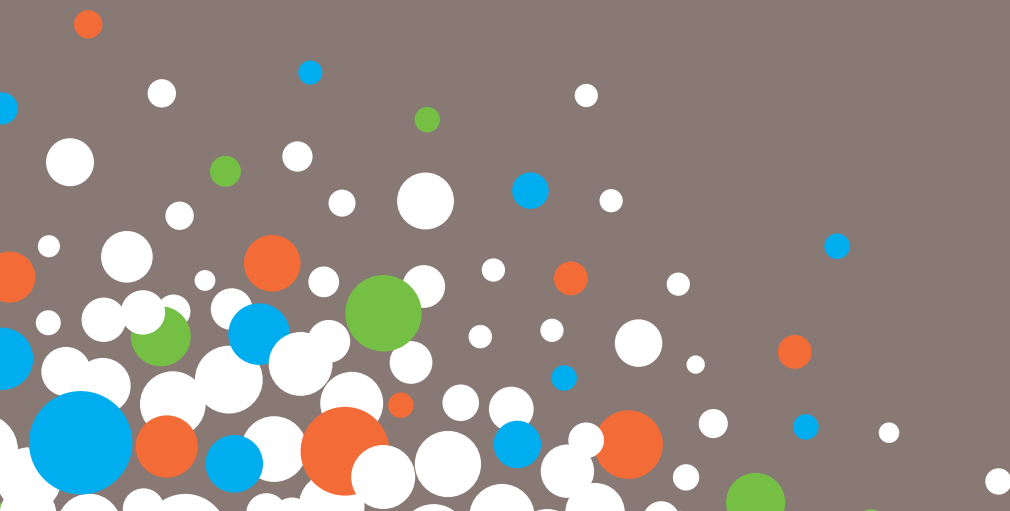




The National Centre of Excellence
in Youth Mental Health

Physical challenge

Wider health impacts for young people with a mental illness



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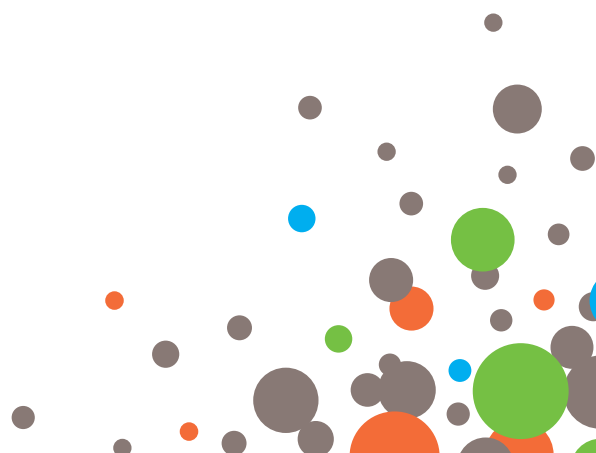
Orygen, The National Centre of Excellence in Youth Mental Health

Locked Bag 10
Parkville Vic 3052
Australia

www.orygen.org.au

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Thank you to all the people who contributed to this report:

Professor Eóin Killackey

Orygen, The National Centre of Excellence in Youth Mental Health

Dr Jackie Curtis

Clinical Director, Youth Mental Health, South Eastern Sydney Local Health District and Conjoint Senior Lecturer, University of New South Wales

Dr Alexandra Parker

Orygen, The National Centre of Excellence in Youth Mental Health

Dr Anne O'Connell

General Practitioner

Ms Melissa Thurley

Orygen Youth Health Clinical Program, Youth Participation Coordinator, Platform and Peer Support Programs

Members of the PLATFORM Team

Orygen Youth Health Clinical Program, Melbourne Health

Dr Katherine Thompson

Senior Research Fellow, HYPE Clinic, Orygen, the National Centre of Excellence in Youth Mental Health

Dr Heather Down

Private provider, General Practitioner, headspace Sunshine

Secretariat

General Practice Mental Health Standards Collaboration

Professor Andrew Chanen

Orygen, The National Centre of Excellence in Youth Mental Health

Abbreviations

ABS	Australian Bureau of Statistics
AIHW	Australian Institute of Health and Welfare
AHPRA	Australian Health Practitioner Regulation Agency
CALD	Culturally and linguistically diverse (background)
CAMHS	Child and Adolescent Mental Health Services
CBT	Cognitive Behavioural Therapy
CHC	Council of Australian Governments Health Council
COAG	Council of Australian Governments
eMHPrac	e-Mental Health in Practice
GP	General Practitioner
HeAL	Healthy Active Lives
HETI	Health Education and Training Institute (NSW)
HIV	Human Immunodeficiency Virus
MBS	Medicare Benefits Schedule
MI	Motivational Interviewing
MHNIP	Mental Health Nurse Incentive Program
MST	Multi-systemic Therapy
NSMHW	National Survey of Mental Health and Wellbeing
PIP	Practice Incentives Program
RACGP	Royal Australian College of General Practitioners
SHIP	Survey of High Impact Psychosis
SMS	Short Messaging Service (aka text messages)
SSHC	Sydney Sexual Health Centre
STI	Sexually Transmissible Infection
YHMP	Youth Health Management Plan (proposed)

Executive Summary

The window of highest onset of mental illness is between the ages of 12 and 25 years. The onset of mental illness brings with it greater risks of poorer physical health outcomes, including sexual and oral health. Despite the increased need to provide holistic health service following the onset of a mental illness, this illness often becomes the single focus, to the detriment of a young person's physical and sexual health.

The type and level of physical health effects will vary among young people and according to the type of illness they suffer from. Physical effects may not be immediately obvious, with many effects evident at a later age due to the accumulated risk of poor diet and/or lack of activity, along with higher rates of smoking, drinking or other drug use among young people with a mental illness. Negative physical health effects of medications prescribed for treating mental illnesses add to the challenge.

The interplay between mental and physical health is illustrated in the role nutrition and physical activity can play in treating mental illness, along with the reduction or cessation of alcohol/other drug use. Early interventions that improve behavioural aspects may minimise the severity of mental illness and the required level of treatment.

Greater understanding of the physical health effects of mental illness will provide the foundation on which public health policies, prevention programs and increased early intervention can be developed. To adequately address the poorer physical health outcomes for young people with a mental illness will require the integration of a broader range of health services, including access to allied health professionals, such as dieticians, exercise physiologists and sexual health nurses. The development of evidenced-based treatment approaches to the physical health of young people with a mental illness will require changes to service delivery models, increased workforce training and collaboration at all levels of care.

“ Physical and mental wellbeing is often difficult to define and measure using objective measures such as mortality, morbidity, or disability and activity limitations. Health is more than just the presence or absence of disease, or activity and participation restrictions, and it is well recognised that health needs to be defined more broadly.

Young Australians: their health and wellbeing 2011

Federal leadership is required to drive the design and implementation of holistic health care for young people with a mental illness. The disparity in resource capacity between States and Territories demands efficient coordination of health planning and information services. Improved service engagement with young people is required to realise the available benefits for the individual and the community. Improvements have already been achieved in the implementation of the youth-specific headspace services and increasingly through the development and application of new technologies (mobile and online platforms). The Australian government will work with States and Territories to achieve the integration of mental health services through the Fifth National Mental Health Plan.

While the physical and sexual health risks for young people with a mental illness are known and the steps needed to be taken are evident, the size of the problem and the extent of the required service improvement and expansion has yet to be accurately quantified. Improved data collection on the interplay between the mental, physical and sexual health of young people and the extent of the problem is required. Further research to economically evaluate available and emerging treatments is also required to inform policy development in this area.

This policy white paper identifies opportunities to improve the for physical, sexual and mental health services for young people in three areas: policy, health services and data monitoring and research.

Future directions

This policy white paper has identified a number of opportunities that reflect the gaps in knowledge, available resources, workforce capacity and service delivery available to address the effects and accumulated risk to the physical and sexual health of a young person with a mental illness.

These opportunities fall into three areas: policy, services and data monitoring and research.

