-17 Survey Participants’ understanding of Lifescripts® when completing the Online Survey ..................................................................................... 198
Table 6-18 Survey Participants’ rating of the Weight Management Lifescript - ‘poor’ to ‘excellent’ ...................................................................................... 198
Table 6-19 Survey Participants’ views on whether or not Lifescripts® would be effective in the general practice setting .................................................................. 198
Table 6-20 Reasons for the effectiveness of Lifescripts® reported by Survey Participants ...... 199
Table 6-21 Survey Participants’ reported benefits of GPs or PNs using Lifescripts® ............ 200
Table 6-22 Disadvantages of GPs or PNs using Lifescripts® reported by Survey Participants ................................................................................................. 200
Table 6-23 Lifescripts® received by General Practice Patients completing questionnaires .... 202
Table 6-24 Patient Participants’ experiences and views of Lifescripts® ................................. 202
Table 7-1 Number of dietetics professionals by Dietitians Association of Australia work categories and percentage change between 2004-2007 and 2005-2007 .......... 223
Table 7-2 Dietetics professional FTEs by Dietitians Association of Australia work categories and percentage change between 2004-2007 and 2005-2007 .......... 224
List of Figures

Figure 1-1 The cascade of events leading to evidence on the effectiveness and cost-effectiveness of nutrition interventions (Splett, 1996); used with permission of Patricia L. Splett.......................................................... 4

Figure 1-2 Cascade model for improving the delivery of nutrition advice in the general practice setting (Adapted from: Splett (1996) ‘The cascade of events leading to evidence on the effectiveness and cost-effectiveness of nutrition interventions’).............. 5

Figure 2-1 Map of Australian by Divisions of General Practice ................................................. 10
Figure 2-2 Map of the GP Access Region (Hunter Urban Division of General Practice) .............. 11
Figure 2-3 GP Access (Hunter Urban Division of General Practice) Population Demographics ......................................................................................................................... 11
Figure 2-4 The cascade of events leading to evidence on the effectiveness and cost-effectiveness of nutrition interventions (Splett, 1996); used with permission of Patricia L. Splett.......................... 13

Figure 3-1 Cascade model for improving the delivery of nutrition advice in the general practice setting (Adapted from: Splett (1996) ‘The cascade of events leading to evidence on the effectiveness and cost-effectiveness of nutrition interventions’)............ 92
Figure 3-2 Overview of study design for GP Project................................................................. 96
Figure 3-3 Overview of study design for Practice Nurse Study ........................................... 99

Figure 4-1 Cascade model for improving the delivery of nutrition advice in the general practice setting (Adapted from: Splett (1996) ‘The cascade of events leading to evidence on the effectiveness and cost-effectiveness of nutrition interventions’).............. 111

Figure 5-1 Cascade model for improving the delivery of nutrition advice in the general practice setting (Adapted from: Splett (1996) ‘The cascade of events leading to evidence on the effectiveness and cost-effectiveness of nutrition interventions’).......... 127
Figure 5-2 Age groups of Interview and Survey Participants............................................. 131
Figure 5-3 Years worked in private practice (PP) by Interview and Survey Participants ....... 132
Figure 5-4 Number of dietetics professionals working in each participants’ practice reported by Interview and Survey Participants .................................................................................................. 133

Figure 5-5 Number of private practice (PP) dietetics professional full-time equivalents (FTEs) in each participants practice .............................................................................. 134
Figure 5-6 Number of patients seen per week reported by Interview and Survey Participants 135

Figure 6-1 Cascade model for improving the delivery of nutrition advice in the general practice setting (Adapted from: Splett (1996) ‘The cascade of events leading to evidence on the effectiveness and cost-effectiveness of nutrition interventions’)............ 172

Figure 7-1 Cascade model for improving the delivery of nutrition advice in the general practice setting (Adapted from: Splett (1996) ‘The cascade of events leading to evidence on the effectiveness and cost-effectiveness of nutrition interventions’)............ 219

Figure 7-2 Total and private practice (PP) Dietitians Association of Australia (DAA) members based on DAA Membership data 2004-2007...................................................... 222
Figure 7-3 Private practice (PP) for Dietitians Association of Australia members as primary (including only), second, third or fourth work category, 2004-2007 ........................................ 225

Figure 7-4 Self-reported weekly work hours in private practice (PP) of Dietitians Association of Australia members, 2004-2007 ......................................................................................... 226

Figure 7-5 Number of dietetics professional Enhanced Primary Care (EPC) consultations per month, July 2004 - June 2009 .......................................................................................... 229

Figure 7-6 Participation in the Enhanced Primary Care (EPC) Program by Interview Participants ................................................................................................................................. 234

Figure 7-7 Average number of Medicare Enhanced Primary Care (EPC) patients seen per week by Interview Participants .................................................................................................................. 235

Figure 7-8 Interview Participants’ reported number of Enhanced Primary Care (EPC) consultations usually allocated per patient per year ................................................................. 236
List of Appendices

GP Study
- GP Information Statement
- GP Consent Form
- GP Questionnaire #1
- GP Questionnaire #2
- GP Questionnaire #3

