Developing an evidence-based specialist nursing role to improve the physical health care of people with mental illness

Abstract

The substantial physical health disadvantage experienced by people diagnosed with mental illness is now identified in a growing body of research evidence. The recent promulgation of improved physical health care as a goal of contemporary Australian Mental Health Policy should provide impetus for initiatives and strategies to address this inequity. To date increased knowledge of the problem has not resulted in obvious and sustained changes. The aim of this paper is to introduce the role of the Physical Health Nurse Consultant as a potential strategy. The potential contribution and value of this role is considered by reviewing the evidence from the perspective of multiple stakeholders and considering the suitability of nursing to meet the complex needs involved in improving physical health. The requirement for a multi-faceted and comprehensive evaluation is also articulated. A robust, prospective and long-term evaluation plan includes physical health measures, changes in health behaviours, cost-benefit analysis and consumer acceptability to ensure the intervention is effective in the long term. This thorough approach is essential to provide the level of evidence required to facilitate changes at the practice and policy levels. The specialist nursing role presented in this paper, subject to the comprehensive evaluation

proposed, could become an integral component of a comprehensive approach to addressing physical health inequities in people with mental illness.

Keywords

Evaluation;

Health inequalities;

Mental health;

Mental health nursing;

Physical health;

Physical Health Nurse Consultant

Psychosis

INTRODUCTION

The Australian Government's Fifth National Mental Health Plan (Commonwealth of Australia, 2017) heralded a fundamental change in policy by acknowledging for the first time, the physical health disadvantages of people diagnosed with mental illness (Commonwealth of Australia, 2017). The plan referenced the significant discrepancy in physical health experienced by people diagnosed with mental illness and the urgent need for strategies to address the gap.

This new policy direction has been influenced by a proliferation of research that has enhanced understanding of the nature and extent of the physical disadvantage experienced by people diagnosed with mental illness. Barriers to providing quality physical healthcare in this context have also been highlighted including systemic issues, staff skill levels, and service availability. Research literature articulating evidence-based interventions to improve the physical health status of people diagnosed with mental illness is unfortunately extremely limited, as articulated in the following statement : *'the greatest current barrier to increasing the life expectancy of persons with serious mental illness is no longer a knowledge gap – it is an implementation gap'*(Bartels, 2014, p. 10).

The need for evidence-based interventions to bridge this implementation gap is therefore now a matter of urgency. The aim of this discursive paper is to present a model for an evidence-based solution to a problem, which, despite more than a decade of discussion, remains to be adequately addressed in mental health care. Moreover, we propose an approach to comprehensively evaluate this model reflecting the perspectives of all key stakeholders.

BACKGROUND TO THE PROBLEM

The physical health of people with mental illness is significantly worse than the general population. People with severe mental illness experience a life expectancy 10-20 years lower than the general population (Laursen, Musliner, Benros, Vestergaard, & Munk-Olsen, 2016; Lawrence, Hancock, & Kisely, 2013), primarily due to non-communicable diseases such as cardiovascular disease, lifestyle behaviours, and side-effects of some psychotropic medications. In response to the increasingly poor physical health of people with mental illness, the World Health Organization recently released a guiding document (World Health Organization, 2018) on the management of physical health conditions in adults with mental illness. The cornerstones of this document include tobacco cessation, weight management, substance use disorders, cardiovascular disease and risk, diabetes mellitus, HIV/AIDS, and other infectious diseases such as hepatitis

B/C. The guidelines and accompanying best practice recommendations acknowledge the complexity of managing physical health care, and the need for implementation using a person-centred approach.

In Australia, more than 700,000 people, or 2-3% of the population experience severe mental illness such as psychotic disorders, with a further 4-6% of the population experiencing mild-moderate mental illness including affective disorders (Department of Health and Ageing, 2013). Comorbid physical illness is responsible for 12,000 early deaths in Australian mental health consumers at a cost of $15 billion each year (Department of Health and Ageing, 2013). Despite attempts to address this disparity through policy changes, the assessment, monitoring, and treatment of comorbid physical health problems in people with mental illness is as low as 3%, and in some cases, assessment of risk factors such as waist circumference is non-existent (Galletly et al., 2012; Rosenbaum et al., 2014).

Longstanding awareness of the prevalence of physical health comorbidities, and the personal and economic impacts, have not realised any significant improvements. Physical health care remains a 'wicked problem' in mental health policy since solutions, which involve changing behaviour across multiple levels, are not seen as the responsibility of one level of authority, and thus far, have not been responsive to policy implementation (Australian Public Service Commission, n.d; Ellis, Churruca, & Braithwaite, 2017; Lamontagne-Godwin et al., 2018).

