



The Royal
Australian &
New Zealand
College of
Psychiatrists



Keeping Body and Mind Together

Improving the physical health and life expectancy of people with serious mental illness

A REPORT PREPARED FOR
THE ROYAL AUSTRALIAN AND NEW ZEALAND COLLEGE OF PSYCHIATRISTS

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About the Royal Australian and New Zealand College of Psychiatrists

The Royal Australian and New Zealand College of Psychiatrists (RANZCP) is responsible for training, educating and representing psychiatrists in Australia and New Zealand. Psychiatrists are medical doctors who undertake additional training to qualify as specialists in the treatment of mental illness. Founded in 1963, RANZCP has more than 5000 members, including around 3700 fully qualified psychiatrists and almost 1200 trainees. The RANZCP has branches in every Australian state and territory and a head office in Melbourne as well as a national office in Wellington, New Zealand. In both countries, all psychiatrists must be accredited by RANZCP before they can practise. For more information go to www.ranzcp.org

Foreword



The Royal Australian and New Zealand College of Psychiatrists (RANZCP) is concerned that people with mental illness typically live between 10 and 32 years less than the general population. This alarming statistic can largely be explained by the devastating impact of other conditions, such as cardiovascular and respiratory diseases and cancer, experienced by people who have mental illness.

This is a consistent finding in a range of international studies, indicating that this is not just a problem in Australia and New Zealand. However, we believe we have a great opportunity to make a difference to the lives of people with these combined problems through the way in which we train psychiatrists and other health practitioners in our two nations, and the way in which we provide health services and the broader systems of which they are part. We believe that much more needs to be done, and much more can be done to address the gap in physical health and life expectancy between those who live with a mental illness and those who don't.

Psychiatrists are responsible not just for the clinical care of consumers but also for clinical leadership, teaching and training, researching, and advocating for better psychiatric health in the community. As part of this work the RANZCP has produced a number of reports and papers that examine the barriers to health care for people with mental illness and physical illnesses, and what can be done to reduce these barriers.

There are a range of ways in which the RANZCP, and its Fellows, can directly influence clinical practice to effect better health outcomes for people with a mental illness.

Firstly, it should be recognised by all psychiatrists that we can't just limit our role to thinking about psychiatric symptoms. As doctors, psychiatrists must think about the whole person, their overall health and the relationship between body and mind.

Secondly, it should be recognised that while antipsychotic medications might be effective in managing mental health symptoms, they can have a range of side effects that can undermine overall good health. As the prescribers of these medications, psychiatrists have an added responsibility to screen and intervene to manage the side effects of medication.

Thirdly, it is important that through our relationships with other medical colleagues we encourage them to recognise that the weight gain and physical decline that so often accompany a diagnosis of serious mental illness are by no means inevitable and that there are effective interventions to mitigate the risk of these occurrences. Through these relationships we should also encourage appropriate attention to the other health problems of people under our care, so that they get the same level of investigation of and treatment for these problems as people without mental illness.

Fourthly, it is important that the agency of consumers in managing their own health is understood and respected. Psychiatrists (and other health professionals) must discuss treatment options with people in a way which ensures that they can make informed decisions about medication and its effects.

Finally, psychiatrists, and the RANZCP, can play a powerful role as advocates for better health for people with serious mental illness. The culture of low expectations that infiltrates all parts of the health system in terms of health outcomes for people with serious mental illnesses must be challenged. Not only can people with mental illnesses benefit from evidence-based interventions, it should also be recognised by all health professionals that people with a mental illness have the same rights to high-quality appropriate health care as everyone else.

This report takes another important step in that direction.

A handwritten signature in black ink that reads "Murray". The signature is written in a cursive style with a long, sweeping tail.

Dr Murray Patton
President
The Royal Australian and New Zealand College of Psychiatrists

The Royal Australian and New Zealand College of Psychiatrists

Our Vision

To enhance the mental health of our nations through leadership in high quality psychiatric care.

Our Values

Collaboration
Excellence
Integrity
Respect

Compassion
Innovation
Sustainability

Our Purposes

Advance the profession

A commitment to advancing the profession of psychiatry by facilitating the provision of high quality psychiatric care through the delivery of training and continuing medical education.

Improve the mental health of the community

A consultative approach to improving the mental health of the community through collaborative working models to better support mental health services.

Meet the needs and expectations of the membership

A dedication to meeting the needs and expectations of the membership to ensure the future growth of the College and enhance the collegial spirit.

Enhance external engagement and relationships

The enhancement of external engagement by building domestic and international relationships, to strengthen the College's influence and leadership across the mental health sector.

View our full Strategic Plan for 2015–2017 online at www.ranzcp.org/strategicplan

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Keeping Body and Mind Together

Improving the physical health and life expectancy of people with serious mental illness

A report prepared for the Royal Australian and New Zealand College of Psychiatrists

About psychiatrists	3
About this report	4
Executive summary	5
Introduction	7
The size of the problem	8
Prevalence of physical ill health in people with serious mental illness	8
Consequences of mental and physical comorbidity amongst people with serious mental illness	9
The barriers to good health for people with comorbidity	11
Determinants of comorbid mental and physical illness	11
Case study 1: Shame	13
Mental health treatment gap	14
Case study 2: A failure to provide equal care: Breast cancer and mental illness	16
Case study 3: A life (and an opportunity) lost: The cost of system fragmentation and role confusion	18
Towards a new approach	23
Population health measures	23
Case study 4: Don't just screen, intervene	24
Lifestyle interventions and the importance of physical exercise	25
Interdisciplinary and collaborative care	26
Management of psychotropic medications	27
Building the capacity of consumers to self-manage	27
Tackling stigma and discrimination	28
Next steps	29
The role of psychiatrists in advocating change	29
Working collaboratively	29
Recommendations	30
Conclusion	31
References	32

Tables

Table 1. Rates of physical ill health in people with serious mental illness	8
Table 2. Multiple health conditions as experienced simultaneously by a patient by condition type	10
Table 3. Summary of barriers to improving the physical health of people with serious mental illness	20

About psychiatrists

A psychiatrist is a medical doctor who has undergone further specialist training in the assessment and treatment of people with mental health problems. Psychiatrists play key roles in mental health care in Australia and New Zealand. Working in private, public or academic practice they see people in hospitals, their private rooms, clinics and other community settings. They play pivotal roles in the teaching, research and administration of mental health care as well as advocating for and leading improvements in service provision.

Psychiatrists treat all types of mental illness, emotional disturbance and abnormal behaviour, from mild or episodic conditions to those that are severe, persistent and life-threatening. They work with people of all ages and from all ethnicities and backgrounds and their families. At its core, psychiatry involves listening carefully and sensitively to people's most personal thoughts and feelings, understanding their mental state, and working with them to identify and implement appropriate treatments, including psychotherapy, psychotropic medication, social strategies and other interventions.

Psychiatrists often work in collaboration with general practitioners (GPs) and other health professionals to best meet the mental health and emotional needs of consumers. Psychiatrists also work in partnership with consumers and their families and carers, and are attuned to the array of social and cultural factors that impact on the individual patient.

Psychiatrists are the leading experts in the field of mental illness in Australia and New Zealand. Through the Royal Australian and New Zealand College of Psychiatrists (RANZCP), which is an accredited specialist medical training body, they receive rigorous training which enables them to provide optimal patient care, work collaboratively with other health professionals in the interests of patients, act with the highest professional and ethical standards, undertake research to improve mental health care and lead mental health services.

In Australia and New Zealand most psychiatrists are members of the RANZCP. For more information about psychiatrists or psychiatry go to www.ranzcp.org

About this report

The RANZCP is concerned about the high rate of physical illness among people with mental illness in Australia and New Zealand (as well as other developed countries). This comorbidity compounds the disadvantages already experienced by people with mental illness and is associated with a far shorter life expectancy. Some estimates suggest that the lives of both men and women with serious mental illness are up to 30% shorter than those of the general population (Piatt et al., 2010) and Australian research indicates that the gap is increasing rather than diminishing (Lawrence et al., 2013).

Evidence demonstrates that just under 80% of excess deaths of people with serious mental illness are the result of physical health conditions, not their mental illness (Lawrence et al., 2013). These are deaths that are additional to what is experienced by the general population at that same age, and therefore a death that occurs before the average life expectancy for that individual. Evidence shows that these deaths are mostly caused by illnesses commonly treated successfully in the broader community – heart disease, respiratory disease and some cancers are particularly prolific. In many cases it appears that the gains made in the treatment of these conditions in recent decades have not occurred for people with mental illness.

In this document serious mental illness is that which occurs in a person over the age of 18 years who has experienced in the past 12 months a diagnosable mental, behavioural or emotional disorder that has resulted in functional impairment which substantially interferes with or limits one or more major life activities. Comorbidity is used to describe the condition of a person who is experiencing both a physical health condition and a mental illness simultaneously.

The RANZCP believes that much more needs to be done to address the gap in physical health and life expectancy between those who live with a mental illness and the general population. This will require a collaborative effort from a broad range of stakeholders involved in mental health, including governments, consumers, health-care providers and psychiatrists.

Psychiatrists play a key role in the provision, management and coordination of care of people with mental illnesses. Psychiatrists are also responsible for clinical leadership, teaching and training, researching, and advocating for better psychiatric health in the community. As such, we are committed to working within our profession to drive positive changes that will improve the care of people with mental illnesses in Australia and New Zealand.

This report is one in a series that examines the barriers to health care for people with both mental and physical illness, and what can be done to reduce these barriers. It was developed by Nicola Ballenden and Dr Maria Duggan (PhD) (Lucem Consulting) under the guidance of the Board of the RANZCP and with the involvement of psychiatrists and consumers in Australia and New Zealand. Particular thanks goes to Dr Murray Patton, Dr David Codyre, Dr Jackie Curtis, Dr Leanne Craze (PhD) and the consumers and consumer organisations who participated.

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Executive summary

There is extensive international evidence of the higher rates of physical illness among people with serious mental illness.

This has a range of consequences, including:

- much shorter life expectancy
- higher levels of ongoing disability because of both physical and mental illness
- reduced workforce participation and productivity
- greater likelihood of welfare dependency and poverty.

The burden of disease is high for a number of reasons. Mental illness itself can make people withdrawn, isolated and sedentary. People with serious mental illness also have greater exposure to other risk factors for chronic illness, including smoking, alcohol and drug use, poor nutrition, sedentary lifestyle, housing insecurity, unemployment and poverty.

Despite being sicker than many others in the community, people with serious mental illness actually use all health services much less – on its own this is a powerful negative influence on the poor health status of this group.

Regrettably, even when people do engage with health services, all too often the system fails them. The health system is fragmented and frequently unaffordable with a lack of integration between physical and mental health care. There are also funding deficits. Spending on mental health is still much lower proportionally than spending on other forms of health care, so there are fewer mental health services than there should be. This set of factors can form an insurmountable barrier to care for people with complex chronic conditions. But these are not the only barriers to good health that people with serious mental illness face.

Frequently, people with both serious mental and physical illness fall through the gaps between physical and mental health systems. When consumers with mental illness report physical health symptoms, all too often they are not addressed because clinicians focus on mental illness to the exclusion of other health problems or symptoms, a phenomenon called 'diagnostic overshadowing'. Furthermore some psychiatrists and others working in the mental health field do not recognise the treatment of physical symptoms as a key part of their role. Conversely, other doctors and clinicians don't feel confident to manage physical health problems in people with mental illness. The result is that this group can miss out on essential services altogether.

Anti-psychotic medications, while a powerful tool in managing the debilitating symptoms of mental illness, can cause side effects such as weight gain and changes to blood sugar regulation that often lead to a range of chronic, life shortening illnesses such as diabetes and cardiovascular disease. A delicate balance must be achieved between managing the symptoms of mental illness so they are not debilitating while still protecting overall physical health, by carefully monitoring and managing the side effects of medication. System fragmentation can make the careful management of anti-psychotic medication much more difficult. Clearly more needs to be done by psychiatrists and others to ensure that people are not carrying a double burden of mental illness as well as the (mostly preventable) side effects of anti-psychotic medication.

Another form of system failure is the culture of hopelessness and low expectations that pervades the health system in relation to people with a serious mental illness. Health professionals are not immune to attitudes that stigmatise those with mental illness, and this manifests in a variety of ways. People with a mental illness do not get sufficient access to programs to help them stop smoking, exercise or lose weight. Life-threatening health conditions such as cancer are diagnosed much later in people with serious mental illness. All too often the weight gain that accompanies a diagnosis of a psychotic illness and the prescription of anti-psychotic medication is seen as inevitable for this group. This is especially tragic when this begins a poor life-long trajectory for young people. The culture of hopelessness and low expectations that allows this powerful form of stigma directly contributes to the shorter life expectancy of people with serious mental illness.

These attitudes need to be challenged, not only because they are unhelpful and discriminatory but also because they are fundamentally incorrect. There is much that can be done to improve the health and increase the life expectancy of people with serious mental illness. There is much of the burden of ill health that is preventable.

From the perspective of the RANZCP, addressing this important challenge begins with the recognition and acknowledgement by all psychiatrists that a key part of their role is to help their patients manage their physical health, particularly in terms of managing the side effects of anti-psychotic medication. Psychiatrists, as medical doctors and the leaders of clinical mental health care, have a special role to play in terms of advocating for the physical health needs of their patients. The RANZCP is committed to supporting psychiatrists to play this important role across the health system.

However, broader cultural and structural change across the health system is also required – a task that should involve governments as well as a broader range of stakeholders. Fortunately, the Australian and New Zealand governments and other bodies with an interest in the mental health systems of our two countries appear to be starting to recognise the severity of this problem and the urgent need to find new ways forward. This report identifies a number of other measures that would be helpful in combatting the poor health outcomes and lower life expectancy of this group.

Firstly, people with serious mental illness should be identified as a health priority population group, and there should be a high level of commitment by policy makers across government portfolios to take action to close the gap in life expectancy between people with mental illness and the rest of the population. Health promotion mechanisms (for example, to quit smoking, undertake exercise and mitigate alcohol abuse) should be tailored and accessible for delivery in all specialist mental health settings and as a core element of both inpatient and community settings.

More consistent delivery of screening for chronic conditions such as cancer, diabetes and cardiovascular disease and the management of medication side effects is also important. In particular, the increasing evidence of the benefits of supported lifestyle interventions (such as tailored physical exercise programs) in managing both the side effects of medication and overall health, should be further explored, and in due course may become part of the standard package of care offered to people with a diagnosis of serious mental illness.

We also need to make sure that care is collaborative, integrated and multidisciplinary in order to reduce the barriers inherent in the currently fragmented health system. We need more collaborative relationships with other health practitioners including GPs, practice nurses, pharmacists and allied health professionals. The delivery of multimodal treatments that include talking therapies, allied health and other non-pharmacological treatments routinely as part of the therapeutic package is also important. The RANZCP will raise these issues with our partner medical colleges and professional and regulatory bodies.

The RANZCP would also like to see further investments by the pharmaceutical industry to develop medications with less-deleterious side effects. The College is disappointed that so little has been done to develop better medication options for people with serious mental illness.

Finally, it should be recognised that consumer agency needs to be at the heart of both clinical practice and policy responses to address this problem. Wherever possible, consumers need to be driving decisions related to the management of their illness. Evidence suggests that building the capacity of consumers to actively manage their own health and their interaction with the health system can be a powerful way to overcome the fragmentation of the health system. This is not only beneficial for people with a serious mental illness, it is also more cost effective. The use of peer workers (those with a lived experience of mental illness) in this context can also be helpful.

Essentially, people with serious mental illness have the same right to good health as everybody else in the community. However, the RANZCP recognises that the problems faced by people with both physical and mental illness are multifaceted, complex and systemic. Tackling these will require commitment from all levels of government, from within the health system, from clinicians including psychiatrists and from other health professionals. RANZCP itself also commits to continuing to address this issue as a priority in the training and medical education of psychiatrists, as well as advocacy. This paper is part of beginning this transformational approach to mental health care and psychiatry practice.

Introduction

The RANZCP is seriously concerned about the inequalities in terms of physical health and life expectancy of people with serious mental illness compared with the rest of the population in both Australia and New Zealand. These inequalities are exemplified by lower treatment rates for mental health conditions compared with physical health conditions, and premature mortality of people with mental health problems. The gap in treatment and outcomes between people with serious mental illness and others is inequitable and socially unjust. These poor outcomes also incur a range of avoidable social and economic costs to health care and welfare systems in both Australia and New Zealand. This inequitable situation falls short of international conventions that recognise the right of people with mental health problems to access the highest attainable standard of health.

In 2008, the New Zealand and Australian governments signed the Convention on the Rights of Persons with Disabilities, which explicitly applies to people with serious mental illness. This commits governments to enabling access to health-care services for people with a disability, including mental illness. In this context, the gaps in life expectancy and health for those with serious mental illness indicate that Australia and New Zealand are far from meeting their obligations to the Convention on the Rights of Persons with Disabilities.