PN Study
- PN Information Statement
- PN Consent Form
- PN Questionnaire #1
- PN Questionnaire #2
- PN Questionnaire #3
- Planned Implementation
- Lifescripts© Distribution Form

Patient Study
- Patient Information Statement (via GPs)
- Patient Information Statement (via PNs)
- Patient Telephone Interview Consent Form
- Patient Questionnaire (via GPs)
- Patient Questionnaire (via PNs)
- Patient Telephone Interview
Lifescrpts© Resources

- Nutrition Assessment /Prescription
- Weight Management Assessment /Prescription
- Alcohol Assessment /Prescription
- Physical Activity Assessment /Prescription
- Smoking Assessment /Prescription

PP dietetics professionals Telephone Interviews

- Email Invitation for pilot testing Telephone Interview
- Email Invitation for participants in the Telephone Interview
- Mail Invitation for participants in the Telephone Interview
- Telephone Interview information statement
- Telephone Interview consent form
- Telephone Interview questions

PP dietetics professionals Online Survey

- Email Invitation for Online Survey via the DAA weekly email
- Online Survey

Publications


## List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AH</td>
<td>Allied Health</td>
</tr>
<tr>
<td>AGPN</td>
<td>Australian General Practice Network (previously Australian Divisions of General Practice)</td>
</tr>
<tr>
<td>AHP</td>
<td>Allied Health Professional/Practitioner</td>
</tr>
<tr>
<td>APD</td>
<td>Accredited Practicing Dietitian</td>
</tr>
<tr>
<td>CDM</td>
<td>Chronic Disease Management</td>
</tr>
<tr>
<td>DAA</td>
<td>Dietitians Association of Australia</td>
</tr>
<tr>
<td>DGP</td>
<td>Division of General Practice</td>
</tr>
<tr>
<td>EPC</td>
<td>Enhanced Primary Care</td>
</tr>
<tr>
<td>FTE</td>
<td>Full-time equivalent</td>
</tr>
<tr>
<td>GP</td>
<td>General Practitioner (includes primary care physician and family physician)</td>
</tr>
<tr>
<td>HEARNET</td>
<td>Health Evaluation and Research Network</td>
</tr>
<tr>
<td>H-EPC</td>
<td>High EPC (practitioners from divisions providing a high number of dietetics Enhanced Primary Care consultations per population and/or number of dietetics professionals)</td>
</tr>
<tr>
<td>HUDGP</td>
<td>Hunter Urban Division of General Practice (named subsequently changed to GP Access)</td>
</tr>
<tr>
<td>L-EPC</td>
<td>Low EPC (practitioners from divisions providing a low number of dietetics Enhanced Primary Care consultations per population and/or number of dietetics professionals)</td>
</tr>
<tr>
<td>PCP</td>
<td>Primary care practitioner</td>
</tr>
<tr>
<td>PHI</td>
<td>Private Health Insurance</td>
</tr>
<tr>
<td>PN</td>
<td>Practice Nurse</td>
</tr>
<tr>
<td>PP</td>
<td>Private practice</td>
</tr>
<tr>
<td>SES</td>
<td>Socioeconomic status</td>
</tr>
<tr>
<td>SNAP</td>
<td>Smoking, Nutrition, Alcohol and Physical Activity</td>
</tr>
</tbody>
</table>
### Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accredited Practicing Dietitian</td>
<td>The status granted by the Dietitians Association of Australia to qualified dietetics professionals who are engaged in continuing professional development</td>
</tr>
<tr>
<td>Allied health</td>
<td>As there are many definitions as to what allied health includes, for the sake of this thesis it will be limited to those professions covered by ‘Allied Health Services Under Medicare’ [Aboriginal Health Worker; Audiologist; Chiropractor; Diabetes Educator; Dietitian (Dietetics Professional); Exercise Physiologist; Mental Health Worker; Occupational therapist; Osteopath; Physiotherapist; Podiatrist; Psychologist; Speech Pathologist]</td>
</tr>
<tr>
<td>Allied Health Individual Services Under Medicare</td>
<td>Initially referred to as the ‘Allied Health and Dental Care Initiative’ which was introduced as part of the Government’s Medicare Plus ‘Strengthening Medicare’ package; this commenced in July 2004 (Pratt, 2004; Senate Select Committee on Medicare Secretariat, 2004). As part of this initiative patients with a complex condition being treated under an approved care plan are eligible for rebates (Pratt, 2004).</td>
</tr>
<tr>
<td>Chronic condition</td>
<td>‘A chronic medical condition is one that has been or is likely to be present for at least six months including, but not limited to, asthma, cancer, cardiovascular illness, diabetes mellitus, mental disorders, arthritis and musculoskeletal conditions’ (pg 10) (Department of Health and Ageing, 2008)</td>
</tr>
<tr>
<td>Complex care needs</td>
<td>‘A patient is considered to have complex care needs if they require ongoing care from a multidisciplinary team consisting of their GP and at least two other health care providers’ (pg 10) (Department of Health and Ageing, 2008)</td>
</tr>
<tr>
<td>General Practice Activity in Australia data (BEACH program)</td>
<td>General Practice Activity in Australia data is taken from the BEACH program (Bettering the Evaluation And Care of Health), which is ‘a continuous national study of general practice activity in Australia. It uses details of about 100,000 encounters between GPs and patients (about a 0.1% sample of all general practice encounters) from a random sample of approximately 1,000 recognised practising GPs from across the country…GP completes details for 100 consecutive GP–patient encounters on structured paper encounter forms...They each also provide information about themselves and their major practice.’ (pg 2) (Britt, et al., 2008a)</td>
</tr>
<tr>
<td>General Practitioner (GP)</td>
<td>Also referred to primary care physician or family physician</td>
</tr>
<tr>
<td><strong>GP Access</strong></td>
<td>A Division of General Practice in NSW covering the regions of Newcastle, Newcastle West, Eastlakes, Westlakes and Maitland (previously titled Hunter Urban Division of General Practice)</td>
</tr>
<tr>
<td><strong>Health Evaluation and Research Network (HEARNET)</strong></td>
<td>A network established by the GP Access (HUDGP) to engage primary health practitioners in Primary Care research. Members of the network agreed to receive newsletters and other information about research projects</td>
</tr>
<tr>
<td><strong>Interview Participants</strong></td>
<td>Private practice dietetics professionals that participated in the Telephone Interview</td>
</tr>
<tr>
<td><strong>Nutrition advice</strong></td>
<td>Includes a range of activities related to discussion regarding nutrition, from raising awareness of nutrition through to in-depth counselling</td>
</tr>
<tr>
<td><strong>Survey Participants</strong></td>
<td>Private practice dietetics professionals that participated in the Online Survey</td>
</tr>
</tbody>
</table>
Publications arising from this thesis