Collaborative strategies are seen as the most effective solution to 'wicked problems' where responsibility and power are dispersed among key stakeholders. This approach garners higher stakeholder engagement, and leads to solutions where all (or most) parties benefit (Brambini & Vang, 2018). In Australia, and reflected in the recent WHO guidelines, collaboration amongst stakeholders, and particularly with the involvement of mental health consumers, is central to developing effective and acceptable solutions. In essence, and as highlighted in the *Fifth National Mental Health Plan* (Commonwealth of Australia, 2017) and National Mental Health Commission's *Equally Well Consensus Statement* (National Mental Health Commission, 2017), there is a strong ethical and economic rationale for improving physical healthcare in this population. Nonetheless, significant barriers remain in translating both research findings and policy into practice.

BARRIERS TO PHYSICAL HEALTH CARE IN MENTAL HEALTH SERVICES

Successfully addressing the 'wicked problem' requires a detailed understanding of the barriers preventing adequate quality physical health care and treatment for people diagnosed with mental illness. Consumers tend to access mental health services as their first and sometimes only point of contact with the health system (Sweeney, Air, Zannettino, & Galletly, 2015). Unfortunately, health system fragmentation and a lack of continuity of care make it difficult for consumers to actively seek ongoing cardiometabolic care (Blanner Kristiansen et al., 2015; Ewart, Bocking, Happell, Platania-Phung, &

Stanton, 2016). Exploring the perspectives and experiences of key stakeholders is an imperative for these barriers to be better understood and ultimately broken down. The literature pertaining to mental health professionals (particularly to nurses working in mental health), consumers, and carers will be explored with a view to better understanding these barriers.

Mental Health Professionals

Literature exploring the attitudes of mental health professionals suggests they do not have adequate expertise in cardiometabolic health and tend to identify mental health issues as holding far greater importance than physical health (De Hert et al., 2011; Gray & Brown, 2018). In addition, there is no clear understanding by mental health professionals about where the primary responsibility for physical health care lies, meaning it is often seen as some-one else's responsibility (Celik Ince, Partlak Gunusen, & Serce, 2018; De Hert et al., 2011; Gray & Brown, 2018). Notable differences exist within and between mental health care provider groups on engagement in physical health care, without a clear shared concern about the physical health difficulties of consumers with mental illness (Bressington et al., 2013; Gray & Brown, 2018).

The majority of literature addressing physical health care in mental health consumers has examined attitudes of nurses working in mental health (Bressington et al., 2018; Hyland, Judd, Davidson, Jolley, & Hocking, 2003)

although some research has also considered attitudes of psychiatrists and other mental health professionals (Fibbins, Ward, Watkins, Curtis, & Rosenbaum, 2018),(Rosenbaum et al., 2016). Generally nurses recognised physical health care as important both in its own right and due to its close association with mental health outcomes (Clancy et al., 2018; Happell, Scott, Platania-Phung, & Nankivell, 2012; Robson, Haddad, Gray, & Gournay, 2012). However, barriers to physical healthcare provision included insufficient time, lack of skill and confidence (Happell et al., 2012), priority given to mental health care, and ambivalence about whether physical health care should be part of their role (Happell et al., 2012; Wynaden et al., 2016). The net effect of these attitudes and actions is to force the responsibility for physical health care back on the consumers.

General Health Professionals

Consumers come into regular contact with other health professionals such as those in primary care and secondary care and stigma and "diagnostic overshadowing" has been considered to play a role in the under-recognition and under treatment of people experiencing severe mental illness (Thornicroft, 2011). Factors contributing to this include poorly informed general health care staff, or misattribution of physical health symptoms as a mental disorder. Negative stereotypes may lead to less thorough and less effective treatment of physical illnesses in consumers with mental illness (Rosenbaum, 2016; Thornicroft, 2011).

Consumers

Despite being the major stakeholder group, there is a paucity of research regarding consumers' attitudes to their physical health and the care they receive. The limited evidence suggests consumers express significant concerns about their own physical health; a view contrary to that of many health professionals who argue consumers lack interest and motivation to address physical health issues (Happell, Ewart, Bocking, Platania-Phung, Scholz, et al., 2016; Young, Praskova, Hayward, & Patterson, 2016).

Literature to date suggests health care providers frequently dismiss physical health concerns or symptoms presented by consumers as symptoms of mental illness (Happell, Ewart, Bocking, Platania-Phung, & Stanton, 2016). This frequent diagnostic overshadowing is described by consumers as dismissive of their concerns and their health seeking endeavours (Happell, Ewart, Bocking, Platania-Phung, & Stanton, 2016; Young et al., 2016). The resultant power imbalance forces consumers to either accept inadequate physical health care (Ewart et al., 2016), develop strategies to increase the likelihood of being taken seriously (Ewart et al., 2016) or seek support elsewhere such as non-conventional health care providers, for example that provided by alternative and complimentary practitioners such as naturopaths (Happell et al., 2018) or peer support workers (Bocking et al., 2017). Consumers report being viewed as a 'whole human', rather than separate physical and mental health entities is key to healthy living

(Blomqvist, Sandgren, Carlsson, & Jormfeldt, 2018). Such an approach requires a paradigm shift in how health is managed for, and by, people who care for those with mental illness.