The RANZCP believes that the time has come for concerted action to make real progress on this commitment in both Australia and New Zealand. There is strong evidence to suggest that the poor physical health of people with serious mental illness is not an inevitable consequence of mental disorder. A significant proportion of the premature mortality associated with comorbid mental illness can be avoided. Achieving transformation in these currently poor outcomes requires change at multiple levels. There is a critical need for integrated evidence-based policy in both Australia and New Zealand that places mental health on an equal footing with physical health and takes account of the links between them in the causation and exacerbation of chronic diseases.

Policy change alone will not be sufficient. Psychiatrists, as clinical leaders in mental health services, have a great deal to contribute to this effort through transforming psychiatric practice in line with the developing evidence base and by embracing new ways of working with others. This requires psychiatrists to ensure, as far as possible, that treatments for the symptoms of mental illness do not harm physical health, do not give rise to disability or impairment, and do not reduce quality of life or life expectancy. It also involves supporting, in all specialist settings, the efforts of people with mental disorders to look after their physical health, and working with other clinicians in both specialist and generalist health-care settings to translate the rhetoric of caring for the whole person into reality.

Purpose

This paper summarises some key evidence about the poorer physical health and reduced life expectancy of people with serious mental illness compared with others in both Australia and New Zealand in order to:

- make a case for a new approach to improving the physical health of people with serious mental illness
- identify current barriers to achieving better health for this group
- consider what needs to change to implement a new approach focused on improving health outcomes
- outline some ways in which psychiatrists and others can contribute to the new approach.

Limits

The literature cited in this paper relates largely to adult and young adult mental health, excluding data on comorbidity in children and older people in both Australia and New Zealand. Similarly, the discussion does not address the acknowledged importance of gender in this area. The gender gap will be addressed in part by future work by the RANZCP. Additionally, the mental health concerns specific to Māori, Pasifika, Aboriginal and Torres Strait Islander peoples deserve further attention, and will be prioritised in future work.

The focus of this paper is on the physical health of people with serious mental illness as a priority group with significant health risks and with the greatest variations in health status and life expectancy relative to the rest of the population. The RANZCP recognises the bidirectional relationship between mental and physical illness more generally, and in particular the association of a number of chronic physical diseases with highly prevalent disorders of mental health, such as mild-to-moderate depression or anxiety. The discussion in this paper may be pertinent to the needs of this broader group also.

The size of the problem

Prevalence of physical ill health in people with serious mental illness

Many national and international studies highlight the fact that people living with serious mental illness have significantly higher rates of major physical illness than their counterparts in the general population.

Similar rates of mental and physical comorbidity are found in both Australia and New Zealand. According to the 2010 National Survey of People Living with Psychotic Illness in Australia, over one-quarter (26.8%) of survey participants had heart or circulatory conditions and one-fifth (20.5%) had diabetes. The prevalence of diabetes found in this survey was more than three times the rate seen in the general population. Other comorbidities included epilepsy (7.3% compared with 0.8% in the general population) and serious headaches/migraines (25.4% compared with 8.9% in the general population) (Begg et al., 2007; Morgan et al., 2013).

Similarly, in New Zealand, Te Rau Hinengaro: the New Zealand Mental Health Survey indicates that people with 'any mental disorder' have a higher prevalence of severe chronic physical conditions compared with those with no mental disorder. This data and data from other sources indicate that people with serious mental illness in New Zealand are also more likely to be obese or overweight and to have a higher prevalence of other health conditions, including cardiovascular disease, respiratory disease, chronic pain, high blood pressure and high cholesterol.

These figures mask disparities between ethnic groups in both countries. In New Zealand higher rates of respiratory conditions and chronic pain have been identified amongst Māori with any mental disorder compared with Māori with no mental disorder (Oakley Browne et al., 2006; Wheeler et al., 2013). A study of mental health service users in Auckland found that Māori and Pasifika service users had a higher body mass index than European or other counterparts (Oakley Browne et al., 2006). The alcohol-related death rate for Māori is four times that of non-Māori (Connor et al., 2005).

In Australia, high levels of unmet health needs have been identified amongst Aboriginal and Torres Strait Islander people, who experience hospitalisation for mental health problems at nearly twice the rate of other Australians. The life expectancy gap between these groups and the rest of the population is significant at 11.5 years for men and 9.7 years for women. It is estimated that 80% of this excess mortality is due to preventable chronic diseases. This suggests that Aboriginal and Torres Strait Islander people with mental illnesses experience double jeopardy and compounded risk (AIHW, 2011).

Table 1. Rates of physical ill health in people with serious mental illness.

According to international evidence, if you have a serious mental illness you are:

- between two and three times more likely to have diabetes
- six times more likely to die from cardiovascular disease, even if you are aged between 25 and 44 years
- more likely to die from cardiovascular disease, even if you do not smoke
- more likely to be diagnosed with diabetes, respiratory disease or have a stroke under the age of 55 years
- more likely to die from almost all key chronic conditions, and more likely to die within 5 years of diagnosis
- extremely likely to also suffer from gastrointestinal disorders such as irritable bowel syndrome, fibromyalgia, chronic fatigue syndrome, temporomandibular joint disorder and chronic pelvic pain
- 90% more likely to be diagnosed with bowel cancer if you have schizophrenia in particular
- 42% more likely to be diagnosed with breast cancer if you are a woman with schizophrenia.

Sources: Saha et al., 2007; Fleischhacker et al., 2008; Bushe et al., 2010; Gilbert, 2014; Disability Rights Commission (UK), 2006; Whitehead et al., 2002; Goldacre et al., 2005.

Consequences of mental and physical comorbidity amongst people with serious mental illness

Life expectancy

The high rate of comorbidity among people with mental ill health is associated with a far shorter life expectancy relative to the general population in all developed countries, with some estimates suggesting that the lives of both men and women with serious mental illness are up to 30% shorter than those of the general population (Colton and Manderscheid, 2006). Excess mortality amongst people with serious and persistent mental illness is a consistent finding across a range of heterogeneous studies, indicating that this is a global phenomenon. Whilst higher rates of suicide account for some of this burden, most of this excess mortality is a consequence of physical diseases including diabetes, respiratory illness, cardiovascular disease and cancer (Robson and Gray, 2007; Fleischhacker et al., 2008). A proportion of this burden is potentially avoidable.

In recent research from the USA it was found that clients of public mental health services die an average of 25 years earlier than the general public (Manderschied and Delvecchio, 2008). Many of the causes of death amongst this group were found to be similar to the causes of death of others in the population, that is, not a direct consequence of having serious mental illness, and could be treated or prevented through timely access to effective health care and information (WHO, 2012). Furthermore, the data examined in one comprehensive systematic review indicate that the mortality gap between people with schizophrenia and the general community has worsened during the three decades up to 2006 (Saha et al., 2007).

In Western Australia, which has one of the highest life expectancies in the world, recent research suggests that between 1985 and 2005, the gap in life expectancy for people with psychiatric disorders increased from 13.5 years to 15.9 years for men and from 10.4 years to 12 years for women (Lawrence et al., 2013). Data indicates that this life expectancy gap is worse than for other disadvantaged groups, for example life-long smokers, who receive considerable public health attention and intervention, in whom the gap is about 10 years (Doll et al., 2004).

A recent review of data gathered in New Zealand reveals a similar mortality gap. Overall, people using mental health services have more than twice the mortality rate of the general population. This disparity is even more pronounced for people with psychotic illness, who have more than three times the overall death rate. Most of this excess mortality is due to natural causes, with cardiovascular diseases and cancers accounting for most deaths (Cunningham et al., 2014).

Disability

The World Mental Health Forum reports that mental disorders are more closely associated with higher levels of individual-level disability than any of the wide variety of commonly occurring physical disorders examined in parallel surveys, including arthritis, asthma, cancer, diabetes and heart disease. (Levinson et al., 2010). Comorbid mental health problems can exacerbate functional disability (Moussavi et al., 2007). Some studies indicate that comorbid mental health problems can have a greater effect on functional status and quality of life than the level of severity of any physical illness (Moussavi et al., 2007). A significant reason for these poorer outcomes may be that comorbid mental health problems reduce a person's ability to actively manage their own condition (Di Matteo et al., 2010).

Reduced productivity

Substantial and growing costs to health systems are compounded by wider social and economic costs. Evidence suggests that people with comorbid mental and physical illnesses are less likely to be in employment than those with physical illness alone.

Conservative estimates by the Australian Institute for Health and Welfare (AIHW, 2009) provide worrying statistics. After adjusting for age and sex it is suggested that people with comorbid chronic disease are 60% more likely to not participate in the labour force, less likely to be employed full-time, and more likely to be unemployed, than those without chronic disease. The overall loss to the Australian workforce associated with chronic diseases of all kinds amounts to around half a million person-years. This is likely to be an underestimate given the limitations of routinely collected data.

People with comorbid illness who are in work are likely to be less productive, with more sickness absence days. Productivity is also lost through premature death (Productivity Commission, 2007). A recent report suggests that the direct financial impact of mental ill-health on Australian businesses is in the vicinity of A\$11 billion a year, largely due to absenteeism and reduced productivity (PWC, 2014). Similar cost estimates are not available for New Zealand currently.

Welfare dependency and impoverishment

Recent Australian microsimulation modelling suggests that people aged 45–69 years with multiple chronic conditions experience drastically lower incomes and receive up to 2000% more in transfer payments from government than those with no condition (Schofield et al., 2013).

People reporting poor mental health are likely to also report themselves as having three or more chronic diseases, suggesting that for these individuals and groups, all of the negative effects of chronic disease are compounded (Table 2).

Costs of comorbidity

Data on the costs of comorbidity are difficult to locate or to have confidence in. This in itself is an artefact of the fragmentation that characterises the ways in which health care systems are structured, funded and monitored. There is some evidence that the economic costs of comorbid mental health problems are driven up by increased use of services including hospital admissions and readmissions and GP consultations (AIHW, 2008). The interactions between physical and mental illnesses significantly increase the costs of care and treatment. Melek (2008) demonstrates that people with depression and a chronic physical illness incurred

average monthly care costs that were between 33% and 169% higher over a range of conditions. These increased costs excluded direct expenditure on mental health services. Moreover, the strong association between poor mental health and increased cost of care and treatment is broadly consistent across all levels of medical severity and persists even when adjusted for clinical and demographic variables (Welch et al., 2009; Unützer et al., 2013). There are, in addition, well-documented, broader, negative impacts on family functioning, standard of living, child development and educational attainment (Nelson et al., 2006).

The important point to take from the data regarding the costs of treating comorbid mental and physical illness is that the costs of comorbidity are exponentially greater than the costs of having the physical conditions alone (Unützer et al., 2009).

Further detail about these costs in both New Zealand and Australia and the potential for cost benefits will be revealed in the forthcoming modelling being undertaken collaboratively between the RANZCP, the Victorian Institute for Strategic Economic Studies (VISES) at Victoria University and the Mitchell Institute for Health and Education Policy.

Table 2. Multiple health conditions as experienced simultaneously by a patient by condition type.

	Total number of comorbid conditions			
	1	2	3	4
High cholesterol	60%	14%	18%	8%
Asthma	35%	32%	16%	18%
Cancer	33%	10%	28%	28%
Arthritis and related disorders	29%	28%	17%	26%
Back problems	25%	18%	21%	36%
Diabetes	20%	20%	40%	20%
Depression	20%	17%	33%	30%
Mental and behavioural disorders	19%	21%	21%	39%
Heart diseases	14%	26%	16%	44%
Diseases of the respiratory system	7%	10%	21%	62%

Source: (Schofield et al., 2013) Number of health conditions by condition type – limited to 45 to 64 year old population not in the labour force for any reason, 2009.

The barriers to good health for people with comorbidity

Determinants of comorbid mental and physical illness

The mechanisms underlying the relationship between mental and physical health are not completely understood. Evidence suggests that a combination of biological, psychosocial, environmental and behavioural factors may be involved (Prince et al., 2007). Chronic diseases, including psychiatric disorders, have complex, multifactorial roots (Glover et al., 2004). Multiple causal factors interact at an individual and at a population level to determine the degree of disease burden, and unhealthy risks can be passed on through families, communities and populations following demographic gradients. In addition to genetic factors, at different life-stages, common risk factors and determinants include:

- Greater exposure to known risk factors – socioeconomic status, high rates of smoking, alcohol and other drug use, reduced physical activity and poor nutrition.
- Reduced access to and quality of health care, due to financial barriers, stigma and discrimination, and systemic issues in health-care delivery, particularly the separation of physical and mental health services and lack of clarity regarding roles and responsibilities for the physical health care of people with serious mental illness in both community and inpatient settings.
- Impacts from treatments, including polypharmacy, prescribing practices, ‘diagnostic overshadowing’, and adverse effects of psychotropic medication, in particular their contribution to obesity, metabolic syndrome, cardiovascular disease and type 2 diabetes.
- The skills and competencies of mental health and other clinical staff in all settings (AIHW, 2007; WHO/Gulbenkian Foundation, 2012; CMO, 2013; Te Pou, 2014).
- Policy-related factors, in particular the lack of integrated policy addressing the prevention, treatment and management of comorbid mental and physical ill health and the lack of funding ‘parity’ for mental health compared with physical health.

Socioeconomic status and adversity

The links between socioeconomic status and mental illness have been widely reported (Collins et al., 2012). Robson and Gray (2007) note that the socioeconomic consequences associated with serious mental illness also impact on the physical health of this group. These consequences include issues such as restricted access to employment, social stigma and isolation, poverty, and poor housing.

There is a considerable body of literature suggesting that adverse life events are implicated in the creation of mental disorders and other chronic health factors, illustrating the fact that many people are subject to multiple social risk factors that can overwhelm their ability to cope (Snell et al., 2014). There are some indications in the literature that women are more affected by adversity than men (Astbury et al., 2000; WHO, 2000). Exposure to adverse events in childhood is strongly associated with adult mental illnesses and comorbidities (Cloitre et al., 2009).

Health risk behaviour

Health risk factors are generally more prevalent amongst those with comorbidities and particularly high amongst those with mental disorders (AIHW, 2007; WHO, 2012). It is important to note that this does not imply a direct causal pathway between the behaviour and the presence of chronic disease.

Greater exposure to known risk factors for chronic physical diseases, such as smoking, poor nutrition, higher sedentary behaviour and lower levels of physical activity, also contribute to relatively poor health. While such behaviours are often described as individual ‘lifestyle choices’, it has been found that socioeconomic and clinical influences can have a significant impact on health behaviours. Indeed, Robson and Gray (2007) argue against such factors being choices and suggest rather that they are the result of a range of social, environmental, physical and psychological consequences of serious mental illness. Given the highly addictive nature of nicotine it is certainly questionable whether choice is a factor in all tobacco smoking. The very high rates of smoking amongst the population with serious mental illness is a key area of concern, particularly given the fact that there is little evidence to suggest that there has been a reduction in smoking prevalence in this population, as has been seen for the general population. Yet stopping smoking is likely to provide both physical and mental health benefits, countering the widely held belief amongst smokers and nonsmokers that smoking itself has mental health benefits (Taylor et al., 2014).

Addictions are both a consequence of serious mental illness and are associated with a number of concurrent mental and physical health problems (Bagnall, 2014). Moreover, both heavy alcohol use and illicit drug use have been linked with excess deaths due to health conditions, accidents or suicides. One European study estimated that life expectancy amongst people with addictions is reduced by almost 14 years (Rehm et al., 2003).

Research from both Australia and New Zealand suggests that mental health service users with a principal diagnosis of substance use had mortality rates greatly in excess of that of the population as a whole (Moore et al., 2006; Lawrence et al., 2013; Cunningham et al., 2014), with a far greater burden being borne by Māori (Connor et al., 2005) and by Aboriginal and Torres Strait Islander people (Vos et al., 2007). This is in addition to the heavy toll that substance abuse takes on the physical health of people with serious mental illness and its association with chronic physical disease overall.

The treatment ‘vexation’

The poor health outcomes of people with serious mental illness are attributable in part to a treatment ‘vexation’ involving lack of access to the right kind of health care, even for established physical conditions (Roberts et al., 2007), and lack of screening and physical health monitoring when psychotropic medication is prescribed (Vasudev and Martindale, 2012). This vexation is exacerbated by the lack of recognition, by both specialists and non-specialist health services, of the relationship between physical and mental health in the context of serious mental illness and in particular the fact that one is a risk factor for the other.

National guidelines from several countries are agreed that the medical care of people with serious mental illness is of paramount importance (Mitchell et al., 2012). Yet serious concerns have been raised about the quality of such medical services to patients with serious mental illness. Studies have identified that people with serious mental illness routinely receive suboptimal care for established medical conditions (Desai et al., 2002; Vahia et al., 2008) and that these inequalities in access to treatments exist in some of the most critical areas of patient care, such as general medicine, cardiovascular, care for diabetes and cancer (Li et al., 2008; Mateen et al., 2008) and postsurgical care (Lawrence et al., 2003). In particular, individuals with schizophrenia are strongly disadvantaged, with studies finding they receive as little as half the monitoring offered to people without schizophrenia (Roberts et al., 2007). This lowered care level extends after diagnosis and surgery, with higher rates of postoperative complications, higher postoperative mortality and much higher than expected mortality (Copeland et al., 2008). Across a range of conditions, people with schizophrenia have much worse health than the general population (Perron et al., 2009).