Articles

Abstracts

Presentations
1. Increasing referrals through enhanced relationships, May 2010, DAA 28th National Conference.
2. Presentation of DAA Membership and Medicare data. Rural Dietitians meeting, February 2007, Tamworth
3. Presentation of Lifescrypts© at John Hunter Hospital Dietetics Department case studies – Oct 2007
4. Work presented by Sandra Capra (PhD Supervisor) at DAA 25th National Conference 2007 - “Structural change through Medicare funding – what does it mean for Dietetics?”
Abstract

Good nutrition is relevant for every person, with the delivery of nutrition advice vital for optimising the populations’ health, reducing risk of developing lifestyle diseases and managing the increasing numbers of people with chronic disease. The primary health care setting, specifically general practice, is an ideal location for the delivery of nutrition advice, as the majority of the population regularly accesses their GP; however, the barriers to the provision of nutrition advice and preventative care in this setting are extensive. Government initiatives have been developed to improve the delivery of lifestyle advice, including Lifescripts© and ‘Allied Health Services under Medicare’. However, it is unclear what the most effective means of delivering nutrition advice in the general practice setting are.

Research in this thesis focused on evaluating the effectiveness of initiatives to increase and improve the provision of nutrition advice through the Lifescripts© implementation study, using General Practitioners (GPs), practice nurses (PNs), and patients. Baseline and follow-up questionnaires for GPs and PNs were developed around Lifescripts© training and implementation; the opinions of patients receiving Lifescripts© were also obtained using separate questionnaires and telephone interviews. Telephone interviews and an online survey were used to assess private practice (PP) dietetics professionals’ opinions. Dietitians Association of Australia (DAA) membership data and Medicare Enhanced Primary Care (EPC) Allied Health (AH) consultations were also analysed. This research was combined to form four individual chapters evaluating: patient access to nutrition advice by GPs, PNs; access to nutrition advice provided by dietetics professionals; implementation of nutrition advice by GPs and PNs, specifically via Lifescripts©; and implementation of nutrition advice by dietetics professionals, in particular via the EPC Program.

GPs, PNs and dietetics professionals have key roles in providing nutrition advice in the general practice setting. GPs are the gatekeepers, believing nutrition is part of their role, and are trusted by patients. Practice nurses are approachable and supportive; however additional nutrition training is required. Dietetic professionals are the
acknowledged nutrition experts with the training to provide individualised complex nutrition advice to patients.

Lifescripts© are evidence based and should theoretically be effective in increasing the provision of nutrition advice. However, it is unclear if the implementation of Lifescripts in the general practice setting will be sufficient to overcome the well documented barriers to the implementation of nutrition advice in this setting, including time and lack of reimbursement. Poor recruitment of GP, PN and patient participants to the studies in this thesis, despite multiple recruitment strategies, highlights the difficulty of interventions into the general practice setting. ‘Allied Health Services under Medicare’ appears to be more effective, providing motivation for referral via structured pathways and reimbursement, utilises support from PNs, raises nutrition awareness via goal setting followed by expert nutrition advice.

Initiatives to improve the delivery of nutrition advice need to involve GPs, PNs and dietetics professionals; have clear pathways for the provision of advice and referral; be reimbursable; and condition specific. GPs should raise nutrition awareness with patients, while PNs provide scripted nutrition advice using decision trees. Dietitian referral provides access to in-depth, personalised advice. It is essential that general practice patients have access to effective nutrition interventions, for without this, improvements in health outcomes will not be possible.