Policy

Opportunity	Mechanism
A specific chapter planning for the direction and provision of mental health services for 12–25 year olds in the forthcoming Fifth National Mental Health Plan would provide an opportunity to articulate measurable actions to deliver early interventions and treatment of the wider health implications for young people with a mental illness.	Council of Australian Governments – Fifth National Mental Health Plan
Smaller States and Territories have limited resources to establish and maintain websites with accessible information for young people. Consideration should be given to integrating State and Territory resources and services into the Australian Government’s digital mental health gateway.	Department of Health
There is a need to ensure that all young people have a sound level of literacy around their sexual health and wellbeing. Consideration should be given to developing a national curriculum for sexual health and wellbeing programs to ensure all secondary students receive the same level of education.	Council of Australian Governments, Department of Health

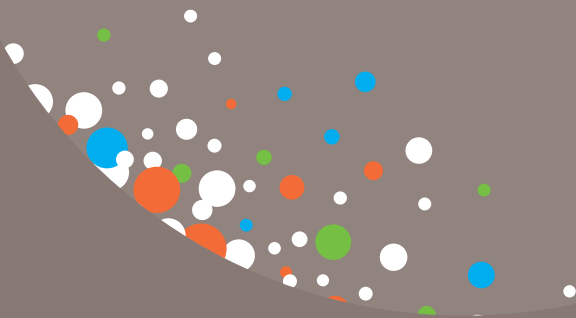
Services

Opportunity	Mechanism
<p>The Australian government has announced a packaged care policy for people with a severe or complex mental illness. A targeted Youth Health Management Plan (YHMP) to increase monitoring and treatment of the wider health of young people with mental ill-health could be trialled by GPs over three years as part of this policy. A range of allied health and/or nursing services would need to be available through the YHMP including: sexual health nurses, social workers, exercise physiologists, accredited dietitians and dental nurses/hygienists, or dental assistants.</p>	<p>Primary Health Networks, Department of Health</p>
<p>headspace centres from ten Primary Health Networks which have General Practitioners on staff should be chosen as trial sites for the inclusion of a dietician, exercise physiologist and sexual health nurse to provide physical and sexual health monitoring and treatment for young people with a diagnosed moderate mental illness.</p>	<p>Primary Health Networks, headspace</p>
<p>Mental health nurses play an important role in the management of people's mental health treatment. This role should be expanded to include accredited training in the monitoring of physical and sexual health symptoms. Incentives for nurses to undertake this training could be considered.</p>	<p>Council of Australian Governments, Australian College of Mental Health Nurses</p>
<p>Training in the monitoring and treatment of physical and sexual health is required for all disciplines working in public, private and non-government mental health services. Professional Bodies and the Australian Health Practitioner Regulation Agency need to make continuing professional education in this area a requirement of their membership and registration eligibility frameworks for related disciplines.</p>	<p>Australian Health Practitioner Regulation Agency, Professional Bodies</p>
<p>The side-effects of some medication used to treat mental illness can contribute to poor physical and sexual health outcomes young people. Drugs with fewer, or lower, negative physical or sexual effects on a young person's health should be first-line options when determining treatment for young people.</p>	<p>Professional Bodies</p>
<p>The HeAL statement on the holistic treatment of young people with psychosis provides a model that could be extended to depression and personality disorders. The HeAL statement includes five-year targets for achieving improved physical health outcomes for young people. Options include:</p> <ul style="list-style-type: none"> ▪ Active approaches to booking appointments and sending reminders. ▪ Routine annual full physical (including oral/dental) examinations for young people commenced on medication. ▪ Training in physical healthcare monitoring to be provided to mental health clinical teams. ▪ Incorporation of the importance of physical healthcare monitoring in training curricula for students in mental health and allied professions. 	<p>Department of Health, Professional Bodies, Universities</p>

Data monitoring and research

Opportunity	Mechanism
<p>Three options exist for improving the collection of data on the mental, physical and sexual health of young people.</p> <ul style="list-style-type: none"> ▪ A specific survey of 12-25 year olds focused on issues relevant to this age group (including health, lifestyle, education and training) to provide an accurate picture and inform policy development. ▪ An expanded sample and questionnaire in the third National Survey of Mental Health and Wellbeing (anticipated in 2017) including: <ul style="list-style-type: none"> › schizophrenia, schizophrenia spectrum and personality disorders within the mental illness categories; › greater collection of physical health data; and › a sexual health component. ▪ Extend the Mental Health Survey of Australian Children to include young people up to the age of 25 years and increase the sample of Aboriginal and Torres Strait Islander people (urban and regional/remote) and hard to reach and at risk groups of young people. 	<p>Australian Institute of Health and Welfare, Australian Bureau of Statistics</p>
<p>eHealth products and services utilising mobile and online platforms are delivering new opportunities for efficiency and improved engagement with young people. This possibility is to be harnessed by the Australian government through a proposed digital gateway to mental health services. The speed with which new programs can be developed demands that measurable outcomes remain a focus. The use of new technologies to deliver ehealth requires a system of evaluation and accreditation.</p>	<p>Orygen, The National Centre of Excellence in Youth Mental Health, National Drug and Alcohol Research Centre</p>
<p>More research is needed to measure and identify which interventions work for identifying and providing effective early treatment for potential physical and sexual health issues for young people with a mental illness and to centrally curate existing evidence.</p>	<p>Orygen, The National Centre of Excellence in Youth Mental Health, National Health and Medical Research Council</p>

Early intervention in the care of the physical health of young people with a mental illness will support recovery in the short-term, with long-term benefits.



What do we know about health?

Most of us take our physical health for granted. Aside from a winter cold, perhaps we have an occasional complaint that is quickly resolved or we accept some changes and pains as part of the ageing process. For most young people, their self-perception is one of good health. Self-reporting by people aged 15–24 years found that 93% rated their health as 'good', 'very good' or 'excellent', higher than any older age group (Australian Institute of Health and Welfare 2011).

For young people who suffer from mental ill-health, however, their physical health is less robust. In Australia a quarter of people aged 12–25 years will experience a diagnosable mental disorder in any one year (Australian Bureau of Statistics 2010). Yet, when health care is accessed the interaction between a person's mental health and their physical and sexual health is often overlooked. Once a young person's mental health is being treated the focus of health professionals on their physical health has been found to decline (Mai et al. 2010). There is a singular focus on treating mental health symptoms. This contributes to an increased rate of experiencing poor physical health among this group, as well as to the accumulation of risk for increased physical health problems and premature mortality in the future.

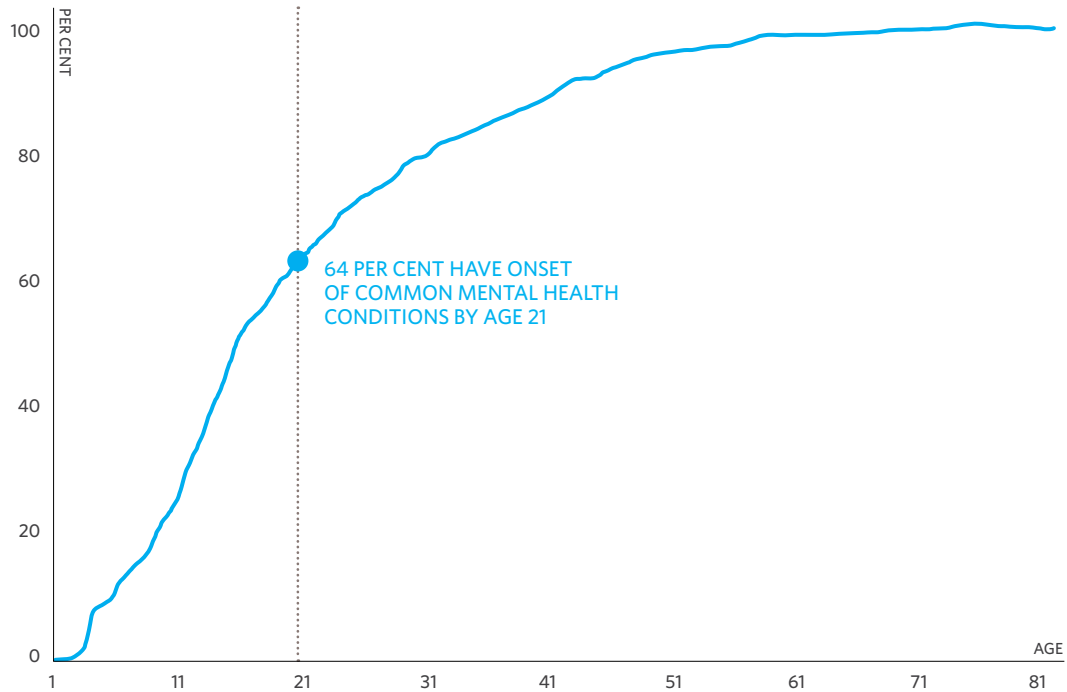
The overlap and interplay of a person's physical and mental health requires a holistic approach to health care that considers the whole person. For young people, the importance of access to integrated health services is underlined by the range of changes that occur, at times quickly, during adolescence.