A number of studies have identified a negative impact on physical health due to the contribution of antipsychotic medications to obesity, cardiovascular disease, poor oral health and type 2 diabetes (Vasudev and Martindale, 2010; Collins et al., 2012). There are conflicting reports with regard to the links between specific drugs and actual levels

of weight gain, and some authors argue that there is limited ability to accurately isolate the effect of antipsychotics on weight gain because of the long-term effects of having a chronic illness (Alvarez-Jiminez et al., 2012). However, there is strong evidence overall that antipsychotic medication contributes to obesity levels. A recent meta-analysis comparing people with schizophrenia and the general population found that people with schizophrenia who have multiple episodes of acute illness and are on medication have a more than fourfold increased risk for abdominal obesity compared with general population controls and that this group is also at significantly increased risk for developing cardio-metabolic abnormalities compared with first-episode and drug-free patients (Vancampfort et al., 2013). Dinan et al. (2004) report that up to 51% of males and 64% of females suffering from schizophrenia are obese as a consequence of treatment with antipsychotic medication.

Evidence from studies of drug naive young people including children and adolescents with first episode psychosis clearly demonstrate that antipsychotic medication frequently leads to rapid, clinically significant weight gain and metabolic side effects as early as within 12 weeks (Foley and Morely., 2011; Perez Iglesias et al., 2014).

In relation to lithium, which is a first-line maintenance treatment for people with bipolar affective disorder, there has been a continuing debate about the potential of serious adverse risks, including kidney damage, and its use has been controversial (Schou et al., 1981). Concerns about these risks may lie behind a decline in its use and replacement with anticonvulsants or some second-generation antipsychotics; however, it is important to note that these alternatives have a much more limited evidence base (Young et al., 2007).

Clinical guidelines recommend that people on antipsychotic medications have regular and thorough monitoring of their physical health. This should involve various parameters including weight, blood pressure, lipids, electrocardiogram (ECG), full blood count, urea, serum electrolytes, liver function tests, and prolactin (Taylor et al., 2007, RANZCP, Practice Guidelines, 10 and 7, Shiers et al 2014a, Shiers et al 2014b). Implementing these and other guidelines in routine clinical practice is, however, inhibited by fragmentation of the service landscape, low rates of consulting by people with serious mental illness, and lack of clarity about who has responsibility for the physical health of people with serious mental illness (De Hert et al., 2011a). Anecdotal evidence of a lack of follow up on test results, even in life-threatening conditions, is widespread, as demonstrated in our case studies.

Case Study 1:

Shame

Twenty years ago I was prescribed olanzapine. The effect on my mental health was brilliant. I explained the rapid weight gain to settling into married life – cuddling up and becoming cuddly. While I had previously been very active it became more difficult to keep this up as I became fatter and less healthy. About five months later I was diagnosed with diabetes. I rang my psychiatrist to ask if it could have anything to do with the olanzapine. There was a longish silence and then he said ‘No, I don’t think so’. I began regularly monitoring my blood sugar levels and alongside these I noted changes in medication, diet, weight, activity and periods of illness. Over time I noticed that if the dose of olanzapine increased, my blood sugar levels also increased, and vice versa. I spoke with him about this pattern. He told me that it was probably due to lifestyle factors. I found this explanation puzzling because my data showed that this was not the only factor. I stayed on olanzapine for a further 10 years. Fast forward to raised cholesterol, elevated blood pressure and a dodgy knee. Then my husband found some articles from the New York Times reporting massive compensation payouts by Eli Lilly to people who had developed diabetes after commencing olanzapine, whose health had worsened significantly, or who had died because of physical health consequences of taking it.

How do I understand these experiences? I felt that I wasn’t listened to or believed. There seemed to be an underlying assumption that the data I had collected had led me to false conclusions. Maybe he was less than honest (in a paternalistic, I-only-want-what’s-best-for-you sort of way) in case I became non-compliant and ceased to take the medication. Perhaps he thought I couldn’t be trusted with the knowledge that while olanzapine was a terrific drug for my mental illness, it wasn’t so good for my physical health. Was the relationship between mental and physical health put in the too-hard basket, cushioned by a complex service system that operates in a confused space where who is responsible for which part of one’s anatomy is unresolved? Was it a case of diagnostic overshadowing where concern for my mental illness trumped the deterioration in

my physical health? I was fairly sanguine: either my mental illness or my increasingly poor physical health could kill me, so I just needed to ‘suck it up’ and accept poor health as a consequence of maintaining mental health.

I have a pervasive and stultifying belief that I have failed to take responsibility for my own health. I feel embarrassed and ashamed. My body has become repulsive to me and I now avoid regular tests like Pap smears or asking for help because I know I probably won’t be able to stick with the plan and will fail again. I’ve given up on chronic disease management plans. How does a podiatry assessment here, an exercise physiology appointment there, maybe a session with a dietician help? Five sessions and it’s over for another year. Pulling together their advice into a coherent, coordinated plan that takes into account the vagaries of mental illness is a difficult task, especially without ongoing support and encouragement.

The stigmatising rhetoric of how difference in society is thought of and managed reinforces how I think about myself. We are described as leakers; we are unacceptably dependent; the nation can’t afford us; we pose an unsustainable burden on the welfare and health systems; we block bed flows in hospitals; emergency departments want to get on with treating those who are ‘really’ sick and who can be relied on to follow advice; we use up valuable resources that could best be spent on others who are more deserving; it’s our fault; we lack personal responsibility; we don’t try hard enough; we are chronic, on the recovery never-never. Complexity is just too complex for a struggling and fractured system where the various parts don’t talk to each other. It is hard to sustain a nuanced debate and the behemoths of the health and welfare systems support the status quo.

As the rhetoric increases it becomes harder to resist internalising it and our voices and lives become smaller. As we get older we become invisible. The ups and downs of both mental illness and poor physical health tend to sap the spirit and inertia undermines the task of becoming healthier. Lifelong poverty, housing insecurity, loneliness, exclusion, stigma and the complexity of our lives create a perfect storm that leads to early and unpleasant deaths. Would it surprise you to read that I feel scared and alone?

Or am I making more excuses? For whom? For what?

(Judy, consumer, 60 years old, Australia)*

Thanks to Judy for sharing her thoughts.

*Judy is a pseudonym.

Access to and quality of health care

A range of health-care-related issues are identified in the literature as having a contributory role in the prevalence and incidence of comorbid physical ill health amongst people with serious mental illness. These include systemic issues such as the separation, (including geographical) of physical and mental health services, lack of clarity with regard to who is responsible for the monitoring and ongoing management of the physical health of patients with serious mental illness, to a lack of continuity of care and overall fragmentation of care across different providers.

Mental health treatment gap

Analysis of the evidence suggests that people with serious mental illness:

- **Are less likely to seek assistance to manage either mental or physical health problems.** A recent Australian study found that only 35% of people with a mental disorder had attended a doctor for a mental health problem in the 12 months prior to the survey (Andrews et al., 2001). Of those who had sought help during that year, most had seen a GP not a psychiatrist. Only half of those who were disabled or had multiple comorbidities had consulted. This study suggests that the high rate of not consulting among those with disability and comorbidity is a significant public health problem.
- **Have difficulties adhering to medication, particularly when in receipt of multiple pharmaceutical treatments.** People with comorbidities are more likely to experience polypharmacy – or treatment with several different drugs (Fortin et al., 2007). This is known to create problems with adherence to drug regimens due to the impact of side effects on quality of life, disorganisation and costs (Townsend et al., 2003; Fortin et al., 2005). There is a need for further research to understand the acceptability of treatments to people with serious mental illness and their families and social networks, but there are indications in the literature that many find the side effects and the attitudes of health-care staff distressing and that this reduces their willingness and ability to comply with treatments (Chian et al., 2009).
- **Have different patterns of service use.** For example, the Equally Well Evidence Review identifies a number of New Zealand studies exploring health care access and usage by people with serious mental illness (Bagnall, 2014). These studies suggest that people with serious mental illness may have different patterns of health care use compared with the general population, particularly in terms of primary care, rather than just reduced contact with health services. Wheeler et al. (2014) explored health

care access patterns amongst a group of mental health service users in Auckland compared with the general population group and found that people with serious mental illness accessed services in more complex ways and were more particular about whom they went to for care than their general population counterparts.

The treatment gap experienced by people with serious mental illness is significant and universal. Only a quarter of people with mental illness across Europe receive any form of appropriate treatment for their mental illness, compared with about 80% of people with diabetes (Ormel et al., 2008). Other evidence suggests that about three-quarters of people with physical disorders receive treatment, while only about a quarter of people with mental disorders do so (Thornicroft, 2007).

However, it is important to note that a range of evidence suggests that timely and appropriate treatment is effective in improving physical and mental health amongst people with serious mental illness (Knapp et al., 2011).

Service fragmentation

Currently, mental health services in both New Zealand and Australia are typically physically and culturally displaced from both primary and acute care providers. As the population of people with chronic diseases of all kinds grows (Willcox, 2014), then the need for integration of care, with primary care at its heart, also grows. There is extensive evidence of both generic and specific barriers to achieving effective models for integration, setting a challenging agenda for context-specific change at a policy level as well as at service-system and practice levels in both countries.

The fragmented service landscape presents particular navigation challenges to people with serious mental illness and can mean that they are trapped in a cycle of poor health. Mental ill health is often characterised by fatalism, lack of motivation, disorganised lifestyle and health-risk behaviours. These factors mean that people do not actively seek medical screening and advice, sometimes do not receive regular monitoring whilst using psychoactive medications, and may use tobacco, alcohol and other drugs excessively (Naylor et al., 2012). These behaviours are also risk factors for chronic physical diseases, including obesity, diabetes and cancers (WHO, 2012). Obtaining high-quality coordinated treatment and care for complex conditions can require a high degree of persistence, tenacity and confidence. These are all associated with robust mental health and not with mental illness. New models of proactive integrated screening and health care appear to be required.

One study explored patients' and carers' views of how care for physical health could be improved (Van Hasselt et al., 2013). Three major themes were identified as follows:

- the reduced ability of patients with serious mental illness to survey their own physical health interests requires health care that is tailored to these needs
- the lack of collaboration amongst mental health-care professionals and GPs hinders optimal care
- chronic disease prevention programs and healthy lifestyle interventions need to be adapted to the special needs of this group; one size does not fit all.

A recent Australian study suggests that 'care boundaries' influence the likelihood of clinical guidelines being implemented. Boundaries existed around the illness itself, care provision processes, sectors, the health-care system, and society. Participants in the study (service users and staff) who were able to identify strategies to mediate these boundaries were better positioned to engage with physical health-promotion practice. Thus, the implementation of evidence-based guidelines appears heavily dependent on the capability of the workforce to develop and adopt boundary-mediating strategies (Ehrlich et al., 2013). This capability appears to be opportunistic, driven by individuals rather than inculcated by training or service ethos. One implication to be drawn from this is that for people with serious mental illness, receiving an adequate response to physical health needs can be largely a matter of luck.

De Hert et al. (2011b) suggest that 'diagnostic overshadowing' occurs in specialist mental health services, in which the priority given to reducing the symptoms and the risks associated with serious mental illness prevents the recognition of accompanying physical health problems or they are deemed of secondary importance. This paper furthermore highlights the 'unwillingness of many psychiatrists to expand their tasks' to include assessments of physical and mental health (Bobes et al., 2001) and psychiatrists' reluctance to monitor physical health (Maj, 2009). This and other studies suggest that some psychiatrists do not always make adequate assessments of the trade-offs between symptom-control and the risks of somatic ill-effects. These can be difficult decisions to make systematically, particularly when attempting to develop a therapeutic regime for people with very complex needs, but it is critical that psychiatrists appropriately balance these competing priorities and support their peers to do the same in order to accelerate the required process of change throughout health practice.

In Australia, complex funding sources and the separation between primary and acute care and between the mental and general health 'systems' have created a particularly fragmented and complex health system. In fact, the navigation

challenges this imposes on people with serious mental illness are so significant that they are used as an example of systemic problems:

Because of its complexity, mental health is a compelling example of the challenges associated with assigning roles and responsibilities in Australia's broader health care arrangements. There is in fact no such thing as a mental health 'system'; instead, this 'system' is shorthand for the many systems and services consumers and carers may encounter. For the most part, these services and systems are poorly integrated, overseen by different parts of government, based on widely differing organising principles, and not working towards a common goal. The Commonwealth and the States and Territories both have roles in policy, funding, and regulation in mental health. These roles have evolved in piecemeal fashion and have usually not been defined with respect to an overarching vision shared across governments and portfolios. It is therefore no surprise that consumers find the system enormously difficult to navigate (DPM&C, 2014, p. 40).

Affordability

High out-of-pocket costs exacerbate system fragmentation and can be a significant barrier for people who have both mental and physical illness. Australian patients already pay a bigger share of health-care costs than patients in almost any other wealthy country and these costs are rising fast (Duckett, 2014). In a recent survey, one in 20 people said that they had avoided seeing a GP because of the cost (ABS, 2013). The cost burden falls most heavily on those who are poor – those with reported incomes much below average were 65% more likely than those in higher income groups to avoid seeing a doctor because of the cost. Sicker people also struggle to access health services because of cost. People who assess their health as poor or fair are much more likely to avoid going to the doctor because of cost than people with better health (ABS, 2013, cited in Duckett, 2014).

A recent report commissioned by the RANZCP has highlighted that in Australia, out-of-pocket costs can have a particularly negative impact on people with mental illness and can be a barrier to appropriate, timely health care. There are significant impacts on particular subgroups, including:

- people with comorbid physical conditions requiring regular care
- people who are regular users of prescription medicine for either a mental or physical condition
- people on low incomes, including people who are homeless and/or unemployed
- people with serious mental health conditions, such as psychosis and schizophrenia.

Case Study 2: **A failure to provide equal care: Breast cancer and mental illness**

Breast cancer is one of the most common causes of premature mortality among women in developed countries. Women with a history of mental illness tend to have poorer outcomes from medical conditions than women without such a history, but it was not known if this is also the case for breast cancer.

A New Zealand-based research project, led by Dr Ruth Cunningham at the University of Otago (2014), investigated the role of factors that may help explain the survival differences between these groups of women. This information is necessary in order to improve outcomes for women with mental illnesses. Research in this area is complex, as psychiatric illness is not homogenous, and both survival and its contributing factors may vary by the type of mental health problem experienced.

Overall, the study aimed to quantify the effect of recent serious mental illness on survival from breast cancer. It examined the role of factors such as the presence of other medical conditions and late stage at diagnosis that may help explain differences in survival. It also investigated how the roles of these factors differ according to psychiatric diagnosis. This was achieved by examining data from New Zealand's Cancer Registry on all breast cancers diagnosed between January 2006 and December 2010 in women under 65 and linking these data to national specialist mental health service records (inpatient and community) between January 2001 and December 2010.

A total of 8762 women with a diagnosis of breast cancer were identified, of whom 440 had had contact with mental health services in the 5 years prior to cancer diagnosis. These women were divided into two groups: those with a diagnosis of functional psychosis (mainly schizophrenia, bipolar affective disorder, and schizoaffective disorder; Group A) and those with service use but either another diagnosis or no recorded diagnosis (Group B). One quarter (112) of the women studied were in Group A.

Modelling was used to compare cancer-specific survival between those with recent mental health service use and those without, and to investigate the contribution of demographic confounders and individual factors likely to be on the causal pathway (deprivation, comorbidity, and stage at diagnosis).

The analysis found that women with a history of mental health service use (Groups A and B combined) were nearly twice as likely to die from their cancer compared with other women after adjusting for confounding by age and ethnicity, and women in Group A (serious mental illness diagnoses) had two and half times the risk of death.

The factors contributing to poor survival were different for the two groups. Comorbidity was a contributor for both groups, but stage at diagnosis was only an important contributor to survival differences for Group A. For women using mental health services without a diagnosis of a psychotic disorder (Group B), stage at diagnosis was not a factor in survival differences, and there was no sole reason for their poorer survival.

After adjustment for all available factors, a substantial survival difference remained, and was similar in magnitude for Group A and Group B. The results were not substantially different when all-cause survival was used as an outcome measure. The study concluded that women with a history of recent mental health service use have poorer survival after diagnosis with breast cancer than other women under 65, even after adjusting for individual confounding and mediating factors. It is likely that failure to provide equal cancer care is an important factor in the remaining differences in survival, and this area requires further exploration.