Carers

Carers of people diagnosed with mental illness are under-represented in literature regarding physical health and health care for mental health consumers. (Bailey, Wye, Wiggers, Bartlem, & Bowman, 2017; Dean, Todd, & Morrow, 2001; Missen, Brannelly, & Newton-Howes, 2013). However available evidence reinforces the difficulties consumers experience in accessing services for physical health concerns, including complaints of not being taken seriously (Happell, Wilson, Platania Phung, & Stanton, 2017).

In the absence of a responsive health care system, carers often found themselves needing to take on the role of care coordinator without the requisite knowledge and experience to do so (Bailey et al., 2018; Happell, Wilson, Platania-Phung, & Stanton, 2017; Olasoji, Maude, & McCauley, 2017). In addition to the frustration of not receiving adequate physical health care, carers observed a significant deterioration in their own physical health associated with the additional responsibilities (Bailey et al., 2018; Happell, Wilson, Platania Phung, et al., 2017; Poon, Curtis, Ward, Loneragan, & Lappin, 2018).

STRATEGIC POTENTIAL OF NURSES

Internationally, nurses are the largest health care provider group within mental health workforces (Kakuma et al., 2011). There was an estimated 21 thousand nurses in mental health in Australia in 2015 (Australian Institute of Health and Welfare, 2018). Their educational background sees them well-suited to assess and respond to physical health concerns in consumers. There is a developing evidence base to support the role of nurses in the physical health care of people with mental illness (Chee, Wynaden, & Heslop, 2018; Druss, von Esenwein, et al., 2010; Fraser, Brown, Whiteford, & Burton, 2018; Gray & Brown, 2018; Happell, Platania-Phung, & Scott, 2014; Watkins, Henry, Curtis, Albert, & Ward, 2009). There is also evidence of models that include specialist nurses focused on cardiometabolic health care for people experiencing serious mental illness as part of a multidisciplinary team that have demonstrated positive outcomes for young people (Curtis et al., 2016).

One study was a 2 group randomised controlled trial of registered nurses managing the medical care of community-residing consumers with severe mental illness in Atlanta, the United States (Druss, Zhao, et al., 2010) (Druss et al., 2010). Medical care management by the two nurses consisted of motivational interviewing, formulation of action plans that included modification of health-related behaviours, facilitating communication between the consumer and multiple health care providers, and assisting with logistical aspects of accessing health care. A suite of measures was

conducted at baseline, 6 months and 12 months, including calculation of an overall preventive service score that encompassed 25 service components and four service areas ('physical examination', 'screening', 'education' and 'vaccination'). At 12 months there was an over two-fold increase in percentage of eligible preventive services received in the nurse group (n=189), while for the control 'care as usual' group (n=174), no change was observed. These between-group changes were statistically significant. For the sub-group of 100 consumers that underwent blood assessment, there were clinically significant, albeit not statistically significant between-group changes on the Framingham Cardiovascular Risk Index that favoured the nurse group.

Specialist nursing roles are shown to increase metabolic monitoring for mental health consumers. In a retrospective cross sectional study (McKenna et al., 2014), metabolic monitoring was conducted on 78% of new episode psychosis consumers, compared to 3% where case managers undertook the role. Unlike case managers who only referred consumers to General Practitioners, the specialist nurse referred consumers to a wider range of consumer-relevant services including dietetic, physical activity, diabetes care, and smoking cessation programs. These findings show that individualised care by a specialist nurse can improve metabolic monitoring and referral for physical health care services compared to usual care, and warrant further investigation as to how these positions can be established as part of usual care.

More recently, a 19-week single group intervention comprising six, registered nurse-led physical activity-focussed behavioural counselling sessions for private psychiatric hospital outpatients was evaluated (Fraser et al., 2018). A medical practitioner provided four reviews and supportive feedback to encourage behaviour change. In addition to change in physical activity, information regarding sleep, smoking, and diet was provided. At study completion, significant improvements in waist circumference and waist-to-height ratio were observed. Although substantial change in physical activity was observed for a small number of participants, no overall mean change was noted. Program attrition was low, and program satisfaction was high. These findings suggest nurse-led behaviour change interventions are feasible and acceptable for people with mental illness, but more work needs to be done regarding physical health behaviour outcomes.