While a variety of physical and biological changes take place in the transition to adulthood, health and social behaviours are also being established. Compounding the health risks during this stage of development is the peak in onset of mental ill-health. The highest rate of onset mental illness occurs between the ages of 12 to 24 years (Kessler et al. 2005).

“ Adolescence, with its rapid physical, mental and hormonal changes, can trigger risky behaviours around smoking, alcohol and poor diet that can lead to chronic health problems as adults.

AGE OF ONSET FOR MOST COMMON MENTAL HEALTH CONDITIONS (CUMULATIVE PROPORTION)

Source: Budget 2011-12: Delivering better hospitals, mental health and health services (Australian Government 2011)



There is also evidence of an increased risk for marginalised groups in this age range. Among Aboriginal and Torres Strait Islander youth the burden of disease is higher, an unacceptable disparity attributed to 'high rates of mental disorder, substance use and injury' (Australian Institute of Health and Welfare 2011). A high rate of mental illness among young people who are homeless, together with negative experiences of the health system (Department of Health 1997), increases the risk of serious physical and sexual health issues. High rates of sexual assault and participation in sex work or 'favours' among this group further increases the sexual health risks they face (Morrison 2009). Young people who are lesbian, gay, bisexual, transgender or intersex

have higher rates of alcohol and other drug use and mental health issues, which increase the risks of poorer physical and sexual health outcomes. These increased health risks and relatively poorer health outcomes have been attributed to experiences of discrimination and abuse (National Mental Health Commission 2014b).

A heightened risk of mental ill-health among people aged 12-25 years and the corresponding risk to their physical and sexual health highlights the need for a comprehensive approach to youth health care. The increased risk for marginalised groups requires that health services engaging with these young people are resourced to 'cover all the bases'.

Mental health

A national picture of mental ill-health among young people in Australia is provided by the National Survey of Mental Health and Wellbeing (NSMHW) (Australian Bureau of Statistics 2010). While bipolar disorder was included in the survey, schizophrenia, schizophrenia spectrum and personality disorders were not included. Conducted by the Australian Bureau of Statistics (ABS) in 2007, the survey included some questions about people's physical health.

More than a quarter of 16–24 years olds (26.4%) were identified as having 'met the criteria for lifetime diagnosis and had symptoms' for a mental disorder in the 12 months prior to interview. Among young people with a mental illness, almost six in ten (58%) had an anxiety disorder, 24% had an affective disorder and nearly half (48%) had a substance use disorder. These proportions add up to more than 100%, indicating that many young people with one mental illness meet criteria for two or more disorders.

Young women were more likely to have a mental disorder (30.1%) compared with young men (22.8%). Anxiety (72%) and affective (28%) disorders were more prevalent among women than men (41% and 19% respectively). Young men were more than twice as likely to have a substance use disorder (68% compared with 33%).

Although not all psychotic illnesses were measured in the NSMHW a nationally representative sample of people living with psychotic illnesses was gathered in the Survey of High Impact Psychosis (SHIP) study in 2010 (Morgan et al. 2011). This

study found that almost two-thirds (64.8%) of people experience their first psychotic episode before the age of 25 years. For the majority of people the onset is gradual, providing a realistic opportunity for early intervention.

General practitioners play a central role in the care of people with a psychotic illness. Most GPs (86.5%) treat patients in collaboration with a mental health team. In comparison, only a third of SHIP participants had been treated by a GP for physical (metabolic, cardiovascular or kidney) disorders, of which one in ten (11.4%) had been referred for specialist treatment. There is evidence that the physical health of young people with a mental illness is not receiving the attention or treatment required.

Personality disorders are another form of mental illness that have a detrimental effect of people's physical and sexual health, as well as their interpersonal and adaptive functioning. The lifetime prevalence of personality disorders in Australia has been estimated at 6.5% of the adult population (Jackson and Burgess 2000). Younger people have been found to be at greater risk of having a personality disorder. The prevalence of severe borderline personality disorders in teenagers has been found to be the range of 0.9% and 3%, extending to 10.8% if moderate cases are included (Chanen et al. 2007). The level of available evidence of the specific health effects of personality disorders is not as developed though as it is for depression and psychosis (Quirk et al. 2015b).

The ABS survey of the mental health of young people used three categories of mental disorder. These categories 'were considered to have the highest rates of prevalence in the population and that [are] able to be identified in an interviewer based household survey'.

The categories of mental disorder were:

Anxiety disorders (panic disorder, agoraphobia, social phobia, generalised anxiety disorder, obsessive-compulsive disorder and post-traumatic stress disorder)

Affective (mood) disorders (depressive episode, dysthymia and bipolar disorder)

Substance Use disorders (alcohol harmful use, alcohol dependence and drug use disorders)

Physical health

People with a mental illness experience higher rates of physical illness than the rest of the population and die up to three decades earlier. Risk of poor physical health outcomes accumulates from the earliest stages of mental illness, thus making physical health care a central issue in early intervention for mental illness. Poorer physical health and premature mortality are noted across the diagnostic spectrum (McCloughen 2012). The link has been recognised by clinicians, clients, researchers, governments and health departments for a number of years. For example, the Fourth National Mental Health Plan stated that more needs to be done to:

“...lower the risk factors and improve the management of physical illness in those who suffer mental health problems.

Australian Government 2009, p. 65

The National Mental Health Commission's 2012 Report card found (again) that the link between poorer physical health and mental illness is being effected by an imbalance in the provision of health care in Australia.

“On a daily basis, care is being compromised by the unequal status and treatment of mental health and physical health conditions.

National Mental Health Commission 2013, p. 33

Despite this, there is evidence that the problem is becoming worse rather than better (Lawrence et al. 2013). There continues to be a shortfall in the provision of physical health care for young people with a mental illness. Early intervention in the care of the physical health of young people with a mental illness will support recovery in the short-term, with long-term benefits.

Rates of activity and obesity

The NSMHW includes data on the physical health of young people with a mental illness. This group are more likely to have low or sedentary levels of exercise. The disparity is higher among women (69% reported low or sedentary levels of exercise) than men (54%). Almost three in ten young people (29%) with a mental illness were overweight or obese. The incidence was highest among people with an affective disorder (35%) and slightly more prevalent among men.

The SHIP study provides further data (for an adult population) on the physical health of people with psychosis. Three-quarters of survey participants (73.4%) were overweight or obese. One-third of participants (33.5%) were classified as sedentary, while the remainder reported a low level of activity in the week before the survey. Older respondents were more likely to be sedentary than 18–34 year olds.

There is also a link between personality disorders and poorer physical health outcomes. There is an increased likelihood of poor life outcomes among people with co-occurring physical health conditions and borderline personality disorder compared with those with the mental disorder alone (El-Gabalawy et al. 2010). A study of adults in the US found a link between personality disorders and diabetes and gastrointestinal diseases. There was also a link between some forms of personality disorders and cardiovascular disease and/or arthritis in adults aged under 55 years (Quirk et al. 2015a). The lack of evidence for personality disorders and young people compared with depression and psychosis points to the need for further research. It was recognised by the authors of the study that the incidence of physical illness among people with personality disorders may be influenced by unhealthy lifestyles and alcohol/other drug use.

Alcohol and other drugs

The physical health of young people with a mental illness will also be affected where there is alcohol and other drug use. The proportion of people with a mental illness who use tobacco differs by age. Amongst 13-17 year olds with a major depressive disorder the rate is 24.4% (Lawrence et al 2015) and increases to 38.1% for 16-24 year olds (Australian Bureau of Statistics 2010) and 69.9% for 18-34 year olds with a psychotic illness (Morgan et al. 2011). More than a third (34.3%) of 13-17 year olds had consumed alcohol in the 30 days prior to being surveyed and were more than three times as likely to have used cannabis. Almost a quarter (24%) of 16-24 year olds in the older NSMHW reported consuming alcohol three or more days a week and 17% used other drugs at least once a day. A majority of 18-34 years olds with a psychotic illness (SHIP) had a lifetime history of alcohol (54.7%) and/or cannabis (64.3%) use or dependence.