A likely consequence of high out-of-pocket costs is that people avoid or delay seeking medical attention. This can lead to the development of more serious illnesses, creating a higher demand for hospital-based mental health services and other interventions, including possibly those from the community sector and law-enforcement sectors, not to mention the costs to the individual.

New Zealand's health system has undergone significant changes over the past two decades in evolving from a national fully public system to a regional, mixed public-private system. The Ministry of Health funds twenty District Health Boards, who are responsible for organising and funding care according to the population health needs in a specific catchment area. While health funding is not a significant contributor to fragmentation within the health system, there are still divisions between acute, primary and specialist care. There can also be huge variations between regions in terms of access to appropriate care, depending on the number and type of services regional health authorities have chosen to fund.

A recent report commissioned by the RANZCP to examine affordability issues in New Zealand found that while New Zealand provides a high level of subsidy for many mental health services and treatments, there are a range of gaps in accessing care for many people with mental illnesses and, in particular, those with complex mental health problems. Most significant is the relatively high cost barrier to accessing GP services, particularly for an initial diagnosis. A likely consequence of this is a lack of early diagnosis and treatment, leading to more serious, but preventable, conditions.

Exacerbating the cost issues in New Zealand are workforce shortages, particularly for GPs and psychiatrists. This shortage is likely to result in an undersupply of providers, particularly in disadvantaged or remote areas. Co-payments and shortages of GPs are barriers to timely, affordable care.

Discrimination: professional and social attitudes

These factors are compounded by widespread discrimination towards people with serious mental illness amongst health-care providers. There is strong evidence that a culture of low expectations regarding the outcomes of treatment for this group pervades the entire health system (Thorncroft, 2006; Thorncroft et al., 2009; Thorncroft et al., 2012). This is seen in the evidence that people with serious mental illness have diminished access to and receive lower-quality treatments for physical disorders, contributing to increased morbidity and mortality (Newcomer and Hennekens, 2007; Nasrallah et al., 2006; Rethink Mental Illness, 2008). Studies in New Zealand and Australia reflect international evidence about the stigma experienced by people with serious mental illness seeking health-care treatment (Peterson et al., 2007), including assessment of metabolic risk (Dunbar et al., 2010).

A survey by SANE Australia (2007) found that 76% of consumers and carers experienced stigma frequently. Indeed, the phenomenon of stigma experienced by people with serious mental illness in all settings is so ubiquitous and damaging that it is understood as a chronic psychosocial disability. Wing and Morris (1981) defined this as 'secondary disability' building upon the primary disability of the disorder itself. Such disability extends from the experience of illness, in particular 'adverse personal reactions' of those in contact with the person with serious mental illness (Wing and Morris, 1981).

The literature suggests that the attitudes of health-care staff in both primary and secondary care as well as in specialist settings inhibit help-seeking by people with mental illnesses and associated physical health needs (De Hert et al., 2011b). One UK audit of physical health monitoring for people with serious mental illness found that a significant proportion of GP surgeries refused to cooperate when asked to undertake screening of patients who had been in the care of specialist health services for more than one month (Vasudev and Martindale, 2010). Other research points to disparities in the level of health care delivered to this group compared with the general population. Of note is that inequalities were most evident in relation to general medicine and cardiovascular care, but may also be present in cancer and diabetes care, particularly as the data show similar prevalence but poorer outcomes (Mitchell et al., 2009).

Review evidence (De Hert et al., 2011a) highlights that a significant proportion of patients with serious mental illness do not receive tests for assessing metabolic risk factors, and those with diabetes are less likely to receive standard levels of care in relation to this health condition. With regard to cardiovascular disease, people with serious mental illness have the highest mortality, but are the least likely to receive specialised interventions or some medications. Others have reported that people with schizophrenia tend to be offered fewer cardiovascular procedures (Hennekens et al., 2005). At a broader level, the literature contains many reports of the lack of assessment, monitoring and documentation of the physical health status of people with serious mental illness, within both primary and secondary settings.

Skills and roles of health care staff

A recent editorial in *The Lancet* (p. 1154, 2013) posed the question 'why are patients with mental health problems being denied such important care?' The Lancet editors conclude that a lack of confidence amongst physical health teams in helping people with serious mental illness in both primary care and acute hospital settings, combined with mental health staff not feeling confident in providing physical health care, is a major part of the answer to this question.

Case Study 3: **A life (and an opportunity) lost**

The cost of system fragmentation and role confusion

Miriama* was born and raised in Aotearoa/New Zealand. From her early teens, she lived with her mother and younger brother, Tane, in Palmerston North. Miriama and Tane were very close, and Miriama had a good circle of friends. After finishing high school, she completed a diploma in business at the local Polytech before moving to Wellington, where she got a job as a waitress in a well-respected restaurant. After a few months, the owners recognised her leadership potential and supported her to begin a diploma in hospitality while continuing to work. Miriama enjoyed the work and the study, she made good friends with her flatmates, and started dating a young man who did casual work at the restaurant while he completed his degree at university. Miriama was a gentle, quiet and unassuming person; always polite, she was considered to be the kindest person around by many people.

Six months into the diploma in hospitality, after a particularly long and challenging week at work and in study, Tane called her to let her know that their estranged father was dying and unlikely to last the weekend. Miriama and Tane had not seen or spoken to their father since their mother fled her abusive marriage, with them aged 13 and 11, so this news came as quite a shock. Over the following month, Miriama began experiencing flashbacks to abuse she experienced as a child by her father and her mental health deteriorated rapidly; she eventually ended up off work, being supported by the First Episode Psychosis team, her boyfriend and her brother. She was prescribed clozapine and over the next few months stabilised, eventually returning to work, and then to study at the beginning of the following year. Miriama also saw a psychologist, who helped her to deal with the abuse flashbacks, and eventually life became more enjoyable.

Two years later, Miriama decided she wanted a change of career and went back to school to study to become an early childhood educator. On graduating, she worked in a preschool and loved the work. She got married and lived with her husband, Paul, in Wellington, where he worked in marketing for radio. Tane lived nearby and Miriama, he and Paul visited their mother in Palmerston North regularly. Miriama had continued on clozapine since her first episode of psychosis and had not experienced any more episodes. She was under a 'shared care' arrangement between

her local mental health service and her local GP. The mental health team monitored her medication and, as part of that, they required her to have monthly full blood tests and copied the results to her GP. Her GP did not routinely review the blood results, instead filing them in Miriama's file under the shared care folder.

Miriama's GP supported her to stop smoking in 2009 and then in late 2010, they talked about fertility and Miriama wanting to get pregnant. Miriama was also concerned about increasing weight gain and her GP gave her some strategies to try to lose weight. Miriama went back for a routine visit in early 2011, including a cervical smear test, and as part of that visit, her GP ordered full blood tests. The tests indicated mild anaemia and the GP prescribed iron tablets, which Miriama stopped taking after a few months because of constipation. The smear test was normal.

A year later, in early 2012, Miriama had a regular check-up with her GP and a member of her mental health team went to the appointment as well. There was no proposed change to the plan – Miriama continued to take clozapine, the mental health team continued to order monthly blood tests, the results of which were copied to her GP, who continued to file them straight into the shared care documents without reviewing them. Her GP had also ordered a full blood test as part of the annual routine exam, and it again indicated anaemia. Miriama had suffered from long, heavy periods for most of her adult life and ate very little red meat. At the appointment, Miriama again spoke about her weight and also indicated that she'd had some abdominal discomfort, and complained about her heavy periods. The GP prescribed iron tablets again, which Miriama took for a month and then stopped, again because of constipation.

Towards the end of 2012, Miriama complained to Paul and Tane about having abdominal pain and spent a week on sick leave struggling with a stomach bug. Her weight continued to slowly rise, despite implementing the GP's recommendations and eating a very strict diet. She saw her GP during this period of sickness to get a medical certificate to cover her work absence and also mentioned that she was still experiencing abdominal pain. At that time, her GP also ordered a routine chest x-ray because of Miriama's smoking history. The x-ray was normal.

In May 2013, Miriama arranged an appointment with her GP because her stomach was a bit swollen and still causing her discomfort. The GP examined her and discovered a mass in her abdomen, as well as noting that her abdomen was tense, swollen and uncomfortable. He said to Miriama that he was 'ordering a blood test as it would assist in organising an urgent scan'. Miriama had the blood test on 16 May and the results were sent to the GP on 20 May; on 24 May, Miriama called the GP practice to see if the blood test results were available. She was informed that the results had been abnormal and Miriama asked whether a scan had been organised; she was told that the scan had not yet been arranged. On 27 May, in extreme pain, Miriama admitted herself to hospital. A scan performed that day revealed a 25-cm mass in her stomach, which was then diagnosed as advanced ovarian cancer. The cancer was aggressive

and Miriama died, surrounded by family, 2 months later at the age of 32.

At no point after her call to her GP on 24 May did the GP practice try to contact Miriama. Subsequent review of the monthly blood tests ordered by the mental health team and copied to her GP indicated that a decline in Miriama's health was apparent from mid-2012. Neither her mental health team, nor her GP, had maintained an overview of these blood test results; the mental health team solely considered the factors relevant to her antipsychotic medication, whilst her GP considered these tests solely the domain of her mental health team.

With thanks to Nga mihi, Mind and Body Consultants NZ for providing this case study.

* Miriama is a pseudonym

The literature emphasises that the health-care workforce, both generalist and specialist, currently lacks the capabilities (attitudes, knowledge and skills) to respond in an integrated way to complex comorbidities (WHO, 2011; Bagnall, 2014). Studies in both Australia and New Zealand concur with international studies with regard to a lack of skills on the part of health-care practitioners within both mental and physical health services. Robson and Gray (2007) note a lack of skills amongst mental health nurse practitioners in New Zealand, who may have received no formal physical health-care training, and also amongst their practice nurse counterparts in primary care, who may have no mental health training. The lack of confidence and skills is an inhibiting factor across the board. Poor levels of knowledge and skill are reported among both mental health practitioners (in relation to physical health) and in physical health practitioners in terms of working with patients with a serious mental illness (Robson and Gray, 2007); stigmatisation of people with serious mental illness (De Hert, et al., 2011a; Vreeland, 2007); and a reluctance to take on functions perceived to be additional to their primary role (De Hert, et al., 2011a; Dunbar, Brandt et al., 2010; Miller, 2008). Blythe and White's (2012) evidence review of the role of mental health nurses identified a lack of knowledge and training on the monitoring and management of physical health, role ambiguity, and poor communication between

primary and secondary health-care services. Vreeland (2007) noted that health-care professionals may not believe that health and wellness are achievable amongst people with serious mental illness, due to the symptomatology of their illness.

Two recent international consensus conferences have called on mental health-care providers to take responsibility for the physical health of their patients (Fleischhacker et al., 2008; De Hert et al., 2011b). However, despite data suggesting that the development of clinical guidelines can be helpful in assisting psychiatrists in expanding the scope of their practice to include assessments of both mental and physical health in serious mental illness patients (Nover and Jackson, 2013), many psychiatrists are uncertain about whether this is appropriate. Miller (2008, cited in Fleischhacker et al., 2008) suggests that many psychiatrists still consider that their primary or even sole function is to provide clinical care in terms of psychiatric symptom control and are reluctant to monitor physical health. The development of effective models for the integration of psychiatric care and general physical health services, with an ultimate goal of providing optimal services to this vulnerable patient population, seems to represent one of the most important challenges for psychiatric care today (Saxena et al., cited in De Hert, 2011b).

Table 3:

Summary of barriers to improving the physical health of people

Consumer and illness challenges

Not seeking adequate physical care due to symptoms of the serious mental illness (e.g. cognitive impairment, social isolation and suspicion).

Phelan et al., 2001.

Difficulty comprehending health-care advice and/or carrying out the required changes in lifestyle due to psychiatric symptoms and adverse consequences related to mental illness (e.g. low educational attainment, reduced social networks, lack of employment and family support, poverty, poor housing).

WHO, 1995; Lambert et al., 2003; Robson and Gray, 2007.

Severity of mental illness (serious mental illness patients have fewer medical visits, with the most severely ill patients making the fewest visits).

Cradock-O'Leary et al., 2002.

Health risk factors and lifestyle factors (e.g. substance abuse, poor diet, smoking, lack of exercise and unsafe sexual practices).

Kendrick, 1996; Brown et al., 1999; De Hert et al., 2009).

Less compliant with treatment.

Brown et al., 2000; Hennekens, 2007.

Unawareness of physical problems due to cognitive deficits or to a reduced pain sensitivity associated with antipsychotic medication.

Ananth, 1984; Goldman, 1999.

Migrant status and/or cultural and ethnic diversity.

Lau and Chau, 2007.

Lack of social skills and difficulties communicating physical needs.

(Phelan et al., 2001; Sokal et al., 2004.

Mental health provider-related factors

Tendency to focus on mental rather than physical health, with infrequent baseline and subsequent physical examination of patients.

Phelan et al., 2001.

Lack of ability or support to assess the potential trade-offs between treatment aimed at controlling symptoms of mental illness and potential for adverse impacts on physical health.

Werneke et al., 2012.

Poor communication with patient or primary care health workers.

Colton and Manderscheid, 2006.

Physical complaints regarded as psychosomatic symptoms.

Lawrence and Keisley, 2010.

Suboptimal and worse quality of care offered by clinicians to patients with serious mental illness.

Ananth, 1984; Druss et al., 2002; Fleischhacker et al., 2004.

Lack of assessment, monitoring and continuity of care of the physical health status of people with serious mental illness.

De Hert et al., 2009; Robson and Gray, 2007;

Paton et al., 2004.

Guidelines perceived as a threat to autonomy, not well known or not clinically accepted.

De Hert et al., 2011.

Deleterious impact (e.g. obesity, type two diabetes, cardiovascular disease, hyperprolactinaemia, xerostomia) of psychotropic medication on physical health.

Robson and Gray, 2007; Paton et al., 2009.

Lack of knowledge regarding medical issues.

Druss et al., 2010.

Erroneous beliefs such as suggestions that serious mental illness patients are not able to adopt healthy lifestyles, weight gain is mainly adverse effect of medications, lower cardiac risk medications are less effective.

Parkes and Radke, 2008.

Unequipped or underfunded teams to handle behavioural and emotional problems of patients with serious mental illness.

Kane, 2009.

with serious mental illness

Physical health care provider-related factors

Stigmatisation of people with mental disorders.
Phelan et al., 2001; Fleischlacker et al., 2004; Kane, 2009.

Physical complaints regarded as psychosomatic symptoms.
De Hert et al., 2009b.

Lack of ability or support to assess the potential trade-offs between treatment aimed at controlling symptoms of mental illness and potential for adverse impacts on physical health.
Werneke et al., 2012.

Suboptimal and worse quality of care offered by clinicians to patients with serious mental illness.
Druss et al., 2002; Fleischhacker et al., 2004; Frayne et al., 2005; Hennekens et al., 2005; Kane, 2009.

Lack of assessment, monitoring and continuity of care of the physical health status of people with serious mental illness.
Paton et al., 2004; Robson and Gray, 2007; De Hert et al., 2009.

Unequipped or underfunded teams to handle behavioural and emotional problems of patients with serious mental illness.
Fagiolini and Goracci, 2009.

Complexity and time intensity of coordinating both medical and psychiatric medications.
Kane, 2009.

Systemic challenges

Lack of integrated health policy.
De Hert et al., 2011.

No parity of esteem for mental health compared with physical health.
WHO, 2014; Medibank/Nous Group, 2012.

Fragmentation or separation of the medical and mental health systems of care, lack of integrated services.
Fleischhacker et al., 2008; Kane, 2009; De Hert et al., 2011.

Fragmented responsibility for funding specialist and non-specialist services.
Medibank/Nous Group, 2012.

Lack of access to health care.
Kane, 2009; Maj, 2010; Thornicroft et al., 2010.

Lack of clarity and consensus about who should be responsible for detecting and managing physical problems in patients with serious mental illness.
Fleischhacker et al., 2004; Robson and Gray, 2007; De Hert et al., 2009.

Under-resourcing of mental health care that provides little opportunity for specialists to focus on issues outside their core specialty.
De Hert et al., 2009.

Lack of health insurance coverage.
Fleischhacker et al., 2004; Kane, 2004.

Financial barriers to physical health care, including co-payments and out of pocket expenses for screening and medications.
RANZCP, 2014.

Source: Adapted from Lawrence and Kisely, 2010.

Lack of parity for mental health compared with physical health

It is suggested in the international literature that the lack of funding 'parity' for mental health compared with that for physical health contributes to the major gaps in the availability of treatment for mental health problems in the first place. It is difficult to come to a judgement about this on the basis of available figures. What is clear is that in both Australia and New Zealand there has been significant investment in mental health in the last decade. The World Health Organisation (WHO, 2014) estimates that in 2011 mental health expenditures by the Australian Government were 7.64% of the total health budget and mental hospital expenditures were 8.70% of the total mental health budget. More recent research suggests that this is a considerable underestimate (Medibank/Nous Group, 2013). In New Zealand, mental health expenditures by the Government in 2011 were 10.0% of the total health budget. Mental hospital expenditures were 15.96% of the total mental health budget.