In perhaps the most comprehensive Australian study to date, a 6 month 2 group pilot RCT was undertaken to evaluate the effectiveness of a physical health nurse specialist intervention for consumers (n=21) (Happell, Stanton, Hoey, & Scott, 2014). The core component of the pilot study was care coordination and the establishment of referral pathways to health services that were acceptable to consumers. Care coordination improved in the intervention group, with 62% of intervention group participants receiving a total of 22 referrals. Follow-up on referrals was recorded for 92% of intervention group participants (Happell, Stanton, & Scott, 2014). Health behaviours also improved in the intervention group, with a 20% reduction in

smoking, a 50% increase in fruit and vegetable intake, and a three-fold increase in the number of consumers achieving >150 min/week of physical activity (Happell, Stanton, Platania Phung, McKenna, & Scott, 2014). Despite the limitations of sample size for this study, it supports the ability of a specialist physical healthcare nurse to coordinate appropriate and ongoing care and have a positive impact on health behaviours and provides rationale for larger and much more powered studies to evaluate the effectiveness of the PHNC model over existing treatment as usual approaches.

The Physical Health Nurse Consultant Role

Interventions delivered by nurses are effective at increasing access to services and improving physical health outcomes in the short term, however it is no longer acceptable to simply screen; we must intervene in a consumer-centred way. For interventions to be sustainable, they need to consider access at all levels of service delivery; not just to the nurse who coordinates care, but the providers to whom consumers are referred. Moreover, for coordinated care to be highly effective at a consumer level, the individual needs of the consumer (and their carers) must be considered.

The Physical Health Nurse Consultant (PHNC) role is proposed as an approach to addressing inadequate physical health care within mental health services. The role would be designed for a dedicated mental health nurse with specialist skills in cardiometabolic healthcare. The role would offer

significant advantages over existing services including: being located within mental health services to promote accessibility and clarify lines of responsibility; providing a single point of contact for relationship building; delivery by shared decision making for more personalised and acceptable referrals; supported referral to improve service navigation and coordinated utilisation of existing health and medical resources; and grounded in behaviour change theory and the internationally endorsed Healthy Active Lives (HeAL) declaration to support predictable and effective evidence-based clinical decision making. Therefore, the PHNC service could provide a better standard of cardiometabolic monitoring and risk assessment, and more effective coordination and linkage to appropriate available services to facilitate clinical and behavioural change (Happell, Stanton, Platania Phung, et al., 2014).

Perspectives and opinions about the PHNC role have been canvassed in previous research. Generally, attitudes towards this role have been positive. Nurses described the role as valuable for coordinating physical health care, despite some concern that it might lead to fragmentation and deskilling, if the PHNC was viewed as the primary mechanism for physical health care (Happell, Platania-Phung, Stanton, & Millar, 2015). Consumers have also indicated in-principle support for the role, particularly as a means to facilitate greater integration within the health care system. The need for cultural change where nurses are not heavily bound to the medical model approach

would be essential for the effectiveness of this role (Happell, Ewart, Platania-Phung, et al., 2016). Carers viewed this type of role favourably, particularly as it would improve access to physical health care and might relieve them of some responsibility for care coordination. The importance of reliability and consistency for the role and the need for support for carers' physical health and well-being were emphasised (Happell, Wilson, Platania Phung, & Stanton, 2016).

In practice, mental health consumers would be referred to the PHCN by their clinical manager, as part of usual care. The PHNC would assess cardiometabolic risk factors including body weight, height, and blood pressure, and assess physical health behaviours relevant to burden of disease modelling. In addition, medication adherence would be assessed, and the consumer referred for pathology services to assess fasting lipids and plasma glucose.

A key aspect of the service is care coordination. Through discussion with the consumer, the PHNC would identify cardiometabolic risks based on information obtained from previous assessments. Using a shared decision making approach, relevant cardiometabolic risk management strategies such as physical health behaviour change, or referral for specialised allied health care services would be agreed upon. The PHNC would support the consumer to make any appointments, provide appointment reminders, follow up on attendance and outcomes, and coordinate recording of results.

Finally, routine consultation with the consumer would be necessary to review progress against agreed goals, revise priorities, and continue service engagement.

EVALUATION

As critical as implementation of acceptable, effective, consumer-focussed physical healthcare interventions are to the long-term wellbeing of people with mental illness, equally important is a comprehensive evaluation which informs not just future interventions, but policy and practice. Evaluation must extend beyond counting service contacts, and beyond physical health outcomes such as weight gain.

Retrospective analyses of nurse-led models of care repeatedly show effectiveness in improving referrals for supported care. However, such analyses are no longer sufficient in the current policy climate. Interventions need to demonstrate long-term effectiveness since physical health changes are only likely in the long term, therefore prospective modelling is needed to predict cost savings due to future physical healthcare needs including reduced hospitalisation for acute care, medication needs, and non-healthcare costs (where possible). Furthermore, ongoing examinations of consumer acceptability are necessary to ensure interventions are adaptable to the dynamic nature of care needs. The following model of evaluation

provides a framework whereby evidence necessary to support policy changes, service delivery, and consumer engagement is gathered.