Based on self-reported rates of smoking and the prevalence of mental illness among young people it can be estimated how many cigarettes young people with a mental illness smoke. Data from the Australian Institute of Health and Welfare (AIHW) shows that 12-24 year olds reported smoking 40 million cigarettes each week in 2013 (Australian Institute of Health and Welfare 2014b). People who smoke are almost 50% more likely to self-report mental illness (Australian Institute of Health and Welfare 2014b) and the prevalence rates of mental illness for young people have been found to be 26% in 16-24 year olds (Australian Institute of Health and Welfare 2011) and 14% in 12-15 year olds (Sawyer M G et al. 2000). It can be estimated that young people with mental illnesses may smoke approximately 14.7 million cigarettes each week (or 5% of all cigarettes smoked).

In addition to the long-term health impacts of such consumption, the financial cost of smoking is considerable for young people with mental illnesses. On the basis of the \$14 billion being spent annually by households on cigarettes and related products (Australian Bureau of Statistics 2015), estimated consumption by young people with mental illnesses would equate to a cost of approximately \$700 million each year. These figures may be an underestimate, however, as they do not adjust for the fact that people with mental illnesses on average smoke more cigarettes than other people who smoke.

The customs and excise on cigarettes was \$0.36 per cigarette in 2013 (Scollo 2013). The government, therefore, collected an estimated \$274 million from young people with a mental illness, almost offsetting the approximately \$300 million spent on disability support payments to young people aged 16-24 in 2014 (National Mental Health Commission 2014a, Department of Social Services 2013). When all taxes relating to cigarette consumption are accounted for, those paid by young people aged 12-24 with mental illnesses in 2013 may have been \$424 million.

Medication

Medication used to treat mental illness can contribute to poor physical health outcomes. For example, some medications are known to cause significant weight gain. While most of the research on this weight gain has been conducted in populations of older adults, more recent research has shown that young people are particularly susceptible to weight increase due to these medications. These medications are used to treat psychotic illness, but are increasingly being prescribed for non-psychotic illnesses. Increases in overweight and obesity in this group is a direct contributor to an increased risk of diabetes, cardiovascular disease and metabolic syndrome.

The poorer physical health of people with mental ill-health contributes to their lower life expectancy. The onset of physical ill-health related to a mental illness may be delayed, perhaps until adulthood, following the onset of mental health issues as a young person (McCloughen 2012). This delay highlights the need for, and the challenge of, developing early interventions to improve physical health outcomes among an age group who may not be experiencing negative effects on their physical health.

Physical health care is the focus of much of the primary health system. Once a mental illness is diagnosed, however, this health issue quickly becomes the principal focus, with physical health care falling aside. The imbalance in treatment needs to be addressed through a holistic approach to a young person's health. For young people this includes their sexual health.

Sexual health

Along with the physical development and higher rate of onset mental illness occurring between the age of 12 and 25 years is a person's sexual development. Sexual development includes increased sexual exploration, intimate relationships and the forming of a sexual identity. Providing sexual health care for a young person with a mental illness will need to consider the roles of, and interaction between, sexual attraction, behaviour and identity. For many young people this development will see the initiation of sexual interactions with others, which increases the importance of sexual health care.

The increased risk for young people with a mental illness who are homeless, engage in sexual favours or exchange, participate in sex work or have a history of sexual abuse, requires specific policy attention. Existing practices frequently include sexual trauma in initial assessments of young people presenting with a mental illness. Consistency is important in this practice, especially among general practitioners who may not be regularly engaging with young people in these situations.

A good resource for the sexual health care of young people with mental health issues has been produced by Orygen Youth Health with contributions from Family Planning Victoria, Rainbow Network, Zoe Belle Gender Centre Inc. (ZBGC) and Platform. The booklet, *Beyond Awkward*, (Orygen Youth Health) is a resource for mental health clinicians but provides accessible information on the issue of sexual health as it relates to young people with mental ill-health. The booklet was a primary reference for the following section.

Sexual behaviour

An active sex life brings added health risks and the need for protected sex. Younger people (13-17 years) with a major depressive disorder were more than three times as likely to have had sexual intercourse compared with people with no diagnosed disorder (Lawrence 2015). While sexual health care for young people with a mental illness has often focused on the prevention of unwanted pregnancy, the risk from sexually transmissible infections (STIs) is a larger health concern. The sexual health and safety of young people with a mental illness is founded upon an understanding and maintenance of physical and psychological boundaries.

Risky sexual behaviour is high among young people, and as a result they have a disproportionately higher incidence of sexual ill-health. 13-17 year olds with a major depressive disorder are 1.5 times less likely to have used a condom and slightly more likely to have used alcohol or other drugs prior to having sex (Lawrence 2015). Among sexually active students four in ten (39%) report that they only 'sometimes' use a condom when they have sex. Seventeen per cent of sexually active students were 'drunk or high' the last time they had sex. Sexual intercourse was reported by a third of students, of whom a quarter indicated that at some time they had had sex when they did not want to (Mitchell et al. 2014). Many young people are sexually active, making their sexual health an important component of a holistic approach to youth health.

There are higher rates of STIs among younger Australians compared with the general population. For example, 15-29 year olds account for approximately 82% of chlamydia notifications (Australian Bureau of Statistics 2012). For young people with a mental illness the risk of infection is increased by the link between mental ill-health and sexual risk-taking behaviours (Edwards et al. 2014). An Australian study of 15-18 years olds found higher rates of lifetime sexually transmitted infections in people with a borderline personality disorder compared with other personality disorders and no such disorder (Chanen et al. 2007). A correlation between mental ill-health and sexual risk-taking behaviours increases the risk of infections. Alcohol and other drug use is an additional risk factor (Edwards et al. 2014). The picture of risk reinforces the need for coordinated approaches to youth health policy that encompasses all aspects of their health.

Sexual identity

A young person's sexual development includes the formation of sexuality and sexual identity, which can include same sex attraction. When a young person feels their identity is acknowledged and valued their mental health will benefit. While impressions of social and peer respect for an individual's identity cannot be readily controlled, a mental health clinician is in a position to support a person's sexual and mental health in the manner they respond to expressed sexual identity.

The various aspects of sexual development and health occurring at this age are a further challenge for young people with a mental illness. It is important that a young person's sexual health does not fall to a distant third priority behind their mental and physical health.

Oral health

There are a range of risk factors for a person's oral health that can be linked to their mental health and accumulated physical health effects. People with a serious mental illness (i.e., schizophrenia, bipolar disorder) have higher rates of oral and dental health problems. Pain and discomfort and dental-related stigma are also issues that affect a person's quality of life. A range of oral and dental health effects are linked with associated health issues for young people with a mental illness, such as tobacco use, poor diet and alcohol/other drug use.

Overall, there is limited literature on the oral health risks for people with severe mental illnesses (Happell et al. 2015). Oral health issues for people with a severe mental illness include a risk of complete tooth loss three times that for the general population (Kisely et al. 2011). However, the evidence of the link between poorer oral health and schizophrenia (McCreadie et al. 2004) is less conclusive when fluoridation is accounted for (Abdellatif 2012). Xerostomia (dry mouth) can be caused by tobacco use and poor diet (both common among persons with a severe mental illness) and antipsychotic medication.

A survey of mental health nurses examined the impact of severe mental illness on oral health (Happell et al. 2015). A majority of mental health nurses (71.4%) considered that the greatest gap between people with a mental illness and the general population was in oral/dental health. Approximately half the nurses surveyed reported giving advice on dental health to their patients.

Due to the accumulated risk of poor oral health the symptoms are less likely to arise for young people with a mental illness. The risk of poor dental health and psychosis treatments points to the potential of early intervention in the oral health care of young people diagnosed with psychosis. To achieve the provision of adequate early intervention and treatments will require increased access to dental nurses. Dental nurses need to be included in the suite of allied health services included in the proposed Youth Health Management Plan.