The available data often do not easily enable a complete breakdown of where money is being spent in either Australia or New Zealand. Nor is it possible to use these figures to assess if the current proportion of funding for mental health service provision in either country is the major obstacle to achieving better health outcomes for people with a mental illness. Notably, most cost-of-illness studies internationally fail to address the costs of comorbidities, although these are known to increase costs of health care and other costs exponentially. What is clear is that the poor outcomes and reduced life expectancy of people with serious mental illness, driven to a significant degree by comorbid physical health problems, appear to represent poor return on investment to society in both Australia and New Zealand and that funding solutions are not the only answer.

In summary, the literature highlights consistently the confluence of factors that, in interaction, create disparities in physical health and life expectancy between people with serious mental illness and other people in Australia and New Zealand. Lawrence and Kisely (2010) segment these factors into three overarching categories: systemic issues, provider issues and patient-related issues. These are summarised and discussed in Table 3 on page 20–21.

Towards a new approach

An issue whose time has come

Until relatively recently people with serious mental illness have been largely invisible within national and global health strategies, and are often not identified amongst vulnerable groups even though they are particularly disadvantaged socioeconomically and in other ways. This lack of visibility as a priority group with legitimate high needs is clearly problematic in terms of improving their health outcomes. De Hert et al. (2011b) argue that the identification of people with serious mental illness as a priority group is a critical first step towards addressing the significant health disparities between people with serious mental illness and others.

There are some signs that the policy context has begun to shift in both Australia and New Zealand in recent years and that the 'humanitarian and economic emergency' (Layard, 2013) posed by poor physical and mental health is finally beginning to attract policy attention. In Australia, the National Mental Health Commission (Blueprint 2, 2013) has called for improved physical health and life expectancy of people with serious mental illness as one of its ten strategic targets for transformational mental health reform. The New South Wales Mental Health Commission has also acknowledged the importance of this issue in their recent work. Similarly, in New Zealand, the Mental Health Commission (2012) has identified the provision of better support for people with complex needs including comorbidities as one of its eight priorities for mental health reforms. In addition, the New Zealand Ministry of Health has identified improvement of the physical health and well-being of people with serious mental illness as one of 100 actions in the service development plan *Rising to the challenge* (MoH, 2012). Building on these developments, in New Zealand, the *Equally Well* Consensus Statement was endorsed by more than 30 national bodies in 2014. *Equally Well* is a national program of collaborative action to improve physical health outcomes for people experiencing mental health and/or addiction problems.

In Australia, in May 2013, a Commonwealth Ministerial Summit was held to address the premature deaths of people with mental illness. This summit recognised that the prevalence of comorbidity amongst people with serious mental illness, low rates of general health consulting and monitoring, and the fact that only one fifth of people with a mental illness have a GP mental health treatment plan is 'an injustice that runs contrary to the United Nations Principles for the Protection of Persons with Mental Illness and the Improvement of Mental Health Care and the Convention on the Rights of Persons with Disabilities, which was signed by Australia in 2008'. A range of possible ways forward were proposed, including a successor to the current National Mental Health Plan. Just as importantly, there is commitment to the building of a national collaboration to address 'the hidden toll of preventable premature death among people living with a serious mental illness'

(Minister for Mental Health and Ageing, 24 May 2013). It is important that the RANZCP is a key player in any future collaboration.

These developments are mirrored elsewhere. In Europe the Mental and Physical Health Platform was established in 2008 with the aims of 'raising greater awareness of the interplay between mental and physical health and changing mind-sets to address the personal, social and economic consequences of ignoring that interaction'. In the UK the cross-government mental health outcomes strategy *No Health Without Mental Health* (HM Government, 2013) was launched in 2011 by nearly 30 mental health non-government organisations, peak professional health bodies, universities, the Department of Health, and child and youth organisations. This comprehensive national strategy outlines six primary objectives. Improving the physical health of people with mental illness is one of these.

In June 2013 an international group of mental health clinicians (including psychiatrists) launched the *Healthy Active Lives* campaign to 'drive to end the global scandal of premature deaths amongst young people suffering from mental illness' (iphYs, 2013). Notably, in this regard, in Australia, Headspace, the National Youth Mental Health Foundation, which is an enhanced primary care model for youth mental health care, identifies consulting for physical health problems as a vital element in its mandate (McGorry, 2007).

Population health measures

These important developments are signs that a more favourable policy context for mental health may be emerging in both Australia and New Zealand. It is time now to press for an approach that prioritises the needs of all people with serious mental illness at a population level. There is clear evidence that both targeted and population-level approaches are required (De Hert et al., 2011b; WHO/Gulbenkian Foundation, 2012). In Australia, this approach would have the particular benefit of focusing both levels of government on both specific and general issues. In both Australia and New Zealand, this would mean the focusing of health care and other resources on developments with good evidence of effectiveness, such as integrated care services and the mainstreaming of evidence-based, collaborative care interventions. Such a development would facilitate action to overcome some of the structural barriers within the health systems in both countries. This sets a challenging agenda for all those with a stake in improving the outcomes of people with serious mental illness, but one that must not be avoided in the face of the overwhelming evidence that current practices are not good enough.

Case Study 4: Don't just screen, intervene

The Early Psychosis Program (EPP) is a multidisciplinary community-based service located in Bondi, Sydney, which focuses on 15–25-year-olds with first-episode psychosis, within 2 years of psychosis onset.

Dr Jackie Curtis, a psychiatrist working at the Bondi Centre with young people experiencing their first episode of psychosis, was deeply concerned that while second-generation antipsychotic medications were effective in relieving people of many of the distressing symptoms of mental illness, they also seemed to be associated with rapid weight gain and consequent longer-term risks of diabetes and heart disease.

'Back in 2006 we developed a very simple monitoring tool to measure weight gain and other potential side effects. It was found that it was not uncommon for a young person to put on 10–20 kilograms or more within 12 months and that changes in a person's metabolic health occur very quickly with this weight gain. This includes elevated blood lipids and blood pressure. Glucose regulation in the body becomes abnormal, and this can eventually lead to diabetes.'

'There is also a huge amount of stigma and poor self-esteem – like a double whammy because a young person is coming to terms with their diagnosis, with the fact that they have to take medication, whilst also trying to deal with changes to their body image as well as disruptions to their social life, to their studying, their work life etcetera.'

'We realised that a screening tool wasn't enough. We needed to do something about it and so we came up with a clinical algorithm and our motto, which is, *don't just screen, intervene.*'

Together with a multidisciplinary team, Dr Curtis developed a range of lifestyle interventions aimed at preventing or minimising weight gain and the associated metabolic disorders that could later lead to diabetes and heart disease. The program is coordinated and delivered by a multidisciplinary team including a clinical nurse consultant, a dietician, an exercise physiologist and a youth peer wellness coach. Psychiatrists and an endocrinologist provide additional medication review and advice. The intervention comprises three interrelated components including health coaching, dietetic support and a supervised exercise program. Each program is individualised to suit the needs of participants.

Recently, the program was evaluated using a controlled study in two early psychosis community services. Participants in the intervention group (n = 16) received the 12-week individualised lifestyle program, while a comparison group (n = 12) were recruited from a similar service and received standard care. The evaluation found

that the intervention group experienced significantly less weight gain at 12 weeks (an average of 1.8 kg over 12 weeks) compared with standard care (an average of 7.8 kg)(1.8kg, 95% CI –0.4–2.8 kg vs 7.8 kg, 95% CI 4.8–10.7 kg). Thirteen percent of the intervention group (2 out of 16) experienced clinically significant weight gain (greater than 7% of baseline weight) while 75% (9 out of 12) experienced clinically significant weight gain in the non-intervention group.

Working with an endocrinologist, Professor Katherine Samaras, Dr Curtis and the Bondi Early Psychosis team developed treatment guidelines to manage weight gain in young people with first-episode psychosis. Both the screening tool and the treatment guidelines have been adapted for use throughout New South Wales.

Working with colleagues in the UK, including Dr David Shiers and Professor Helen Lester, the guidelines have been adapted to suit the UK context and distributed to GPs and psychiatrists throughout the country, with strong support from the Royal College of Psychiatrists. The UK resource has been included in the NICE guidelines for schizophrenia and psychosis in adults as well as adolescents and young people. Dr Curtis and Dr Shiers co-chaired an international working group of psychiatrists, endocrinologists, GPs and consumers to develop the HeAL (Healthy Active Lives) Declaration (www.ipphys.org.au) that aims to provide impetus to combat the stigma, discrimination and prejudice that prevent young people experiencing psychosis from leading healthy, active lives.

According to Dr Curtis, 'It's a human rights issue as far as I'm concerned that access to high-quality, evidence-based treatments for people with mental illness should be no different to that of people without mental illness. Traditionally psychiatrists and other mental health professionals don't deal with the body so much as the mind, and I think the separation is not acceptable. It is encouraging to see that many mental health professionals are taking this on board now, and that physical health is being considered core business given that the risks involved with the physical health complications of our treatments are so high.'

'I think it is important to start actively monitoring and managing physical health as soon as these medications are prescribed. We have a role in shared decision making with our clients, so that treatment choices are informed by an understanding of risks of future obesity, cardiovascular disease and diabetes. It is really important to try and prevent these problems from developing and to provide people with the skills, resources and support to manage their weight and their physical health.'

With many thanks to Dr Jackie Curtis for providing this case study.

If status as a significant priority group for people with serious mental illness can be achieved, there is some evidence that broader health policy can improve health outcomes. For example, it has been suggested that promoting mental health has positive impacts on both clinical and quality-of-life outcomes for people with psychiatric diagnoses (Silva et al., 2005; Friedli and Parsonage, 2007); however, evidence is sparse in this area with respect to comorbidity. A number of modelling studies have attempted to assess the economic gains of improving workforce productivity through better prevention and management of chronic disease. These kinds of projections are methodologically complex and may arrive at different conclusions depending on underlying assumptions and other factors. Of these, one robust study estimated the health status, financial and economic benefits of reducing the prevalence of six risk factors that contribute to chronic diseases (Cadilhac et al., 2009). These six risk factors included:

- smoking
- high-risk alcohol use
- high body mass index
- physical inactivity
- intimate partner violence
- inadequate diet.

All of these behaviours are highly associated with the presence of mental illness as well as a range of chronic physical illnesses (WHO, 2012). The financial benefits that might be released from modifications in these risk factors were conservatively estimated to be A\$2.334 billion over the lifetime of the 2008 Australian population. Similar estimates were found in a recent UK study undertaken by the Chief Medical Officer (CMO's Annual Report, 2014).

Lifestyle interventions and the importance of physical exercise

Recent large, landmark studies from the US indicate the significant benefits of individual or group lifestyle interventions in reducing or limiting weight gain and improving health (Daumit et al 2013, Bartels et al 2014, Green et al 2014).

In Australia, a recent evaluation of a lifestyle intervention offered to young people experiencing their first episode of psychosis has found that weight gain and its health consequences can be prevented and/or ameliorated (Curtis et al., 2015). The program, offered in Bondi, New South Wales, is based on tailored lifestyle interventions such as health coaching, dietetic support, and a supervised exercise program. A psychiatrist and an endocrinologist provide regular review and advice on medications, while the overall program is delivered by a multidisciplinary team including a clinical nurse consultant, a dietician, an exercise physiologist and youth peer wellness coaches.

A New Zealand study has found that combining psycho-education and nutrition and/or exercise counselling appears to be a cost-effective way to help people with first-episode psychosis to manage their weight (Knapp et al., 2011).

A number of clinicians working with young people experiencing their first episode of psychosis have argued that exercise and lifestyle interventions could provide an opportunity to alter the trajectory towards cardiovascular disease and type 2 diabetes and should be prioritised as a matter of urgency (Eapen et al., 2012, Shiers et al 2014b).

The findings of the benefits of exercise and physical activity are also relevant to adults who may have long-standing mental illness. Validated healthy lifestyle programs appear to be cost effective as a means of managing body mass index in people who have been living with schizophrenia for longer (Acil et al., 2008; Knapp et al., 2014). In the US a recent randomised control trial found that lifestyle interventions significantly reduced weight over a period of 18 months in overweight and obese adults with serious mental illness (Daumit et al 2013).

A recent meta-analysis of physical activity interventions concluded that physical activity interventions reduce the symptoms of depression regardless of psychiatric diagnoses and that physical activity reduces the positive and negative symptoms of schizophrenia (Rosenbaum et al., 2014a). The authors conclude that, based on the available evidence, clinicians should refer patients to physical activity interventions to improve both mental and physical health outcomes. In an editorial in the *British Journal of Sports Medicine* the authors recommend that the 'universal inclusion of exercise and dietary interventions is likely to have important short term benefits for mental and physical health as well as preventing the development of chronic lifestyle related diseases' and that such interventions should be routinely included as an essential component in recovery from mental illness (Rosenbaum et al., 2014b).

A recent editorial in the *American Journal of Psychiatry* was even more emphatic arguing that "It is safe to conclude that behavioural interventions for obesity in people with serious mental illness should be considered an evidence based practice" and furthermore that "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, 2015)

In Australia, the Monash Alfred Psychiatry Research Centre (MAPRC) has been conducting a stream of work focusing on improving physical health for people experiencing mental illness. The Healthy Lifestyles and Outcomes stream of research focuses on:

- promoting the assessment of physical health in people experiencing mental illness
- developing and implementing interventions (individual and group) to address physical health issues (e.g. smoking, diet and physical activity) in people experiencing mental illness
- evaluating the impacts of these interventions.

The stream has both a research and a clinical focus. Early findings are that the program is effective in reducing smoking levels and changing behaviour with regard to exercise and diet.

The single most important target at the individual level is smoking, because it is highly prevalent, its harms to health are well understood, as are the benefits of stopping, and behaviour-change interventions are effective (Hotopf and McCracken, 2013). It has been suggested that adding the antidepressant bupropion to cognitive behavioural therapy and nicotine replacement can help people with first-episode psychosis to quit smoking (Ziedonis and Williams, 2003). In Australia the Quit anti-smoking program has worked with the mental health advocacy group SANE Australia to develop materials targeted specifically at people with serious mental illness.

Mindfulness-based treatments have also been shown to reduce depression, anxiety and physical distress in people with physical illnesses in general (Pots et al., 2014).

Interdisciplinary and collaborative care

Overall the growing international evidence points to the effectiveness of integrated multilevel approaches to treating comorbidities, with significant effects demonstrated in both outcomes and costs (Katon et al., 2010; Morgan et al., 2013). There is evidence that collaborative care delivered in primary care settings involving multiple interventions to people with comorbidities can be cost effective – notwithstanding initial investment in service redesign (Bodenheimer, 2005; Rosenberg and Hickie, 2013; Foot, 2014).

There are well-developed examples of integrated care internationally and in New Zealand and Australia. These developments have the potential to bridge primary and secondary care and to reduce barriers between physical and mental health services. However, such developments are far from being the norm. Much more information is required about the effectiveness and cost-effectiveness of models of integrated care, including physical health input for community and inpatient mental health services, primary care clinical and health psychiatry, liaison psychiatry and collaborative care models relevant to the specific contexts of Australia and New Zealand.

The need for physical health care screening and monitoring in serious mental illness is clear, but unfortunately not done as a matter of course. The Lester Adaptation, a program of screening and intervention endorsed by the UK Royal College of Psychiatrists and the UK Royal College of General Practitioners provides a framework for assessment and intervention. Such interventions have been tested: a small randomised controlled trial among members of the United States Veterans Association indicated that integration of primary care within mental health systems is effective at improving the uptake of screening and other public health interventions; however, as this trial was based in the USA it is difficult to generalise the results to Australian or New Zealand settings (Druss et al., 2001).

Other evidence for the benefit of screening is identified by the National Institute for Health and Care Excellence in the UK (Pilling et al., 2009) provided it is accompanied by the development of care pathways that offer a different approach to health management. This is illustrated by the TEAMcare approach, where a population approach to identification and management of depression in patients with heart disease and diabetes not only improved depression outcomes but also improved diabetic control, blood pressure and cholesterol levels (Frayne et al., 2005; Katon et al., 2010).

The TrueBlue model of collaborative care uses practice nurses as case managers for depression alongside diabetes or heart disease; a randomised trial underscored the importance of collaborative care in improving outcomes in patients with comorbidity. TrueBlue participants showed significantly improved depression and treatment intensification, sustained over 12 months of intervention and reduced 10-year cardiovascular disease risk. Although the cohort that was studied did not have serious mental illness, this and other studies indicate that collaborative care using practice nurses appears to be an effective primary care intervention (Morgan et al., 2012).