Physical health measures

Since the key purpose of the PHNC role is to improve cardiometabolic health of mental health consumers, there is emphasis on relevant measures. However, since for this proposed evaluation, physical health measures contribute to later burden of disease modelling, it is important to ensure the appropriate measures are used. First, clinical measures including body mass and stature should be measured to determine body mass index and waist circumference. Fasting glucose and cholesterol are measured using standard laboratory techniques, and assessment of resting blood pressure is recorded. Second, health behaviours including smoking (and second hand smoke), intake of fruits and vegetables, and alcohol intake should be assessed in line with relevant burden of disease assessment guidelines.

Economic analysis

Cost-effectiveness analysis is critical in supporting translational and policy impacts of any proposed intervention. One model specific to the Australian context by which cost-effectiveness can be determined is the Assessing Cost Effectiveness (ACE) Prevention methodology (Mihalopoulos,

Vos, Pirkis, & Carter, 2011), informed by the Pharmaceutical Benefits Advisory Committee economic evaluation guidelines (Department of Health, 2016).

Based on physical health and health behaviour outcomes, and using Australian Institute of Health and Welfare burden of disease modelling, estimated changes in Disability Adjusted Life Years (DALYs) for each disease can be used to derive an estimate of total DALYs saved over the next 20 years due to the intervention. Quite small changes in risk factors due to an intervention can lead to very significant reductions in DALYs. So, for example, if an intervention leads to one male quitting smoking, this will save approximately 3 DALYs for that person over the next 20 years. (This calculation is done for a male smoker aged 47 years, with a discount rate of 3%). In addition, the estimated reduction in DALYs can be used to estimate how much health system costs will be reduced now, and 20 years into the future because of the intervention. The value of the reduction in health system costs is not as great as the value of the health improvements, but the health system cost savings along with the expected health improvement gives a holistic perspective on the impact of the intervention which is useful for health care system managers as well as for governments and the general public.

Consumer engagement

Aspects of consumer engagement relevant to the evaluation of the proposed intervention can be garnered from the Patient Experiences in Primary Healthcare Survey (PEPHCS) survey. The PEPHCS has been evaluated in the Australian context and so to understand the impact of a PHNC intervention, knowing if the intervention meets the needs of people diagnosed with psychotic illness with respect to access and acceptability is paramount. In addition, consumers, careers and policy makers respect the need for shared decision making. Thus, the PEPHCS domains of access, acceptability, and shared decision making would seem appropriate. These domains are valid and reliable in isolation and although taking around 15 minutes to complete, allow consumers to reflect on service provision and offer a means of providing feedback on care coordination.

Summary

It is no longer acceptable for retrospective analysis, or short-term evaluation to inform policy and practice. Prospective modelling is necessary to confirm the potential long term benefits associated with nurse-led models of physical healthcare for mental health consumers. Alongside changes in physical health, health behaviours, cost effectiveness, and service engagement factors are crucial to understanding the true effectiveness of interventions. The model proposed in this paper addresses each of these

factors using valid approaches, and is put forward to guide future studies examining the implementation of physical healthcare interventions for people with a mental illness.

References:

Australian Institute of Health and Welfare. (2018). Australia's health 2018. Canberra: AIHW.

Australian Public Service Commission. (n.d). Tackling wicked problems : A public policy perspective. Retrieved from https://www.apsc.gov.au/tackling-wicked-problems-public-policy-perspective website:

Bailey, J. M., Hansen, V., Wye, P. M., Wiggers, J. H., Bartlem, K. M., & Bowman, J. A. (2018). Supporting change in chronic disease risk behaviours for people with a mental illness: a qualitative study of the experiences of family carers. *BMC Public Health, 18*(1), 416. doi: 10.1186/s12889-018-5314-z

Bailey, J. M., Wye, P. M., Wiggers, J. H., Bartlem, K. M., & Bowman, J. A. (2017). Family carers: A role in addressing chronic disease risk behaviours for people with a mental illness? *Prev Med Rep, 7*, 140-146. doi: 10.1016/j.pmedr.2017.05.014

Bartels, S. J. (2014). Can behavioral health organizations change health behaviors? The STRIDE study and lifestyle interventions for obesity in serious mental illness: American Psychiatric Assocation.

Blanner Kristiansen, C., Juel, A., Vinther Hansen, M., Hansen, A., Kilian, R., & Hjorth, P. (2015). Promoting physical health in severe mental illness: Patient and staff perspective. *Acta Psychiatrica Scandinavica, 132*(6), 470-478.

Blomqvist, M., Sandgren, A., Carlsson, I. M., & Jormfeldt, H. (2018). Enabling healthy living: Experiences of people with severe mental illness in psychiatric outpatient services. *International Journal of Mental Health Nursing, 27*(1), 236-246. doi: 10.1111/inm.12313

Bocking, J., Ewart, S. B., Happell, B., Platania-Phung, C., Stanton, R., & Scholz, B. (2017). "Here if you need me": exploring peer support to enhance access to physical health care. *Journal of Mental Health*, 1-7.