The physical and sexual health of young people with a mental illness

Existing research and available data shows that young people with a mental illness have increased physical and sexual health issues. These health needs cannot be treated in isolation, there is an interaction between the mental, physical and sexual health of a young person.

At risk groups

A young person's circumstances can make them more vulnerable to poor health outcomes. Factors are varied, but demonstrate the influence of social and cultural factors and personal histories and circumstances on a person's health. The range of people's experiences may contribute to the risk of mental illness and also the level of treatment they may receive. Existing disparities in the physical and sexual health risks of marginalised young people are likely to be exacerbated by mental ill-health.

At risk groups include young people who:

- are Aboriginal and Torres Strait Islanders;
- live out of home, in foster care or are homeless;
- have had contact with the justice system;
- are lesbian, gay, bisexual, transgender and intersex;
- are from a culturally and linguistically diverse (CALD) community.

The interaction of physical, sexual and mental health

For young people with a mental illness their physical and sexual health becomes a greater issue. The issues are complex and can depend on the type of illness and treatment received. For people suffering depression and anxiety, nutrition and physical activity can form early interventions to address their mental ill-health, whereas the side-effects of some medications for psychosis can result in rapid weight gain impacting on the physical health of a young person. Some medications prescribed for mental illnesses can also decrease sexual desire and cause erectile dysfunction and vaginal dryness (Orygen Youth Health).

For young people with a mental illness, the physical and sexual health risks they face represents an accumulation of health risks. The interaction between a person's mental health and their physical and sexual health makes addressing all aspects of a person's health necessary, and ignoring one or both in focusing on mental health symptoms disregards this accumulated risk.

Recognition of the need for a holistic health focus for people with a mental illness was identified in the *National Review of Mental Health Programmes and Services*. The review stated that the 'appalling' physical health of people with severe mental illness makes the integration of primary physical and mental health a logical policy direction (National Mental Health Commission 2014a). While the report recognises the increased mental health issues for lesbian, gay, bisexual, transgender or intersex people, the absence of discussion regarding sexual health reflects a lack of coordinated sexual health care within existing mental health programs and services.

The prevalence of alcohol and other drug use by young people further illustrates the need for a complete approach to health care for young people. The use of alcohol/other drugs can have long-term effects on a person's physical and mental health. The higher use of alcohol/other drugs by young people with a mental illness also increases the likelihood of risky behaviour, with potential consequences for their physical and sexual health.

For further information see the Orygen, The National Centre of Excellence in Youth Mental Health policy white paper: *Two at a time: alcohol and other drug use by young people with a mental illness*.

Interventions and consequences

The consequences of some treatments for mental illness can include rapid weight gain, onset of diabetes and sexual dysfunction. The potential for such consequences highlights the need for including physical and sexual health care alongside mental health treatment. Similarly, the role of physical activity and nutrition as an intervention for some forms of mental illness reinforces the need for providing complete health care for young people.

There is a high probability that a young person's mental ill-health will have negative effects on their physical and/or sexual health. Given the health risks associated with mental ill-health, more needs to be done to draw attention to these issues and provide access to information and help. Despite the name, headspace: The National Youth Mental Health Foundation is based on four pillars of support for young people: general health and wellbeing; mental health; alcohol and other drugs; and education, employment and training. These pillars provide scope for the provision of information about, and services for, a young person's physical and sexual health. The integration of headspace with other youth services identified by the Australian government has the potential to increase awareness of mental, physical and sexual health issues and services for young people.

Summary

Young people can face many health issues in the transition to adulthood. While health issues may have been categorised in the past, there is increasing evidence of the interaction between mental health and other aspects of a person's health. For young people with a mental illness there is an accumulation of physical and sexual health risks, some of which may not become evident until later in life.

This interaction is recognised in public health literature; for example the *Linking physical and mental health care...it makes sense* brochure from NSW Health (New South Wales Health 2009), which is available in 11 languages (Health Translations Online Directory 2015). While there is recognition of these links, and policy reports have repeatedly identified the need to address mental and physical health together (the need to also include sexual health is less frequently recognised), health services are not yet adequately treating the whole person.

Opportunity	Mechanism
<p>Three options exist for improving the collection of data on the mental, physical and sexual health of young people.</p> <ul style="list-style-type: none"> ▪ A specific survey of 12-25 year olds focused on issues relevant to this age group (including health, lifestyle, education and training) to provide an accurate picture and inform policy development. ▪ An expanded sample and questionnaire in the third National Survey of Mental Health and Wellbeing (anticipated in 2017) including: <ul style="list-style-type: none"> › schizophrenia, schizophrenia spectrum and personality disorders within the mental illness categories; › greater collection of physical health data; and › a sexual health component. ▪ Extend the Mental Health Survey of Australian Children to include young people up to the age of 25 years and increase the sample of Aboriginal and Torres Strait Islander people (urban and regional/remote) and hard to reach and at risk groups of young people. 	<p>Australian Institute of Health and Welfare, Australian Bureau of Statistics</p>



IMPLICATIONS

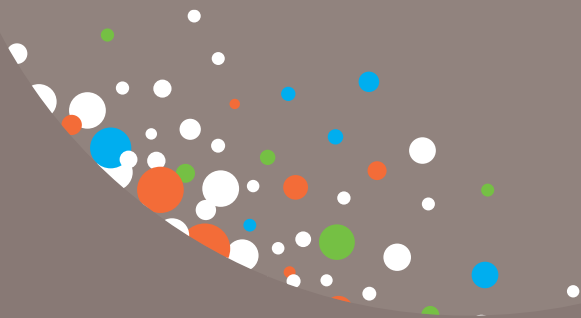
With the increased onset of mental illness between the ages of 12 and 25 years comes greater risk of poor physical health outcomes, including sexual and oral health. While these wider health effects may not be immediately apparent, an accumulation of risk will contribute to poorer health prospects and reduced life expectancy.

The complexity of interacting health factors is not sufficiently measured in health data presently collected for young people. To accurately determine the effects of mental health on a young person's physical and/or sexual health and develop programs and policies to address these health issues improved data collection is required.

Greater understanding of the physical health effects of mental illness is necessary to ensure better health outcomes and future prospects of young people. This understanding will be the foundation for the development of public health policies, prevention programs, increased early intervention and service delivery models, workforce capability and holistic treatment for young people.

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The challenge of developing a holistic health policy for young people with a mental illness is heightened by the different effects and needs of different illnesses.



Different illnesses; different needs

The increased accumulation of physical and sexual health risks for young people with a mental illness highlights the importance of monitoring and treating each aspect of a person's health. The challenge of developing a holistic health policy for young people with a mental illness is heightened by the different effects and needs of different illnesses.

Within the scope of this policy paper a number of factors shaping the health of young people with a mental illness are considered. These factors are nutrition, physical activity, alcohol/other drug use and the side-effects of medication prescribed for the treatment of a mental illness. Due to the differences in the roles of these factors for different mental illnesses they will be considered separately, initially in terms of depression and anxiety; secondly with regard to psychosis and severe mood disorders; and briefly personality disorders (reflecting the limited available evidence).

Depression and anxiety

Treatment of depression and anxiety can include changes in a young person's diet and level of physical activity. There is also an association between depression and anxiety and the use of alcohol and other drugs.

Analysis by the AIHW (2012) found that young women (aged 16–24 years) with an anxiety disorder were almost four times more likely to also have a physical health condition (9.5%) than young men (2.4%). Rates of comorbid physical health conditions and an affective disorder (including depression) were lower, however, young women (4.3%) were still twice as likely to have a comorbid illness compared with young men (1.8%). There are limitations in analysing the co-occurrence of physical conditions and mental illness in young people due to the accumulated risk of physical health outcomes that may not become evident until adulthood.

Physical activity

Physical activity affects the balance of brain chemicals that can affect mood and thinking and help grow new brain cells. Among people with depression and anxiety there is an increased risk of lower levels of physical activity, which in turn increases the risk of poorer physical health outcomes. It is recommended that someone aged 12–18 years should exercise moderately for an hour over the course of a day, and that those over

18 years should exercise for 30 minutes a day. Although more than two out of three young people engage in some form of physical activity, less than half engage in moderate to vigorous exercise (Muir et al. 2009). Awareness of current activity guidelines among clinicians is mixed (Daley 2008), therefore, young people with a mental illness require specific support from professionals, such as exercise physiologists, to increase their engagement in physical activity.