Management of psychotropic medications

There is a growing body of literature focusing on the need to improve medical care and, specifically, implementing metabolic monitoring for patients with serious mental illness. Numerous barriers are cited in the same literature, despite the fact that Australasian psychiatrists are already demonstrating high levels of concern about the metabolic consequences of atypical antipsychotics (Organ et al., 2010; Galletly et al., 2012). These barriers reflect the confluence of many different factors associated with the care of people with complex needs, including exposure to multiple risk conditions, confusion about roles and responsibilities, and stigma (De Hert et al., 2011b). As a consequence, the duty of care that is due to many people with serious mental illness is in danger of not being fulfilled. Psychiatrists have a major contribution to make to finding ways forward to address this issue. The literature reflects the continuing debate about responsibilities, with one UK study suggesting that 56% of UK psychiatrists felt that primary care services should take full responsibility for physical health monitoring (Kohen, 2005). This is challenged by other studies which, citing multiple sources, suggest that primary responsibility should rest with the treating mental health team within 'a coordinated approach involving localized service protocols for systematic screening for metabolic syndrome, sharing and interpretation of results and provision of treatment led by mental health services with the collaboration of primary care general practitioners and mental health services' (Brunero et al., 2009).

Examples exist of effective intervention aimed at providing metabolic screening within public mental health services. At St Vincent's Mental Health in Melbourne, despite significant barriers to implementation, it has been possible to deliver approximately 60% of routine blood glucose and lipid monitoring and weight measurement (Organ et al., 2010). However, in the absence of a clear consensus amongst clinicians, local collaborative care protocols and clear policy directions, such initiatives are rarely scaled to the point where they can make a significant difference to population health (Organ et al., 2010).

Recent research has found that, for a range of antidepressants and psychotropic medications, genetic testing can predict which patients will have increased side effects and which patients will have treatment failure – that is, the medication will not be effective. As well as the very real benefits for people who are prescribed these medications, being able to anticipate the response to treatment could have the potential to reduce the length of hospitalisation and consequently achieve savings to the health system.

However, even as doctors search for better medication options it is important that psychiatrists and others take account of the potential for industry bias in the reporting of trials of medications. Recent commentators have found strong evidence that, compared with independent trials, industry-sponsored trials exaggerate treatment effects in favour of the products developed and sold by their sponsors (Every-Palmer and Howick, 2014).

Consultation with people with a lived experience of mental illness highlights the importance of seeing medication as just one part of managing overall physical and mental health. As part of consultations undertaken with consumers for the National Health Commission, one consumer said:

'A good clinician is one who is balanced and who understands the importance of looking at a person's whole life and not just focusing on what medication might control particular symptoms.'

'Clinicians who actually want to improve their practice by learning about people's different repertoire of coping strategies. Those clinicians are the ones with the X factor. They make a difference in turning people's lives around.'

Others mentioned the importance of having their voice heard in treatment decisions, particularly when they are on involuntary community treatment orders (CTOs).

'I've been on a CTO now for a long time. The psychiatrists are changing all the time but this CTO just goes on and on and on. I don't want this to continue. I'd like the opportunity to show that I can manage my medication and my health for myself. The medication I am on is making me very tired and gets in the way of doing work. I feel that no one is listening to me about whether we can try different alternatives.'

'I have been on a CTO for a long time and I've been arguing that the frequency of injections is too high. Just recently a doctor actually listened to me. It means a lot to me to not have such frequent injections.'

Building the capacity of consumers to self-manage

Recent initiatives within the health system emphasise the importance of helping people with chronic health conditions to 'self-manage' their conditions (von Korff, 2002). In practice this should mean supporting people to develop the skills and capacities they need to manage their own illness as well as their interactions with the health system. Common elements of effective self-management strategies include collaboration between service providers and patients, a personalised written care plan and tailored education in self-management (Morgan et al., 2013).

These initiatives, if properly supported, have been shown to improve outcomes and improve the efficiency and effectiveness of service delivery (Smith et al., 2012). The nature of serious mental illness means that from time to time people's capacity to self-manage may be compromised. However, given that most people with serious mental illness live in the community and that they, or their families, often bear much of the responsibility for organising their own health care, it is important that bespoke interventions are provided, which enhance the ability of people with serious mental illness to manage their own conditions (Morgan et al., 2013).

There is some evidence that peer support programs may have a role to play in supporting people with serious mental illness in managing their health. This is complicated terrain as there are many different models of peer support identified in the literature and only limited comparative research about their impact. A literature review undertaken by the Chronic Disease Illness Alliance (Australia) points to evidence that some models can be both effective and cost-effective. This review suggests that the major impact of peer support interventions is improved self-efficacy (CDA, 2011). If this finding is supported by further evidence it appears that incorporating models of peer support into health management and improvement programs holds great promise. A further recent review of the literature has suggested that use of peer workers to support recovery can be helpful in preventing readmission to hospital, finding employment, and increasing individuals' sense of empowerment and independence amongst people with mental illness (Health Workforce Australia, 2014). Peer workers can support people with mental illness to define their own needs, think about their choices and support them in terms of recovery strategies.

In New Zealand, the Kia Kaha primary care intervention in Auckland involves peer support workers working with patients with poorly managed long-term conditions to improve self-management. A significant proportion of service users have 'high psychological distress and high levels of complexity'. The program has the ambitious target of achieving a 25% reduction in overall hospital and GP utilisation and for the engagement of 125–150 individuals with chronic diseases and coexisting serious mental health and addiction needs. The program aims to meet these needs by building the self-management skills of these individuals and their familial and social networks. The program employs flexible peer-supporters and outreach methods and is supported by a consultant psychiatrist based in the primary care setting. In 2013, the program achieved a 45% reduction in the use of emergency services by enrolled participants and a 25% reduction in GP consultation as well as significant reductions in the symptoms of generalised anxiety and depression.

One small Australian study (38 participants) found that a program delivered by peer workers was effective in building the self-management skills of a group of people with both physical and mental illness. This resulted in improved self-management skills and improvement in mental health functioning (Lawn, 2011).

Tackling stigma and discrimination

International evidence suggests that stigmatised attitudes towards people with serious mental illness are widespread, leading to systematic discrimination (Thornicroft et al., 2007). Whole-of-society action is required to combat stigma and discrimination. There are some suggestions in the literature that high-level anti-stigma campaigns can have a positive impact on public attitudes, although attitudes amongst health-care staff appear to be harder to shift (Crisp et al., 2003). Moreover, these problems are not just 'out there' but also influence the ways in which people with serious mental illness experience psychiatric care (Corrigan, 2005). A survey in South Australia compared the attitudes of more than 250 mental health staff and the general public about the likely outcomes of cases of people with depression and schizophrenia (Hugo, 2001). Professionals were more likely to be more pessimistic than the public, and psychiatrists were even less optimistic than nurses.

Other studies suggest that GPs can also be stigmatising in responding to people with serious mental illness (Jorm, 1999; Pinfold, 2003). Moreover, these negative attitudes develop early amongst medical students (Wilkinson, 1983). People with serious mental illness fear coercive treatment and many believe that their encounters with psychiatric staff may contain the threat of coercive treatment (Szmuckler, 2001). Stigma is so endemic that it extends to mental health staff. Mental health roles, including those of psychiatrists, are themselves stigmatised (Repper, 2003).

There is much that psychiatrists can do, working with others involved in mental health research, policy and services to challenge the stigmatised attitudes that impact on the physical health and life expectancy of the population with serious mental illness. Thornicroft et al. (2010) propose a range of actions, including locally-focused public information campaigns targeting various settings, including workplaces; research into the discriminatory impacts of policy and funding allocations at national and local levels; the development of anti-oppressive personal practice; and leading service change in this area.

There is a critical need to develop clear and accessible information for people with serious mental illness and carers as well as other professionals, particularly in relation to the need for physical health monitoring and risk reduction. It is also important that these groups know that there are evidence-based interventions available to people with serious mental illness to maintain and protect physical health.

Next steps

The role of psychiatrists in advocating change

The RANZCP recognises that this analysis highlights a number of areas in which psychiatrists clearly need to play a leadership role in improving the physical health status of people with serious mental illness.

Firstly, as medical doctors, psychiatrists have a clear responsibility to help patients to manage their physical health. In the RANZCP's view, this is a core part of being a psychiatrist. In inpatient and outpatient settings where psychiatrists set the parameters for clinical care, they should ensure that appropriate physical health screening, monitoring and intervention programs are put in place and adhered to.

Secondly, it is recognised that psychiatrists prescribe medications that can undermine physical health and that this role brings with it special responsibilities. While these medications can be a powerful tool in managing symptoms of mental illness, their side effects, particularly if they are not carefully managed, can be very serious. Psychiatrists must know not just how to 'screen' but how to 'intervene' to manage the side effects of medication. The RANZCP has a role in further developing guidelines and working collaboratively with its Fellows to optimise their ability to manage the side effects of medications as part of a holistic approach to attending to a patient's physical health concerns.

Thirdly, it is vital that psychiatrists recognise that the weight gain and physical decline that is a common feature of serious mental illness is by no means inevitable, and that there are effective and evidence-based ways of managing both the side effects of medication and the consequences of mental illness to protect and maintain physical health. Not only can people with a mental illness benefit from evidence-based interventions, it should also be recognised by all health professionals that people with a serious mental illness have the same rights to high-quality appropriate health care as everyone else.

Fourthly, it is important that the agency of consumers in managing their own health is understood and respected. Psychiatrists (and indeed all health professionals) must communicate treatment options to consumers and ensure that consumers understand, and can make informed decisions about the side effects of medication and how to manage them. Treatment must always be clearly understood, it must be personalised and treat the 'whole person'. It should be regularly reviewed to ensure that it remains the best and most appropriate option. Psychiatrists have a particular ethical responsibility to undertake medication reviews when people are being treated involuntarily.

Finally, the RANZCP recognises that psychiatrists should play a role as advocates for better mental health care and treatment. This involves reviewing clinical training and practice, working with government and health care providers and with pharmaceutical companies when necessary, to ensure that patients get the best possible support in their journey to recovery.

Working collaboratively

Mental health can rarely be considered in isolation; its impact infiltrates every part of life and all sections of society. As mental health cannot be separated from physical health, so improving health outcomes overall requires the involvement of multiple stakeholders. There is a need to agree on a vision for the future and critically focus on ways to achieve this in both New Zealand and Australia. The literature and the daily experience on the front-line of clinical services highlights a lack of collaboration within and between services and disciplines; a lack of engagement with people with serious mental illness, carers and clinicians; and disturbing levels of stigma and discrimination pervading all health-care settings. The literature describes a lack of skills and confidence amongst both specialist and non-specialist health-care staff in responding to the complex physical and mental health needs of people with serious mental illness. These 'cultural' and training-related issues create significant barriers to implementing change. While the RANZCP is not blind to the financial pressures facing mental health provision in both countries, funding alone is unlikely to deliver the required systemic changes being demanded without a shared plan of action endorsed by other clinical stakeholders as well as by governments in both Australia and New Zealand.

Recommendations

The following steps are proposed to address the challenges outlined in this discussion paper.

1. People with serious mental illnesses must be designated as a health priority population group by policy makers.
2. Government leaders in portfolios such as health, disability and welfare must make a commitment to take action to close the gap in life expectancy between people with mental illness and the rest of the population of Australia and New Zealand. This should include ambitious targets to reduce the life expectancy gap amongst people with serious mental illness as a priority group and also amongst Aboriginal and Torres Strait Islander people in Australia and Māori and Pasifika people in New Zealand.
3. Health promotion mechanisms (for example to quit smoking, undertake exercise, or mitigate alcohol abuse) should be adapted for delivery in all specialist mental health settings and become core elements in the service 'offer' in both inpatient and community settings. Physical health monitoring and supporting people to stay healthy should be seen as essential contributions in discharging the duty of care to people with serious mental illness.
4. Integrated care pathways, including integrated services, are urgently required for people with complex physical and mental health-care needs. These will reduce the navigational barriers that are inherent in the fragmented architecture of current physical and mental health systems. These pathways should be based on the growing evidence that the best care for people with complex needs is delivered through collaborative practices and integrated interventions which are capable of providing the support required.
5. Screening and lifestyle interventions, based on the best available evidence, must be routinely offered to both people newly diagnosed with a serious mental illness and those with more long-standing illnesses in order to prevent unnecessary chronic conditions from developing.
6. Prescription of antipsychotic medications by psychiatrists and others must be consistent with international guidelines and should be reviewed regularly. Psychiatrists as prescribing doctors have a key role to play in ensuring that international guidelines are enshrined in their prescribing and broader clinical practices. They must attempt to ensure that the adverse side effects of medications are minimised and that treatment is holistic. Patients receiving multiple pharmaceutical treatments should be offered regular medication management as part of a proactive approach to managing their complex health needs in both specialist and non-specialist health-care settings. Talking therapies, lifestyle-change programs and other personalised non-pharmacological treatments should be offered routinely as part of the therapeutic package.
7. The RANZCP calls upon the research community and the pharmaceutical industry to undertake further research into ways of improving the physical health of people with serious mental illness, and invest in the development of medications with less-deleterious side effects. Better long term treatment options are essential.
8. There is an urgent need to develop a mechanism for identifying and disseminating information about promising interventions in both Australia and New Zealand. Seeds of future success appear to be found in service-level interventions with proactive approaches to the identification of people with comorbidities that offer screening and medication management, support self-care and include the use of peer support workers in validated programs.

Conclusion

The RANZCP represents more than 5000 psychiatrists and doctors training to become psychiatrists across Australia and New Zealand. Through consultation and discussion, the issue of the lower wellbeing and poor life expectancy of people with serious mental illness was identified as one of the most important challenges for people working in mental health. This recognition reflects the discussions happening in this field around the world. No longer do clinicians expect to be able to separate the mind from the body. However, even for the bravest clinician there can be a hesitation in tackling such a multifaceted and complex issue. In an area with constant pressure on resourcing and frequent decisions which can be literally 'life or death', changing the status quo is a significant challenge.

This report, and its predecessors, signals a commitment by the RANZCP to work with our members to address the concerns raised about many areas of clinical practice related to treatment of the physical health of people with serious mental illness.

However, this analysis also highlights the fact that psychiatrists cannot achieve these changes alone. Comprehensive, coordinated multilevel approaches are required so that meaningful change can take place. The RANZCP recognises that a consensus for change is needed between a number of stakeholders, including governments, specialist and non-specialist service providers and clinicians (including other colleges and health-care professional and registration bodies), research communities, and industry and consumer organisations. There is an urgent need to challenge the low expectations and service fragmentation that shape the experiences of people with serious mental illness in their interactions with mental and physical health-care services in all settings.

The size of this problem is also an obstacle to change that must be acknowledged. It affects care and treatment in every area, and involves rewriting the guidelines of medicine which have guided practice for decades. However, the enormity of the impact change could make clarifies our focus and intent. Soon to be published economic modelling commissioned by the RANZCP and the Mitchell Institute for Health and Policy shows a substantial cost to the Australian and New Zealand economies from the preventable early deaths and comorbidity of patients with serious mental illness. And whilst economic concerns are important they only serve as an indicator of the pain and suffering endured by patients and their families.

Success will require widespread cultural and attitudinal shifts, workforce developments and service integration driven forward by new integrated policy frameworks aimed at prevention; better treatment, management and rehabilitation; and mental health promotion. This will be most appropriately facilitated by whole-of-government approaches in both Australia and New Zealand.

In New Zealand, under the auspices of the Equally Well initiative, there is an emerging consensus about the need to prioritise the physical health needs of people with serious mental illness. The RANZCP endorses this consensus-building approach and is keen to also contribute to an equally substantial approach in Australia.

The RANZCP recognises that the problems faced by people with both physical and mental illness are multifaceted, complex and systemic. Tackling these will require commitment from all levels of government, from within the health system, from health professionals, and from those with a lived experience of mental illness. As lead clinicians in the field of mental health psychiatrists are keen to play our part. We look forward to the widespread adoption of responsibilities and clinical practices which make these damning statistics a distant memory, as we strive for better outcomes for our patients.