Brambini, A., & Vang, J. (2018). Towards a networked governance approach in Danish hospitals? Analysing the role of patients in solving wicked problems. *World Review of Entrepreneurship, Management and Sustainable Development, 14*(3). doi: https://doi.org/10.1504/WREMSD.2018.091687

Bressington, D., Badnapurkar, A., Inoue, S., Ma, H. Y., Chien, W. T., Nelson, D., & Gray, R. (2018). Physical Health Care for People with Severe Mental Illness: the Attitudes, Practices, and Training Needs of Nurses in Three

Asian Countries. *International Journal of Environmental Research and Public Health, 15*(2). doi: 10.3390/ijerph15020343

Bressington, D. T., Mui, J., Cheung, E. F., Petch, J., Clark, A. B., & Gray, R. (2013). The prevalence of metabolic syndrome amongst patients with severe mental illness in the community in Hong Kong--a cross sectional study. *BMC Psychiatry, 13*, 87. doi: 10.1186/1471-244X-13-87

Celik Ince, S., Partlak Gunusen, N., & Serce, O. (2018). The opinions of Turkish mental health nurses on physical health care for individuals with mental illness: A qualitative study. *Journal of Psychiatric and Mental Health Nursing, 25*(4), 245-257. doi: 10.1111/jpm.12456

Chee, G. L., Wynaden, D., & Heslop, K. (2018). The provision of physical health care by nurses to young people with first episode psychosis: A cross-sectional study. *Journal of Psychiatric and Mental Health Nursing, 25*(7), 411-422. doi: 10.1111/jpm.12487

Clancy, R., Lewin, T. J., Bowman, J. A., Kelly, B. J., Mullen, A. D., Flanagan, K., & Hazelton, M. J. (2018). Providing physical health care for people accessing mental health services: Clinicians' perceptions of their role. *International Journal of Mental Health Nursing*. doi: 10.1111/inm.12529

Commonwealth of Australia. (2017). *The Fifth National Mental Health and Suicide Prevention Plan*. Canberra: Australian Government.

Curtis, J., Watkins, A., Rosenbaum, S., Teasdale, S., Kalucy, M., Samaras, K., & Ward, P. B. (2016). Evaluating an individualized lifestyle and life skills intervention to prevent antipsychotic-induced weight gain in first-episode psychosis. [10.1111/eip.12230]. *EARLY INTERVENTION IN PSYCHIATRY, 10*(3), 267-276. doi: 10.1111/eip.12230

De Hert, M., Cohen, D., Bobes, J., Cetkovich-Bakmas, M., Leucht, S., Ndetei, D. M., . . . Correll, C. U. (2011). Physical illness in patients with severe mental disorders. II. Barriers to care, monitoring and treatment guidelines, plus recommendations at the system and individual level. *World Psychiatry, 10*(2), 138-151.

Dean, J., Todd, G., & Morrow, H. (2001). Mum, I used to be good looking....look at me now: The physical health needs of adults with mental health problems: The perspectives of users, carers and front line staff. *International Journal of Mental Health Promotion, 4*, 16-24.

Department of Health. (2016). Guidelines for submission to Pharmaceutical Benefits Advisory Committee. Canberra.

Department of Health and Ageing. (2013). National Mental Health Report 2013: tracking progress of mental health reform in Australia 1993 – 2011. . Canberra.

Druss, B., Zhao, L., Von Esenwein, S., Bona, J. R., Fricks, L., Jenkins-Tucker, S., . . . Lorig, K. (2010). The Health and Recovery Peer (HARP) Program: A peer-led intervention to improve medical self-management for persons with serious mental illness. *Schizophrenia Research, 118*(1-3), 264-270.

Druss, B. G., von Esenwein, S. A., Compton, M. T., Rask, K. J., Zhao, L., & Parker, R. M. (2010). A randomized trial of medical care management for community mental health settings: the Primary Care Access, Referral, and Evaluation (PCARE) study. *American Journal of Psychiatry, 167*(2), 151-159. doi: 10.1176/appi.ajp.2009.09050691

Ellis, L. A., Churruca, K., & Braithwaite, J. (2017). Mental health services conceptualised as complex adaptive systems: what can be learned? *Int J Ment Health Syst, 11*, 43. doi: 10.1186/s13033-017-0150-6

Ewart, S. B., Bocking, J., Happell, B., Platania-Phung, C., & Stanton, R. (2016). Mental Health Consumer Experiences and Strategies When Seeking Physical Health Care: A Focus Group Study. *Global Qualitative Nursing Research, 3*. doi: 10.1177/2333393616631679

Fibbins, H., Ward, P. B., Watkins, A., Curtis, J., & Rosenbaum, S. (2018). Improving the health of mental health staff through exercise interventions: a systematic review. *Journal of Mental Health, 27*(2), 184-191. doi: 10.1080/09638237.2018.1437614