Young people with depression or anxiety face illness-related barriers such as a lack of motivation and energy, which decrease their capacity to engage in physical activity (Morgan et al. 2013a, Rosenbaum et al. 2015). Although beneficial, physical activity may not appeal to someone who is depressed or anxious. Promoting opportunities and incentives to exercise needs to be presented in a variety of ways to appeal to different people. Choosing one's own activities has been shown to increase the likelihood of engagement in physical activity as part of treatment. Tapping into intrinsic (enjoyable, fun, satisfying activities) and extrinsic (knowledge on link between activity and mental health) motivation is important.

Promoting physical activity is made more difficult by the increased prevalence of 'screen time'. Seven out of ten secondary students exceed the daily recommended weekday use of computers and consoles for communicating with friends, playing games and watching television during the week, increasing to more than 80% on the weekend. Limiting the length of sedentary behaviour, particularly through reduced screen time, can reduce the risk of adverse physical and mental health outcomes for 13-17 year olds (Okely et al. 2013).

There is also a link between rates of physical activity by young people and participation in paid employment or study. There is a lower participation rate in physical activity among 15-24 year olds not in paid work or education. This group are 2.4 times less likely to exercise. Employed youth are less likely to exercise than those studying by a factor of 1.5. Young people not working or studying are also more likely to experience mental ill-health (Muir and Powell 2012). The wider importance of participation in paid employment or study of young people with mental ill-health is beyond the scope of this paper.

For more discussion see the Orygen, The National Centre of Excellence in Youth Mental Health 2014 policy paper: *Tell them they're dreaming: work, education and young people with mental illness in Australia*.

Nutrition

The potential for poorer physical health outcomes among young people with depression and anxiety is compounded by the quality and consistency of their diet. The potential for weight gain as a result of reduced activity, poor nutrition and the side-effects of some medication prescribed for depression and anxiety underlines the physical health risks of mental ill-health.

Various approaches have been taken in the study of nutrition and mental health outcomes. For example, diet quality is related to the health of the immune system, which also moderates the risk of depression (Sarris et al. 2015) and can be an indicator of future mental health (Jacka et al. 2011). Less attention has been directed at the risks of poor nutrition on the physical health of people with depressive symptoms and anxiety.

The relationship between depression and anxiety and nutrition can become more complex when disordered eating manifests as an eating disorder. There are particularly strong associations between eating disorders and depressive disorders, with lifelong comorbidity estimates of 40% for anorexia nervosa and 50% for bulimia nervosa (Rodgers and Paxton 2014, Surgenor and Maguire 2013). While this topic is beyond the scope of this paper, it is the subject of another policy paper from Orygen, the National Centre of Excellence in Youth Mental Health: *Nip It In The Bud: Intervening early for young people with eating disorders*.

Alcohol and other drugs

Excessive consumption of alcohol can contribute to liver and heart disease, cancer and accidents resulting in permanent injury or death. The utility of guidelines for alcohol consumption are limited for young people. The legal drinking age is 18 years. The National Health and Medical Research Council guidelines for young people (18 years and under) is that not drinking alcohol is the safest option. However, Guideline 3 states that the 'greatest risk of harm from drinking' is in people aged under 15 years and that initiation of drinking by 15-17 year olds should be delayed as long as possible (National Health and Medical Research Council 2015).

Physical immaturity and inexperience with alcohol increase the health risks of alcohol consumption by young people. Yet patterns of adolescent drinking are mostly at risky levels (Hayes et al. 2004). Consumption is also higher among young people with a mental illness. More than half (56.7%) of 16–24 year olds with a mental illness consume alcohol at least weekly, compared with 34% of their peers without a diagnosed mental illness (Australian Bureau of Statistics 2010). Higher levels of consumption increase the health risks of alcohol use by this age group. Alcohol use by 12–25 year olds presents an increased short-term risk of physical impairment or death from risky behaviour and an accumulated disease burden in the longer-term.

Smoking is a major risk factor for many serious health issues, including coronary heart disease, stroke and numerous cancers. Although rates of smoking in Australia have been decreasing, the rate of smoking among people with a mental illness remains higher than for the general population. Almost four in ten (37%) 16–24 year olds with an anxiety disorder smoke tobacco (Australian Bureau of Statistics 2010). While there has been a decline in the proportion of Aboriginal and Torres Strait Islander people smoking and the number of cigarettes smoked, approximately a third (32%) of this population were smokers in 2013 (Department of Health 2015).

For more information on alcohol and other drug use by young people with a mental illness refer to the Orygen, The National Centre of Excellence in Youth Mental Health policy paper: *Two at a time: alcohol and other drug use by young people with a mental illness*.

Psychosis and severe mood disorders

Many of the secondary effects of nutrition, physical activity and alcohol and other drug use on the physical health of young people with a mental illness discussed above are applicable across different mental illnesses. There are, however, specific issues for young people suffering from psychosis and mood disorders as a result of higher than average rates of obesity and smoking.

An overview of the comorbidity of physical health conditions and psychosis is available for 18–64 year olds. A snapshot of the nutrition, weight and activity of this group illustrates the contributing factors to poorer physical health outcomes they experience (Morgan et al. 2011).

- Two-fifths (41.5%) had one serve or less of vegetables a day and 7.1% did not eat vegetables at all.
- Three-quarters (73.4%) were overweight or obese, with almost half (45.1%) in the obese range.
- One-third (33.5%) were classified as sedentary and the remaining two-thirds had a low level of activity.
- Two-thirds (66.1%) of participants reported being smokers.
- One-quarter reported engaging in risk-taking behaviour over the past year as a result of their alcohol (26.6%)/other drug use (26.5%; excluding tobacco).

Nutrition

The link between diet and mental health demonstrates the interaction of physical and mental health. For example, severe macronutrient deficiencies during periods of development have also been linked with psychosis (Sarris et al. 2015). Among young people with first-episode psychosis there is a heightened risk of weight gain, extending to obesity. Obesity has been found in 42–60% of people with schizophrenia and 68% of people with bipolar affective disorder (De Hert et al. 2011). Obese people have shorter life spans and are at increased risk of developing Type 2 diabetes and cardiovascular disease. This increased risk is due to metabolic syndrome, a constellation of health issues including obesity, dyslipidaemia, hypertension, and impaired glucose tolerance.

Metabolic syndrome is found in between 61% and 68% of people with schizophrenia and 30% of people with bipolar affective disorder (Álvarez-Jiménez et al. 2008a, Morgan et al. 2013b). In first-episode psychosis, the rate is already 13%, double the rate in the general population (Curtis et al. 2011). The importance of prevention and early intervention is reinforced by the difficulty of cardiometabolic remediation.

Physical activity

An increased rate of obesity among young people with psychosis can in part be attributed to medications used to treat this illness. Therefore, there is a role for addressing lifestyle factors as part of overall treatment. Physical activity, along with nutrition, has the potential to attenuate these health risks. The risks of metabolic syndrome can be ameliorated with exercise interventions (Wu et al. 2007) as well as nutritional counselling and cognitive behavioural therapies. In treating the physical health of young people with psychosis, physical activity and nutrition are mutually inclusive.

Alcohol and other drugs

Tobacco smoking, one of the leading causes of preventable death and disease in Australia, is a considerable physical health risk for young people with psychosis. The evidence indicates that high rates of tobacco smoking are present at the onset of illness. Seventy-three per cent of people attending a first-episode psychosis clinic in Melbourne were found to be smoking daily at admission, increasing to 76% being daily smokers 15 months later (Wade et al. 2006).

Among adults with a psychotic illness, 71% of males and 59% of females use tobacco (Galletly et al. 2012). In other words, for males with psychotic illness, the prevalence of smoking in 2010 was the same as for the general population of males in the 1940s, and five times that of the current general population. Females in the general population have never smoked as much as females with psychosis. Higher smoking rates increase the risk of longer-term health consequences.

Personality disorders

Although the evidence is not as well established, there is now a growing body of evidence that shows young people with a personality disorder have a heightened need for physical health care as a result of their mental illness. Poor physical health among people with a personality disorder is linked with unhealthy lifestyles. A UK study of adults with personality disorders found that death from natural causes was independently associated with severe physical illness (Fok et al. 2014).