References

- ABC Radio National (2013) Linking body and mind [radio segment; broadcast 19 May 2013 as part of All in the Mind]. <http://www.abc.net.au/radionational/programs/allinthemind/new-document/4689134>
- Acil AA, Dogan S, Dogan O (2008) The effects of physical exercises to mental state and quality of life in patients with schizophrenia. *Journal of Psychiatric and Mental Health Nursing* 15: 808–815.
- Alvarez-Jiménez M, Martínez-García O, Pérez-Iglesias R et al. (2010) Prevention of antipsychotic-induced weight gain with early behavioural intervention in first-episode psychosis: 2-year results of a randomized controlled trial. *Schizophrenia Research* 116: 16–19.
- Ananth J (1984) Physical illness and psychiatric disorders. *Comprehensive Psychiatry* 25: 586–93.
- Andrews G, Henderson S, Hall W, et al. (2001) Prevalence, comorbidity, disability and service utilisation: Overview of the Australian National Mental Health Survey. *British Journal of Psychiatry* 178: 145–153.
- Australian Institute of Health and Welfare (2008) *Australia's health 2008*. Cat. no. AUS 99. Canberra: AIHW. <http://www.aihw.gov.au/publication-detail?id=6442468102>
- Australian Institute of Health and Welfare (2009) *Australia's Welfare 2009*. Cat. no. AUS 117. Canberra: AIHW. <http://www.aihw.gov.au/publication-detail?id=6442468304>
- Australian Institute of Health and Welfare (2011) *The health and welfare of Australia's Aboriginal and Torres Strait Islander people, an overview 2011*. Cat. no. IHW 42. Canberra: AIHW. <http://www.aihw.gov.au/publication-detail?id=10737418989>
- Bartels, S. (2015) Can behavioural health organizations change health behaviour: The STRIDE study and lifestyle interventions for obesity in serious mental illness. *American Journal of Psychiatry* 172:1,9–11.
- Bartels SJ, Pratt SJ, Aschbrenner KA, Barre LK, Naslund, JA, Wolfe R, Xie, H, McHugo, GJ, Jimenez DE, Jue, K, Feldman, J, Bird, BL (2014) *Pragmatic Replication Trial of Health Promotion Coaching for Obesity in Serious Mental Illness and Maintenance of Outcomes*. *American Journal of Psychiatry* 2014; AiA:1–9; doi: 10.1176/appi.ajp.2014.14030357
- Begg S, Vos T, Barker B, et al. (2007) *The burden of disease and injury in Australia, 2003*. Cat. no. PHE 82. Canberra: AIHW. <http://www.aihw.gov.au/publication-detail?id=6442467990>
- Bobes J, González MP, Bascarán. MT, et al. (2001) Quality of life and disability in patients with obsessive-compulsive disorder. *European Psychiatry* 16: 239–45.
- Bodenheimer T (2008) Coordinating care: a perilous journey through the health care system. *New England Journal of Medicine* 358: 1064–7.
- Brown S, Birtwhistle J, Roe L (1999) The unhealthy lifestyle of people with schizophrenia. *Psychological Medicine* 29: 697–701.
- Brown S, Inskip H, Barraclough B (2000) Causes of excess mortality of schizophrenia. *British Journal of Psychiatry* 177: 212–7.
- Brunero S, Lamont S, Fairbrother G (2009) Prevalence and predictors of metabolic syndrome amongst patients attending an outpatient Clozapine clinic in Australia. *Archives of Psychiatric Nursing* 23: 261–8.
- Bushe CJ, Taylor M, Haukka J (2010) Mortality in schizophrenia: a measurable clinical endpoint. *Journal of Psychopharmacology* 24 (suppl. 4): 17–25.
- Cadilhac DA, Magnus A, Cumming T, et al. (2009) *The health and economic benefits of reducing disease risk factors*. Research report for Vic Health. <https://www.vichealth.vic.gov.au/media-and-resources/publications/health-and-economic-benefits-of-reducing-disease-risk-factors>
- Cappo D, McGorry P, Hickie I, et al. (2011) *Including, Connecting, Contributing: A Blueprint to transform Mental Health and Social Participation in Australia*. <http://www.swytch.org.au/resources-1/blueprint-and-blueprint-summary>
- Carney RM, Freedland KE, Miller GE, Jaffe AS (2002) Depression as a risk factor for cardiac mortality and morbidity: a review of potential mechanisms. *Journal of Psychosomatic Research* 53: 897–902.
- Chiang YLJ, Klainin-Yobad P, Ignacio J (2011) The impact of antipsychotic side-effects on attitudes toward medication in patients with schizophrenia and related disorders: a systematic review. *JB Library of Systematic Reviews* 9: 791–832.
- Chief Medical Officer (UK) (2013) *Annual Report of the Chief Medical Officer 2013. Public Mental Health Priorities: Investing in the Evidence*. UK Department of Health. <https://www.gov.uk/government/publications/chief-medical-officer-cmo-annual-report-public-mental-health>
- Chronic Disease Alliance (2011) *Peer Support for People with Chronic and Complex Conditions. A Literature Review*. http://www.chronicillness.org.au/images/linked_documents/PeerSupportforChronicandComplexConditionsLitRevMay2011Final_000.pdf
- Cloitre M, Stolbach BC, Herman JL, et al. (2009) A developmental approach to complex PTSD: childhood and adult cumulative trauma as predictors of symptom complexity. *Journal of Traumatic Stress* 22: 399–408.
- Collins E, Jones L, McVeigh J, et al. (2010) The physical health of the seriously mentally ill: An overview of the literature. *Journal of Psychiatric and Mental Health Nursing* 19:638–46.
- Colton CW, Manderscheid RW (2006) Congruencies in increased mortality rates, years of potential life lost, and causes of death among public mental health clients in eight states. *Preventing Chronic Disease: Public Health Research, Practice, and Policy* 3: 1–14.
- Commonwealth of Australia (2007) *Research and evidence in suicide prevention*. Living Is For Everyone (LIFE) Framework. Pub. no. P3-2060. Canberra: Department of Health and Ageing. <http://www.livingisforeveryone.com.au/Research-and-evidence-in-suicide-prevention.html>
- Commonwealth of Australia (2009) *Closing the Gap on Indigenous Disadvantage. The challenge for Australia*. Canberra: Commonwealth of Australia. https://www.dss.gov.au/sites/default/files/documents/05_2012/closing_the_gap.pdf
- Commonwealth of Australia (2014) *White paper on the Reform of the Federation. Roles and Responsibilities in Health*. Issues Paper 3. Canberra: Department of the Prime Minister and Cabinet. https://federation.dpmc.gov.au/sites/default/files/issues-paper/Health_Issues_Paper.pdf
- Connor Y, Broad J, Rehm J, et al. (2005) The burden of death, disease and disability due to alcohol in New Zealand. *New Zealand Medical Journal* 118: 1213.
- Copeland LA, Zeber JE, Pugh MJ, et al. (2008) Postoperative complications in the seriously mentally ill – a systematic review of the literature. *Annals of Surgery* 248: 31–8.
- Corrigan PW (2005) *On the Stigma of Mental Illness*. Washington, DC: American Psychological Association.

- Craze L, Craze R, Holmes D, et al. (2014) *National Contributing Life Methodology Project Report of the Contributing Life Discussions and Yarns*. Prepared for the Australian Government National Mental Health Commission. Not yet published – personal correspondence with authors.
- Crisp AH, Cowan L, Hart D (2004) The College's Anti-Stigma Campaign, 1998–2003. *The Psychiatrist* 28, 133–36.
- Cunningham R, Peterson D, Sarfati D, Stanley J (2014) Premature mortality in adults using New Zealand psychiatric services. *New Zealand Medical Journal* 127: 31–41.
- Cunningham R, Shaw C, Blakely T et al. (2010) Ethnic and socioeconomic trends in breast cancer incidence in New Zealand. *BMC Cancer* 10: 674.
- Curtis J, Watkins A, Rosenbaum S, et al. (2015) Evaluating an individualized lifestyle and life skills intervention to prevent antipsychotic induced weight gain in first-episode psychosis. *Early Intervention in Psychiatry* 2015; doi: 10.1111/eip.12230.
- Daumit, GL, Dickerson, FB, Wang NH, Dalcin, A, R.D., Jerome, GJ Anderson, CA, Young, DR, Frick, KD, Airong Y., Gennusa JVG, Oefinger, M, Crum, RM, Charleston, J, Casagrande, SS, Guallar, E, Goldberg, RW, Campbell, LM, and Appel, LJ (2013) *A Behavioral Weight-Loss Intervention in Persons with Serious Mental Illness*. The New England Journal of Medicine. 368:17. April 2013.
- De Hert Correll CU, Bobes J, Cetkovich-Bakmas M et al. (2011a) Physical illness in patients with severe mental disorders. 1. Prevalence, impact of medications and disparities in health care. *World Psychiatry* 10: 52–77.
- De Hert M, Cohen D, Bobes J et al. (2011b) 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: 138–51.
- De Hert M, Schreurs V, Vancampfort D (2009) Metabolic syndrome in people with schizophrenia: a review. *World Psychiatry*; 8:15–22.
- Desai MM, Rosenheck RA, Druss BG, Perlin JB (2002) Mental disorders and quality of diabetes care in the veterans health administration. *American Journal of Psychiatry* 2002; 159: 1584–90.
- Di Matteo MR, Lepper HS, Croghan TW (2000) Depression is a risk factor for noncompliance with medical treatment. Meta-analysis of the effects of anxiety and depression on patient adherence. *Archives of Internal Medicine* 160: 2101–7.
- Dinan TG (Ed.) (2004) Schizophrenia and diabetes 2003: an expert consensus meeting. *British Journal of Psychiatry* 184 (suppl. 7); S53–114.
- Disability Rights Commission (UK) (2006) *Equal Treatment. Closing the Gap. A formal investigation into physical health inequalities experienced by people with learning disabilities and/or mental health problems*. Stratford upon Avon: Disability Rights Commission. <http://disability-studies.leeds.ac.uk/files/library/DRC-Health-FI-main.pdf>
- Doll R, Peto R, Boreham J, Sutherland I (2004) Mortality in relation to smoking: 50 years' observations on male British doctors. *BMJ* 328: 1519.
- Duckett S, Breadon P (2014) *Out of pocket costs: hitting the most vulnerable hardest*. Grattan Institute submission to the Senate Standing Committee on Community Affairs Inquiry into the Out of-pocket costs in Australian healthcare. Melbourne: Grattan Institute. http://grattan.edu.au/wp-content/uploads/2014/07/Grattan_Institute_submission_-_inquiry_on_out-of-pocket_costs_-_FINAL.pdf
- Eappen V, Shiers D, Curtis J (2012) Bridging the Gap from evidence to policy and practice: Reducing the progression to metabolic syndrome for children and adolescents on anti-psychotic medication. *Australian and New Zealand Journal of Psychiatry* 47: 435–42.
- Ehrlich C, Kendall E, Frey N, et al. (2013) Improving the physical health of people with severe mental illness: Boundaries of care provision. *International Journal of Mental Health Nursing* 23: 243–51.
- Fenton W, Stover E (2006) Mood disorders: cardiovascular and diabetes co-morbidity. *Current Opinion in Psychiatry* 19: 421–7.
- Fleischhacker WW, Cetkovich-Bakmas M, De Hert M, et al. (2008) Comorbid somatic illnesses in patients with severe mental disorders: clinical, policy, and research challenges. *The Journal of Clinical Psychiatry* 69: 514–9.
- Foot C, Gilbert H, Dunn, P, et al. (2014) *People in control of their own health and care. The state of involvement*. London: The Kings Fund. <http://www.kingsfund.org.uk/publications/people-control-their-own-health-and-care>
- Fortin M, Soubhi H, Hudon C, et al. (2007) Multimorbidity's many challenges. *BMJ* 334: 1016–7.
- Frayne SM, Halanych JH, Miller DR, et al. (2005) Disparities in diabetes care: impact of mental illness. *Archives of Internal Medicine* 165: 2631–28.
- Friedli L, Parsonage M (2007) *Mental Health Promotion: Building an economic case*. Belfast: Northern Ireland Association for Mental Health. http://www.chex.org.uk/media/resources/mental_health/Mental%20Health%20Promotion%20-%20Building%20an%20Economic%20Case.pdf
- Galletly CA, Foley ED, Waterreus A, et al. (2012) Cardiometabolic risk factors in people with psychotic disorders: The second Australian National survey of psychosis. *Australian and New Zealand Journal of Psychiatry* 46: 753.
- Gilbert H (2014) Cultural change is as important as funding in transforming mental health [blog article]. The Kings Fund. <http://www.kingsfund.org.uk/blog/2014/09/cultural-change-transforming-mental-health>
- Glover JD, Hetzel DM, Tennant SK (2004) The socioeconomic gradient and chronic illness and associated risk factors in Australia. *Australia and New Zealand Health Policy* 1: 8.
- Goldacre MJ, Kurina LM, Wotton CJ, et al. (2005) Schizophrenia and cancer: an epidemiological study. *The British Journal of Psychiatry* 187: 334–8.
- Goldman LS (1999) Medical illness in patient with schizophrenia. *Journal of Clinical Psychiatry* 60: 10–15.
- Green, CA, Yarborough, BJH, Leo, MC, Yarborough, MT, Stumbo, SP, Janoff, SL, Perrin, NA, Nichols, GA, Stevens, VJ (2014) *The Stride Weight Loss and Lifestyle Intervention for Individuals Taking Antipsychotic Medications: A Randomized Trial*. American Journal of Psychiatry.
- Hall-Flavin DK, Winner JG, Allen JD, et al. (2013) Utility of integrated pharmacogenomic testing to support the treatment of major depressive disorder in a psychiatric outpatient setting. *Pharmacogenetic Genomics* 23: 535–48.
- Health Workforce Australia (2014) *Mental Health Peer Workforce Literature Scan*. <https://www.hwa.gov.au/our-work/mental-health-workforce-reform/mental-health-peer-workforce>
- Hicks J K, Swen JJ, Thorn CF et al. (2013) Clinical Pharmacogenetics Implementation Consortium Guideline for CYP2D6 and CYP2C19 Genotypes and Dosing of Tricyclic Antidepressants. *Clinical Pharmacology and Therapeutics* 93: 402–8.

- Hugo M (2001) Mental health professionals' attitudes towards people who have experienced a mental health disorder. *Journal of Psychiatric and Mental Health Nursing* 8: 419–25.
- Inspire Foundation (2014) *Crossroads: Rethinking the Australian Mental Health System*. <http://about.au.reachout.com/wp-content/uploads/2015/01/ReachOut.com-Crossroads-Report-2014.pdf>
- International Physical Health in Youth (iphYs) working group (2013) *Healthy Active Lives (HeAL) consensus statement*. www.iphys.org.au
- Jorm AF (2014) Why hasn't the mental health of Australians improved? The need for a national prevention strategy. *Australian and New Zealand Journal of Psychiatry* 48, 795–801.
- Jorm AF, Christensen H, Griffiths KM (2005) The impact of beyondblue. The national depression initiative on the Australian public's recognition of depression and beliefs about treatments. *Australian and New Zealand Journal of Psychiatry* 39, 248–54.
- Katon JW, Russo JE, Von Korff M, et al. (2010) Collaborative care for patients with depression and chronic illnesses. *New England Journal of Medicine* 363, 2611–20.
- Kendrick T (1996) Cardiovascular and respiratory risk factors and symptoms amongst general practice patients with long-term mental illness. *British Journal of Psychiatry* 169: 73–9.
- Knapp M, Lemmi V (2013) The economic case for better mental health. In: Davies S (ed.) *Annual Report of the Chief Medical Officer 2013. Public Mental Health Priorities: Investing in the Evidence*. London: Department of Health, pp. 147–156.
- Knapp M, McDaid D, Parsonage M (2011) Mental health promotion and prevention: the economic case. *New Zealand Journal of Psychiatry* 48: 795–801.
- Kohen D (2005) Physical health in mental illness. Psychiatric shared responsibility. *Advances in Psychiatric Treatment* 11: 789–96.
- Lai DW, Chau SB (2007) Effects of service barriers on health status of older Chinese immigrants in Canada. *Social Work* 52: 261–9.
- Lambert TJ, Velakoulis D, Pantelis C (2003) Medical comorbidity in schizophrenia. *Medical Journal Australia* 178: S67–S70.
- Laplagne P, Glover M, Shomos A (2007) *Effects of health and education on labour force participation*. Staff working paper, Productivity Commission.
- Lawn S (2011) Self-management: supporting people with mental health and physical health conditions. Presentation for the Mental Illness Fellowship Victoria, May 2011. <http://www.mifellowship.org/sites/default/files/pdfs/3.%20Health%20Self-Management/3.2%20Dr%20Lawn%27s%20presentation.pdf>
- Lawn S, Schoo A (2010) Supporting self-management of chronic health conditions: Common Approaches. *Patient Education and Counselling* 80: 205–11.
- Lawrence D, Hancock KJ, Kisely S (2013) The gap in life expectancy from preventable physical illness in psychiatric patients in Western Australia: retrospective analysis of population based registers. *BMJ* 346: f2539.
- Lawrence D, Kisely S (2010). Inequalities in healthcare provision for people with severe mental illness. *Journal of Psychopharmacology* 24 (suppl. 4): 61–8.
- Leucht S, Burkard T, Henderson J, et al. (2007) *Physical Illness and Schizophrenia. A Review of the Evidence*. Cambridge: Cambridge University Press.
- Levinson D, Lakoma MD, Petukhova M, et al. (2010) Associations of serious mental illness with earnings: results from the WHO World Mental Health surveys. *The British Journal of Psychiatry* 197: 114–21.
- Li Y, Glance LG, Cai X, Mukamel DB (2008) Adverse hospital events for mentally-ill patients undergoing coronary artery bypass surgery. *Health Services Research* 43: 2239–52.
- Maj M (2009) Physical health care in persons with severe mental illness: a public health and ethical priority. *World Psychiatry* 8: 1–2.
- Manderschied R, Delvecchio P (2008) Guest Editors' Introduction: Moving Toward Solutions: Responses to the Crisis of Premature Death. *International Journal of Mental Health* 37: 3–7.
- Mateen FJ, Jatoi A, Lineberry TW, et al. (2008) Do patients with schizophrenia receive state-of-the-art lung cancer therapy? A brief report. *Psychooncology* 17: 721–5.
- McCrone P, Knapp M, Lawton-Smith, ST (2013) The cost of mental health care in England to 2026. In: Davies S (ed.) *Annual Report of the Chief Medical Officer 2013. Public Mental Health Priorities: Investing in the Evidence*. London: Department of Health, pp. 147–156.
- Meehan T, Madson K, Shepherd N, Siskind D (2010) Housing and Support Program final evaluation report. Queensland Health, Brisbane. Cited at <https://www.ranzcp.org/Files/Publications/psyche/Jan-2015/RANZCP-2015-Queensland-State-Election-Submission.aspx>
- Mental Health Commission (NZ) (2012) *Blueprint II. Improving mental health and wellbeing for all New Zealanders. How things need to be*. Wellington: Mental Health Commission. <http://www.hdc.org.nz/publications/other-publications-from-hdc/mental-health-resources/blueprint-ii-improving-health-and-wellbeing-for-all-nz-how-things-need-to-be>
- Ministerial Advisory Committee on Mental Health (Victoria) (2012) *Improving the physical health of people with severe mental illness. Report*. <http://docs.health.vic.gov.au/docs/doc/Improving-the-physical-health-of-people-with-severe-mental-illness-No-mental-health-without-physical-health>
- Ministry of Health (NZ) (2012) *Rising to the challenge. The mental health and addiction services development plan, 2012–17*. Wellington: Ministry of Health. <http://www.health.govt.nz/publication/rising-challenge-mental-health-and-addiction-service-development-plan-2012-2017>
- Mitchell AJ, Lord O, Malone D (2012) Differences in the prescribing of medication for physical disorders in individuals with v. without mental illness: meta-analysis. *British Journal of Psychiatry* 201: 435–43.
- Mitchell AJ, Malone D, Doebbeling CC (2009) Quality of medical care for people with and without comorbid mental illness and substance misuse: systematic review of comparative studies. *British Journal of Psychiatry* 194: 491–9.
- Monash Alfred Psychiatry Research Centre (2014) Healthy lifestyles and outcomes video on website. Accessed at www.maprc.org.au
- Moore, A, Giuli L, Gould R, et al. (2006) Alcohol use, comorbidity, and mortality. *Journal of the American Geriatrics Society* 54: 757–62.
- Morgan VA, Waterreus A, Jablensky A, et al. (2012) People living with psychotic illness in 2010: the second Australian national survey of psychosis. *The Australian and New Zealand Journal of Psychiatry* 46: 735–52.
- Morgan, MAJ, Coates MJ, Dunbar JA, et al. (2013) The TrueBlue model of collaborative care using practice nurses as case managers for depression alongside diabetes or heart disease: a randomised trial. *BMJ Open* 3: e002171.