Fraser, S. J., Brown, W. J., Whiteford, H. A., & Burton, N. W. (2018). Impact of nurse-led behavioural counselling to improve metabolic health and physical activity among adults with mental illness. *International Journal of Mental Health Nursing, 27*(2), 619-630. doi: 10.1111/inm.12343

Galletly, C., Foley, D., Waterreus, A., Watts, G., Castle, D., McGrath, J., . . . Morgan, V. (2012). Cardiometabolic risk factors in people with psychotic disorders: The second australian national survey of psychosis. *Australian and New Zealand Journal of Psychiatry, 46*(8), 753-761. doi: 10.1177/0004867412453089

Gray, R., & Brown, E. (2018). What does mental health nursing contribute to improving the physical health of service users with severe mental illness? A thematic analysis. *International Journal of Mental Health Nursing, 26*, 32-40.

Happell, B., Ewart, S. B., Bocking, J., Platania-Phung, C., Scholz, B., & Stanton, R. (2016). What physical health means to me: Perspectives of people with mental illness. *Issues in Mental Health Nursing, 37*(12), 934-941.

Happell, B., Ewart, S. B., Bocking, J., Platania-Phung, C., & Stanton, R. (2016). "That red flag on your file': Misinterpreting physical symptoms as mental illness". *Journal of Clinical Nursing, 25*, 399-408.

Happell, B., Ewart, S. B., Platania-Phung, C., Bocking, J., Griffiths, K., Scholz, B., & Stanton, R. (2016). Embedding a physical health nurse consultant within mental health services: Consumers' perspectives. *International Journal of Mental Health Nursing, 25*(4), 377–384. doi: 10.1111/inm.12185

Happell, B., Platania-Phung, C., Bocking, J., Ewart, S. B., Scholz, B., & Stanton, R. (2018). Consumers at the centre: interprofessional solutions for meeting mental health consumers' physical health needs. *Journal of Interprofessional Care, DOI: 10.1080/13561820.2018.1516201*. doi: 10.1080/13561820.2018.1516201

Happell, B., Platania-Phung, C., & Scott, D. (2014). A systematic review of nurse physical healthcare for consumers utilizing mental health services. *Journal of Psychiatric and Mental Health Nursing, 21*(1), 11-22. doi: 10.1111/jpm.12041

Happell, B., Platania-Phung, C., Stanton, R., & Millar, F. (2015). Exploring the Views of Nurses on the Cardiometabolic Health Nurse in Mental Health Services in Australia. *Issues in mental health nursing, 36*(2), 135-144. doi: 10.3109/01612840.2014.901449

Happell, B., Scott, D., Platania-Phung, C., & Nankivell, J. (2012). Should we or shouldn't we? Mental health nurses' views on physical health care of

mental health consumers. *International Journal of Mental Health Nursing, 21*(3), 202-210. doi: 10.1111/j.1447-0349.2011.00799.x

Happell, B., Stanton, R., Hoey, W., & Scott, D. (2014). Cardiometabolic health nursing to improve health and primary care access in community mental health consumers: baseline physical health outcomes from a randomised controlled trial. *Issues in Mental Health Nursing, 35*(2), 114-121. doi: 10.3109/01612840.2013.842619

Happell, B., Stanton, R., Platania Phung, C., McKenna, B., & Scott, D. (2014). The cardiometabolic health nurse: physical health behaviour outcomes from a randomised controlled trial. *Issues in Mental Health Nursing, 35*(10), 768-775. doi: 10.3109/01612840.2014.896061

Happell, B., Stanton, R., & Scott, D. (2014). Utilization of a cardiometabolic health nurse–a novel strategy to manage comorbid physical and mental illness. *Journal of Comorbidity, 4*(1), 22-28.

Happell, B., Wilson, K., Platania-Phung, C., & Stanton, R. (2017). Filling the gaps and finding our way: family carers navigating the healthcare system to access physical health services for the people they care for. *Journal of Clinical Nursing, 26*(13/14), 1917-1926. doi: 10.1111/jocn.13505

Happell, B., Wilson, K., Platania Phung, C., & Stanton, R. (2016). A physical health nurse consultant role to improve physical health in mental health

services: A carer's perspective. . *International Journal of Mental Health Nursing, 25*(3), 243-250.

Happell, B., Wilson, K., Platania Phung, C., & Stanton, R. (2017). Physical health and mental illness: listening to the voice of carers *Journal of Mental Health, 26*(2), 127-133.

Hyland, B., Judd, F., Davidson, S., Jolley, D., & Hocking, B. (2003). Case managers' attitudes to the physical health of their patients. *Australian and New Zealand Journal of Psychiatry, 37*(6), 710-714.