Alcohol and other drugs

Young people with a borderline personality disorder start smoking at an earlier age compared to young people with other forms of personality disorders or no disorder. A study of Australian young people (15–18 years) found that more than half the people with a borderline personality disorder met criteria for a tobacco-related disorder (Chanen et al. 2007). In the UK, the mortality of adults with a personality disorder has been associated with alcohol and other drug use. Mild use is associated with natural causes and severe use with unnatural causes of death (Fok et al. 2014).

Summary

The overlap between nutrition, physical activity and mental health provides multiple opportunities for improving health outcomes for young people. Improving nutrition is a potential early intervention and therapeutic component in the treatment of more advanced mental disorders. Promotion of healthy eating is no longer just about physical health, but mental health too.

More needs to be done to address smoking rates among young people with a mental illness and among Aboriginal and Torres Strait Islander people. Undermining this objective is a culture among some clinicians that accepts or excuses smoking by people with a mental illness (Lawn 2011). While nicotine may calm the nerves or improve attention and concentration, effects are short-lived, lasting as little as five minutes (Weir 2013). In contrast, the long-term health risks of smoking are considerable, necessitating greater efforts to reduce smoking among young people with a mental illness.

**IMPLICATIONS**

The form and magnitude of physical health effects young people may experience will be shaped by the mental illness they suffer from. These effects can also be shaped by behavioural patterns and treatment medications.

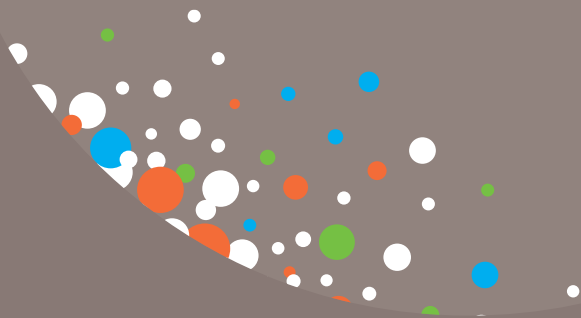
Factors influencing a young person's physical health include nutrition quality, levels of physical activity and alcohol and other drug use. These factors overlap, with all three contributing to an individual's health outcomes.

Health programs need to reflect this complexity and address all aspects of physical health. For example, increased physical activity will be more beneficial if it is paired with improved nutrition. Tobacco use can no longer be ignored or excused considering the accumulated health risks of smoking for a young person.

The gaps in available evidence for different categories of mental illness need to be filled to ensure that the physical health implications for all young people with a mental illness can be addressed.

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A reluctance to seek help, a shortage of available services or barriers to access increase the risk that the physical and sexual health of young people with a mental illness will go untreated and potentially develop into more severe conditions.



Delivering services

The Australian government has announced reforms to the funding of primary health care services including mental health services. From 2016-17 mental health services are to be commissioned through 31 Primary Health Networks (PHNs). The PHNs will be supported to plan services based on local need and have been instructed not to duplicate services funded by the States and Territories through hospitals and community health services. It is important that the Australian government, State and Territory governments and PHNs work together to provide to best care for young people.

Commonwealth

Primary health services are the 'gateway' to the health system for most people. Seeing a doctor about a health complaint or issue begins the process of diagnosis and treatment, which can draw in specialist services as required. Where barriers to seeing a doctor exist, particularly for young people, seeking health care may be delayed until an acute event results in hospitalisation. Such barriers block the potential for early interventions for young people.

Young people with a mental illness are more likely to turn to family and friends for help (Tylee et al. 2007). Three out of four young people do not access mental health care (Freijser and Brooks 2013). A reluctance to seek help, a shortage of available services or barriers to access increase the risk that the physical and sexual health of young people with a mental illness will go untreated and potentially develop into more severe conditions.

Unpublished data from the General Practice Mental Health Standards Collaboration Secretariat (General Practice Mental Health Standards Collaboration 2015) shows that there are high levels of mental health training among General Practitioners (GPs). Approximately three in four registered GPs (76%) have undertaken mental health skills training. This level of training is required to access certain MBS item numbers for the development of mental health treatment plans. Evidentially, basic mental health training among GPs is high in Australia.

Despite the high rate of mental health training among GPs, there is some evidence that the additional time required to plan for and manage a mental health program is a barrier to providing this service. The issue of time constraints has been cited by the Royal Australian College of General Practitioners (RACGP) in arguing for more 'adequate incentives' to ensure GPs are encouraged to allocate the time and resources required for the treatment of mental health issues (Freijser and Brooks 2013). Where a GP or smaller practice does not have sufficient resources for providing mental health services a mental health nurse may be able to provide the holistic care that young people with a mental illness require.

The ability of GPs to provide mental health care is supported by mental health nurses. Mental health nurses work with GPs as well as psychiatrists to monitor and manage treatment and to make links with other services for people with severe mental health disorders. The Commonwealth established the Mental Health Nurse Incentive Programme (MHNIP) in 2007 to support an increase in the capacity of the primary care sector to provide mental health care, maintain community

connections for people with a mental illness and to reduce hospital (re)admissions.

An evaluation of the MHNIP was published in December 2012 (Healthcare Management Advisors 2012). The evaluation found that the MHNIP had been successful in achieving the improvements in the services the program was designed to deliver. These improvements included:

- The levels of care being provided;
- Wellbeing of people with a mental illness;
- A decrease in hospital admissions; and
- Increased involvement in social and education activities, including some evidence of increased employment.

The evaluation also found that the MHNIP:

“...had a positive impact on medical practitioner workloads by increasing their time available to treat other patients and improve patient throughput.

Healthcare Management Advisors 2012, p. 57

A cost analysis conducted for the evaluation found that the cost of the program approximated the savings on reduced hospital admissions, even though the cost of the program was higher in non-metropolitan areas. Among suggested options for the program was an examination of why there was unmet demand in parts of the country and how the program could provide targeted services to meet this demand.

The MHNIP has been successful in increasing services for people with a severe mental disorder, while reducing the workload for GPs and psychiatrists. The MHNIP was originally funded in the 2006–07 Federal budget, with \$118.9 million allocated over four years. Although take-up was slow to begin with the program has grown and has continued to be funded. To manage the growth of the program a sessions cap was introduced in May 2012—this was a cap on total funded sessions, not a cap on the number of sessions a patient can have. Although funding was provided for existing services under the MHNIP in the 2013–14 Federal budget (Australian Government 2013), this effectively capped growth in the number of mental health nurses provided by the program.

The National Mental Health Commission identified barriers in the MHNIP, including a lack of access to the program by headspace services (National Mental Health Commission 2014a). In response the Australian government has announced the MHNIP will be enhanced to address geographic inequities (Australian Government 2015).

Primary health clinics

Primary health clinics are the frontline delivery point for services, such as those provided by mental health nurses and GPs. The time and resources required to monitor and treat people with chronic or complex health needs can place pressure on smaller, local clinics. Larger clinics have the potential to provide a greater range of services for specific physical health issues. Consecutive Australian governments have implemented successive policies in an attempt to improve the delivery of primary health services, including the range of services available.

GP Super Clinics

The 2007–08 Federal Budget allocated \$275.2 million in capital funding over five years for 31 GP Super Clinics to ‘improve access to primary and chronic health care’. Improvements in access to care was achieved through co-location of allied health services with GPs (Australian Government 2008).

A preliminary review of the GP Super Clinics program (seven centres open for less than 12 months) found that the program had ‘increased access to primary health care in a multi-disciplinary setting’ An indication of the demographic make-up of this increase has to be inferred from the survey sample. Compared with a benchmark of general practice patient populations, GP Super Clinics ‘had a slightly higher proportion of females, were younger, and had a higher proportion of Aboriginal and/or Torres Strait Islanders.’ (Considine et al. 2012). People aged 18–24 years only constituted 10% of the sample, however, limiting the conclusions that can be drawn about the reported increases among this group.

Medicare Locals

Medicare Locals were launched to improve the coordination and coverage of general practice and allied health services. This program expanded the GP Super Clinics initiative and included a focus on identifying local service gaps and targeting services to groups missing out on GP and primary care services (Australian Government 2010a). The policy included full government funding for the delivery of GP and primary health care services through Medicare Locals (Australian Government 2010b).