- Moussavi S, Chatterji S, Verdes E, et al. (2007) Depression, chronic diseases, and decrements in health: results from the World Health Surveys. *Lancet* 370: 851–8.
- Musselman DL, Evans DL, Nemeroff CB (1998) The relationship of depression to cardiovascular diseases; epidemiology, biology and treatment. *Archives of General Psychiatry* 55: 580–92.
- Nasrallah HA, Meyer JM, Goff DC, et al. (2006) Low rates of treatment for hypertension, dyslipidemia and diabetes in schizophrenia: data from the CATIE schizophrenia trial sample at baseline. *Schizophrenia Research* 86: 15–22.
- National Mental Health Commission (Australia) (2013) *A Contributing Life: the 2013 National Report Card on Mental Health and Suicide Prevention*. Sydney: National Mental Health Commission. <http://www.mentalhealthcommission.gov.au/our-2013-report-card.aspx>
- National Mental Health Report (2010) Australian Government Department of Health. <http://health.gov.au/internet/publications/publishing.nsf/Content/mental-pubs-n-report10-toc~mental-pubs-n-report10-c~mental-pubs-n-report10-c-5~mental-pubs-n-report10-c-5-9>
- Nelson G, Westhuis A, Mcleod J (2003) A Meta-analysis of Longitudinal Research on Preschool Prevention Programmes for Children. *Prevention and Treatment* 6: 31a [cited in *Learning from the EIP paradigm: Application to children and young people, people with long term conditions and people living with dementia*. North East Mental Health Development Unit. <http://www.nemhdu.org.uk/silo/files/learning-from-the-eip-paradigm--march-2010.pdf>]
- Nover C, Jackson SS (2013) Primary care-based educational interventions to decrease risk factors for metabolic syndrome for adults with major psychotic and/or affective disorders: a systematic review. *Systematic Reviews* 2, 116.
- O'Connor P, Schottenfield R (1998) Patients with alcohol problems. *New England Journal of Medicine* 338: 592–682.
- Oakley Browne MA, Wells JE, Scott KM (2006) *Te rau hinengaru: The New Zealand Mental Health Survey*. Wellington: Ministry of Health. <http://www.health.govt.nz/publication/te-rau-hinengaro-new-zealand-mental-health-survey>
- Organ B, Nicholson E, Castle D (2012) Implementing a Physical Health Strategy in a Mental Health Service. *Australasian Psychiatry* 18: 456–9.
- Ormel J, Kempen GJM, Deeg DJH, et al. (1998) Functioning, well-being, and health perception in late middle-aged and older people: Comparing the effects of depressive symptoms and chronic medical conditions. *Journal of the American Geriatrics Society* 46: 39–48.
- Ostille DO, Warren AM, Kulkarni J (2014) The role of pharmacogenomic testing in psychiatry. *Australian and New Zealand Journal of Psychiatry* 0004867413520050 [Epub ahead of print].
- Parkes J, Radke AQ (eds) (2008) *Obesity reduction and prevention strategies for individuals with serious mental illness*. Alexandria, VA, USA: National Association of State Mental Health Program Directors (NASMHPD) Medical Directors Council. http://dhss.delaware.gov/dhss/dsamh/files/obesity_reduct_prevent_article.pdf
- Perron BE, Howard MO, Nienhuis JK, et al. (2009) Prevalence and burden of general medical conditions among adults with bipolar I disorder: results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Journal of Clinical Psychiatry* 79: 1407–15.
- Peterson D, Pere L, Sheehan N, Surgenor G (2007) Experiences of mental health discrimination in New Zealand. *Health and Social Care in the Community* 15: 18–25.
- Phelen M, Stradins L, Morrison S (2001) Physical health of people with severe mental illness. *BMJ* 322: 443–4.
- Pilling S, Anderson I, Goldberg D et al. (2009) Depression in adults, including those with a chronic physical health problem: summary of NICE guidance. *BMJ* 339: b4108.
- Pinfold V, Huxley P, Thornicroft G (2003) Reducing psychiatric stigma and discrimination. Evaluating an educational intervention with the police force in England. *Social Psychiatry and Psychiatric Epidemiology* 38: 337–44.
- Pots WTM, Meulenbeek PAM, Veehof MM, et al. (2014) The efficacy of mindfulness-based cognitive therapy as a public mental health intervention for adults with mild to moderate depressive symptomatology : a randomized controlled trial. *PLOS One* 9:e109789.
- Price Waterhouse Coopers (2014) *Creating a mentally healthy workplace. Return on investment analysis*. Report for beyondblue. http://www.headsup.org.au/docs/default-source/resources/beyondblue_workplaceroi_finalreport_may-2014.pdf?sfvrsn=4
- Productivity Commission (2013) *Inquiry into the Mental Health System*. <http://www.cch.com.au/au/News/ShowNews.aspx?ID=40263&Type=F&TopicIDNews=8>
- Rehm J, Gmel G, Sempos CT, Trevisan M (2003) Alcohol-related morbidity and mortality. *Alcohol Research* 35: 178–184.
- Repper J, Perkins R (2003) *Social inclusion and recovery. A model for mental health practice*. Sidcup, UK: Baillière-Tindall.
- Rethink Mental Illness (2013) *Lethal discrimination: why people with mental illness are dying needlessly and what needs to change*. London: Rethink Mental Illness. <http://www.rethink.org/media/810988/Rethink%20Mental%20Illness%20-%20Lethal%20Discrimination.pdf>
- Roberts L, Roalfe A, Wilson S, Lester N (2007) Physical health care of patients with schizophrenia in primary care: a comparative study. *Family Practice* 24: 34–40.
- Robson, D Gray R (2007) Serious mental illness and physical health problems: a discussion paper. *International Journal of Nursing Studies* 443: 457–466.
- Rosenbaum S, Tiedemann A, Sherrington C, et al. (2014a) Physical activity interventions for people with mental illness: a systematic review and meta-analysis. *Journal of Clinical Psychiatry* 75: 964–74.
- Rosenbaum S, Tiedemann A, Ward PB, et al. (2014b) Physical activity interventions: an essential component in recovery from mental illness. *British Journal of Sports Medicine* bjsports-2014-094314 [epub ahead of print].
- Rosenberg S, Hickie I (2013) Managing madness: mental health and complexity in public policy. *Evidence Base* 2013, issue 3.
- Royal Australian and New Zealand College of Psychiatrists. Practice Guidelines 10 and 7. <http://www.ranzcp.org/publications/statements-guidelines.aspx>
- Royal Australian and New Zealand College of Psychiatrists (2014) *Keeping your head above water: Affordability as a barrier to mental health care*. A report prepared for the RANZCP by CEG-AP Consultants. Melbourne: RANZCP. https://www.ranzcp.org/Files/Resources/Media_Centre/FINAL-RANZCP_Affordability-Mental-Health.aspx
- Saha S, Chant D, Mcgrath J (2007) A systematic review of mortality in schizophrenia. *Archives of General Psychiatry* 64: 1123–1131.
- Sainsbury Centre for Mental Health (SCMH) (2007) *Mental Health at Work: Developing the business case*. Policy Paper 8. London: SCMH. http://www.centreformentalhealth.org.uk/pdfs/mental_health_at_work.pdf

- Schofield DJ, Callander EJ, Shrestha RN, et al (2013) The indirect economic impacts of co-morbidities on people with depression. *Journal of Psychiatric Research* 47, 796–801.
- Schofield DJ, Callander EJ, Shrestha RN, et al. (2013) Multiple chronic health conditions and their link with labour force participation and economic status. *PLoS One* 8: e79108.
- Schou M, Vestergaard P (1981) Lithium and kidney scare. *Psychosomatics* 22: 92.
- Silva MJDe, Mckenzie K, Harpham T, Huttly SRA (2005) Social capital and mental illness: a systematic review. *Journal of Epidemiology and Community Health* 59: 619–27.
- Shiers DE, Rafi I, Cooper SJ (2014b). *Positive cardiometabolic health resource: an intervention framework for patients with psychosis and schizophrenia*. London: Royal College of Psychiatrists, London, 2014.
- Shiers, D and Curtis J (2014a) *Cardiometabolic health in young people with psychosis*. *Lancet Psychiatry* 2014 Published Online, November 19, 2014, [http://dx.doi.org/10.1016/S2215-0366\(14\)70398-0](http://dx.doi.org/10.1016/S2215-0366(14)70398-0)
- Smith S, Soubhi H, Fortin M, Hudon C, O'Dowd T (2012) Managing patient with multimorbidity: a systematic review of interventions in primary care and community settings. *BMJ* 345: e5205.
- Snell B, Askenasy AR, Krasnoff L, et al. (1978) Exemplification of a method for scaling life events: the Peri life events scale. *Journal of Health and Social Behavior* 19: 205–229.
- Sokal J, Messias E, Dickerson FB (2004) Comorbidity of medical illnesses among adults with serious mental illness who are receiving community psychiatric services. *Journal of Nervous and Mental Disorders* 192: 421–7.
- Strang J, Babor T, Caulkins J, et al. (2012) Drug policy and the public good: evidence for effective interventions. *The Lancet* 379: 71–83.
- Szmuckler G, Applebaum P (2001) Treatment pressures, coercion and compulsion. In: Thornicroft G, Szmuckler G (eds) *Textbook of Community Psychiatry*. New York: Oxford University Press, pp. 529–44.
- Taylor G, McNeill A, Girling A, et al. (2012) Change in mental health after smoking cessation. Systematic review and meta-analysis. *BMJ* 348: g1151.
- Te Pou (2014) *The physical health of people with a serious mental illness and/or addiction. An evidence review*. Auckland: Te Pou o Te Whakaaro Nui, The National Centre of Mental Health Research, Information and Workforce Development. <http://www.tepou.co.nz/library/tepou/the-physical-health-of-people-with-a-serious-mental-illness-and-or-addiction-an-evidence-review>
- Thornicroft G (2006) *Shunned. discrimination against people with mental illness*. Oxford: Oxford University Press.
- Thornicroft G, Brohan E, Rose D, et al. (2009) Global pattern of experienced and anticipated discrimination against people with schizophrenia: a cross-sectional survey. *The Lancet* 373: 408–15.
- Thornicroft G, Rose D, Mehta N (2010) Discrimination against people with mental illness: what can psychiatrists do? *Advances in Psychiatric Treatment* 16: 53–59.
- Townsend A, Hunt K, Wyke S (2003) Managing multiple morbidity in mid-life. A qualitative study of attitudes to drug use. *BMJ* 327: 837.
- Unützer J, Schoenbaum M, Katon W, et al. (2009) Healthcare costs associated with depression in medically ill fee-for-service medicare participants. *Journal of the American Geriatrics Society* 57: 506–10.
- Vahia IV, Diwan S, Bankole AO, et al. (2008) Adequacy of medical treatment among older persons with schizophrenia. *Psychiatric Services* 59: 853–9.
- Vancampfort D, Probst, M, Scheewe T (2011) Lack of physical activity during leisure time contributes to an impaired health related quality of life in patients with early schizophrenia. *Schizophrenia Research* 129: 122–7.
- Von Korff M, Glasgow RE, Sharpe M (2002) Organising care for chronic illness. *BMJ* 325: 92.
- Von Korff M, Glasgow RE, Sharpe M (2002) Organising care for chronic illness. *BMJ* 325: 92.
- Vos D, Barker B, Stanley L, Lopez A (2007) The burden of disease and injury in Aboriginal and Torres Strait Islander peoples 2003. Brisbane: School of Population Health, The University of Queensland. <http://www.craah.org.au/sites/default/files/docs/Indigenous-BoD-Report.pdf>
- Welch CA, Czerwinski D, Ghimire B, Bertsimas D (2009) Depression and costs of health care. *Psychosomatics* 50: 392–401.
- Wereneke U, Ott M, Salander E, et al. (2012) A decision analysis of long term lithium treatment and the risk of renal failure. *Acta Psychiatrica Scandinavica* 126: 186–97.
- Wheeler A, McKenna B, Madell D (2013) Stereotypes do not always apply. Findings from a survey of the health behaviours of mental health consumers compared with the general population. *The New Zealand Medical Journal* 126: 35–46.
- Whitehead WE, Palsson O, Jones KR (2002) Systematic review of the comorbidity of irritable bowel syndrome with other disorders: what are the causes and implications? *Gastroenterology* 122: 1140–56.
- Wilkinson DG, Greer S, Toone BK (1983) Medical students' attitudes to psychiatry. *Psychological Medicine* 13: 185–92.
- Winner J, Allen JD, Altar CA, Spahic-Mihajlovic A (2013) Psychiatric pharmacogenomics predicts health resource utilization of outpatients with anxiety and depression. *Translational Psychiatry* 3: e242.
- World Health Organization (2000) *Women's mental health. An evidence-based review*. Geneva: WHO. http://www.who.int/mental_health/publications/women_mh_evidence_review/en/
- World Health Organization (2003) *Social determinants of health: the solid facts*, 2nd edition, Marmot M, Wilkinson R (eds). Geneva: WHO. http://www.euro.who.int/__data/assets/pdf_file/0005/98438/e81384.pdf
- World Health Organization (2005) *The Mental Health Atlas 2005*, revised version. Geneva: WHO.
- World Health Organization (2011) *The Mental Health Atlas 2011*, revised version. Geneva: WHO. http://whqlibdoc.who.int/publications/2011/9799241564359_eng.pdf?ua=1
- World Health Organization (2012) *Risks to mental health. An overview of vulnerabilities and risk factors*. Geneva: WHO. http://www.who.int/mental_health/mhgap/risks_to_mental_health_EN_27_08_12.pdf
- Young AH, Hammond JM (2007) Lithium in mood disorders: increasing evidence base, declining use? *British Journal of Psychiatry* 191: 474–6.
- Ziedonis DM, Williams JM (2003) Management of smoking in people with psychiatric disorders. *Current Opinion in Psychiatry* 16: 305–15.



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