Kakuma, R., Minas, H., van Ginneken, N., Dal Poz, M. R., Desiraju, K., Morris, J. E., . . . Scheffler, R. M. (2011). Human resources for mental health care: current situation and strategies for action. *Lancet, 378*(9803), 1654-1663. doi: 10.1016/S0140-6736(11)61093-3

Lamontagne-Godwin, F., Burgess, C., Clement, S., Gasston-Hales, M., Greene, C., Manyande, A., . . . Barley, E. (2018). Interventions to increase access to or uptake of physical health screening in people with severe mental illness: a realist review. *BMJ Open, 8*(2), e019412. doi: 10.1136/bmjopen-2017-019412

Laursen, T. M., Musliner, K. L., Benros, M. E., Vestergaard, M., & Munk-Olsen, T. (2016). Mortality and life expectancy in persons with severe unipolar

depression. *Journal of Affective Disorders, 193*, 203-207. doi: 10.1016/j.jad.2015.12.067

Lawrence, D., Hancock, K. J., & Kisely, S. (2013). The gap in life expectancy from preventable physical illness in psychiatric patients in Western Australia: retrospective analysis of population based registers. *British Medical Journal, 346*, 2539. doi: 10.1136/bmj.f2539

McKenna, B., Furness, T., Wallace, E., Happell, B., Stanton, R., Platania Phung, C., . . . Castle, D. (2014). The effectiveness of specialist roles in mental health metabolic monitoring: a retrospective cross-sectional comparison study. *BMC Psychiatry, 14*, 234.

Mihalopoulos, C., Vos, T., Pirkis, J., & Carter, R. (2011). The economic analysis of prevention in mental health programs. *Annual Review of Clinical Psychology, 7*, 169-201.

Missen, R. L., Brannelly, T., & Newton-Howes, G. (2013). Qualitative exploration of family perspectives of smoke-free mental health and addiction services. *International Journal of Mental Health Nursing, 22*(4), 294-303. doi: 10.1111/j.1447-0349.2012.00882.x

National Mental Health Commission. (2017). Equally Well: Consensus statement to improve the physical health and wellbeing of people living with mental illness in Australia. Sydney.

Olasoji, M., Maude, P., & McCauley, K. (2017). Not sick enough: experiences of carers of people with mental illness negotiating care for their relatives with mental health services. *Journal of Psychiatric and Mental Health Nursing, 24*(6), 403-411.

Poon, A. W. C., Curtis, J., Ward, P., Loneragan, C., & Lappin, J. (2018). Physical and psychological health of carers of young people with first episode psychosis. *Australasian Psychiatry, 26*(2), 184-188.

Robson, D., Haddad, M., Gray, R., & Gournay, K. (2012). Mental health nursing and physical health care: A cross-sectional study of nurses' attitudes, practice, and perceived training needs for the physical health care of people with severe mental illness. *International Journal of Mental Health Nursing*. doi: 10.1111/j.1447-0349.2012.00883.x

Rosenbaum, L. (2016). Closing the Mortality Gap — Mental Illness and Medical Care. *New England Journal of Medicine, 375*(16), 1585-1589. doi: 10.1056/NEJMms1610125

Rosenbaum, S., Nijjar, S., Watkins, A., Garwood, N., Sherrington, C., & Tiedemann, A. (2014). Nurse-assessed metabolic monitoring: A file audit of risk factor prevalence and impact of an intervention to enhance measurement of waist circumference. *International Journal of Mental Health Nursing, 23*(3), 252-256. doi: 10.1111/inm.12057

Rosenbaum, S., Watkins, A., Ward, P. B., Pearce, D., Fitzpatrick, K., & Curtis, J. (2016). Psychiatry HeAL thyself! *Australian & New Zealand Journal of Psychiatry, 50*(6), 600-600. doi: 10.1177/0004867415620023

Sweeney, S., Air, T., Zannettino, L., & Galletly, C. (2015). Psychosis, Socioeconomic Disadvantage, and Health Service Use in South Australia: Findings from the Second Australian National Survey of Psychosis. *Front Public Health, 3*, 259. doi: 10.3389/fpubh.2015.00259

Thornicroft, G. (2011). Physical health disparities and mental illness: the scandal of premature mortality. *British journal of psychiatry, 199*(DEC), 441-442.

Watkins, A., Henry, C., Curtis, J., Albert, S., & Ward, P. (2009). re-turning the blind eye: Addressing metabolic complications in young mental health consumers. *International Journal of Mental Health Nursing, 18*, A26.

World Health Organization. (2018). Guidelines for the management of physical health conditions in adults with severe mental disorders. . Geneva.

Wynaden, D., Heslop, B., Heslop, K., Barr, L., Lim, E., Chee, G. L., . . . Murdock, J. (2016). The chasm of care: Where does the mental health nursing responsibility lie for the physical health care of people with severe mental illness? *International Journal of Mental Health Nursing*. doi: 10.1111/inm.12242

Young, S. J., Praskova, A., Hayward, N., & Patterson, S. (2016). Attending to physical health in mental health services in Australia: a qualitative study of service users' experiences and expectations. *Health and Social Care in the Community*. doi: 10.1111/hsc.12349