A negative review of the Medicare Locals policy in 2013 led the Australian government to replace the program with a policy of Primary Health Networks.

Primary Health Networks

PHNs are based on larger regional areas and will oversee the coordination of health care sectors. PHNs will commission services instead of having a direct role in providing services. In the event that services do not exist and cannot be attracted a PHN may be approved by the Department of Health to directly provide services (Australian Government 2014).

The very nature of general practice, having to be 'everything to everyone' suggests that dedicated youth clinics, be they headspace or a similar more holistic health service, could increase the level of accessible health services for young people.

Evidence from headspace suggests that this service delivery model, although promoted as a mental health service, is providing a youth-friendly point of access. Overall, a small proportion of young people presented with a physical health issue (6.6%), with smaller groups reporting alcohol and other drug use (1.7%) and sexual health issues (1.6%) as their main reason for accessing headspace (Rickwood 2014). These non-mental health related issues peaked among men aged 18–20 years, among who 4.8% gave alcohol/other drug use as the main reason, with women in this age range identifying physical (12.0%) and sexual health (3.9%). This data reinforces the potential for providing physical and sexual health services through headspace centres. Such an expansion would require equipping headspace centres with the resources to treat physical and sexual health issues.

Opportunity	Mechanism
A specific chapter planning for the direction and provision of mental health services for 12–25 year olds in the forthcoming Fifth National Mental Health Plan would provide an opportunity to articulate measurable actions to deliver early interventions and treatment of the wider health implications for young people with a mental illness.	Council of Australian Governments – Fifth National Mental Health Plan

States and Territories

The focus on youth health within State and Territory health departments varies along with the resources available to fund the staffing and delivery of programs and services. The variety ranges from specific youth health policies; to a limited focus on specific health factors (mental health, substance use); and grouping youth mental health together with child health policies.

In NSW the new *Healthy, Safe and Well: A Strategic Health Plan for Children, Young People and Families 2014–24* (New South Wales Health 2014) sets out strategic directions that include addressing risk and harm, early intervention, and delivering services where and when required.

The strategy identifies which roles NSW Health has responsibilities for and where service partners will play a role. Early intervention and engaging with youth at risk are the responsibilities of partner organisations. The workforce, evidence base and e-health are cited as a means to achieving the strategy.

Existing youth health and wellbeing programs in NSW include department support for local health networks in implementing policies, awareness raising of available services and adolescent health training resources for GPs and other health professionals.

In Victoria there are youth mental health and substance use programs. These include government funding for child and adolescent mental health services (CAMHS) that collaborate with a range of organisations providing contact points with young people. These organisations

include schools, GPs and health and welfare agencies. Projects tackling alcohol and other drugs include programs focused on Aboriginal and Torres Strait Islander communities and Say When, an online information, screen and intervention tool.

Queensland has a number of school-based programs. These programs include youth health nurses, healthy eating and physical exercise as well as support workers for students' social and emotional wellbeing. Access to psychological services is by referral. There are Aboriginal and Torres Strait Islander Community Health Services that provide mental health services. Nutrition and exercise programs, such as cooking classes and walking groups, are also run by different community groups.

Community-based programs like those in Victoria and Queensland are also used in Western Australia. The importance of an Aboriginal health workforce is recognised in the development of the WA Health Aboriginal Workforce Strategy 2014–2024. The strategy focuses upon attraction and retention of staff, skill development and workforce design, planning and evaluation. An explicit goal of attaining 3.2% Aboriginal staff within the WA Health workforce requires 100 additional staff to be hired annually.

In South Australia and Tasmania websites list links to youth health services. The Northern Territory Department of Health links to the South Australian site. Youth health services in the Australian Capital Territory are part of a Women, Youth and Children category. The NT provides a pragmatic example for providing access to health information in a jurisdiction with limited resources. Limited resources in many parts of Australia point to a need for Federal coordination of a national health services website for young people.

Opportunity	Mechanism
<p>Smaller States and Territories have limited resources to establish and maintain websites with accessible information for young people. Consideration should be given to integrating State and Territory resources and services into the Australian Government's digital mental health gateway.</p>	<p>Department of Health</p>

Balancing the focus on mental health

Efforts to overcome barriers to accessing mental health care have seen the development of strategies, policies, specific MBS item numbers, training for GPs and the establishment of a specific mental health service for young people and most recently steps to integrate services at a regional level. This focus on mental health care has seen improvements in the level of focus, awareness and treatment of mental health in the health system. While welcome and much needed, this focus has overshadowed the continuing deficit in physical and sexual health care for young people with a mental illness.

The establishment of headspace: The National Youth Mental Health Foundation provides a model for targeted health services. The headspace model is structured around four pillars of support for young people. These pillars are:

1. Mental health;
2. Physical health;
3. Alcohol and other drug use; and
4. Employment, education and training assistance.

Although, popularly perceived and promoted as a mental health project, the headspace concept is designed to be more holistic. The model co-locates a range of services to deliver more comprehensive support for the health and wellbeing of young people. The headspace model enables the delivery of physical and sexual health care to young people with a mental illness.

The headspace initiative has resulted in increased youth access to mental health services. This increase includes an increase in the proportion of males accessing services, as well as those by young people with little contact with family and friends and those born overseas. Less success is evident in increasing access for young people with English as a second language (Patulny et al. 2013). Despite the successes, there remain barriers to access for some young people.

Feedback from people attending headspace centres have identified barriers to access. These barriers include the restriction of services to business hours and waiting times to see specialists. Interestingly, 18–25 year olds have reported that headspace centres were too 'youthy'

(Patulny et al. 2013). This last barrier identifies the challenge in designing services for people aged between 12 and 25 years of age.

Missing physical and sexual health care

The recent improvements in public awareness around mental ill-health and cooperative leadership on initiatives and strategies to address the pressing need for improved mental health services have overshadowed the wider health needs of young people with a mental illness.

There is evidence that health prevention and promotion is reduced for people with a severe mental illness (Reilly et al. 2013). The extent to which people with a mental illness miss out on physical health care is not easy to determine. The specific nature of MBS item numbers mean the actual range of services provided or issues covered during a consultation cannot be accurately measured. Evidence of poorer physical health outcomes among people with a mental illness indicate that even when GP services are accessed, people are not fully benefitting from these visits (Mai et al. 2010).

There is a role for specialists and the allied health sector in ensuring the physical and sexual health of young people with a mental illness is monitored and treated. Allied health professionals need to see addressing the physical health needs of their clients as part of their role. To do so they require the necessary training and knowledge. While primary care providers are often reluctant to treat people with a severe mental illness, psychiatrists 'often pay little attention to physical conditions' (Lawrence et al. 2001). Regarding exercise specifically, clinicians report lacking the knowledge and skills to confidently deliver such interventions (Callaghan 2004) and physical activity is not often viewed as a priority for intervention (Phongsavan et al. 2007). Indeed, clinicians are not fully aware of the benefits of physical activity for mental health and wellbeing, reinforcing the need for education and training (Daley 2008).

Young people with mental illnesses may not be aware of the potential for associated physical health problems. Among people with schizophrenia, a high pain threshold or reduction in pain sensitivity as a result of treatment medication can hide physical health symptoms (Lawrence et al. 2001). A reluctance to volunteer symptoms or ability to communicate physical symptoms can mean patients require longer consultation

times, adding to time pressures for GPs and clinics (Lawrence et al. 2001). These factors may limit the ability of health professionals to deliver adequate physical and sexual health care.

Reluctance to treat wider symptoms, attitudes, and levels of confidence among some primary, allied health and specialist health professionals, together with uncertainty and a lack of confidence among some young people, combine to restrict service quality and delivery. Restricted provision of broad health care jeopardises the physical and sexual health of young people with a mental illness.

Improving service delivery

Providing a safe environment and different approaches creating a youth-friendly model of primary care has the potential to improve service delivery. Although the need for youth-friendly services is recognised, initiatives to improve services have not been adequately assessed. What evidence there is, is insufficient to recommend what this might look like (Tylee et al. 2007). More needs to be done to assess existing attempts and to coordinate the development, trial and assessment of youth-friendly services and settings based on what has already been learned.

MBS

The provision of Federal funding for health services is predominantly provided through the MBS. The MBS stipulates what a service is, who can provide it and how long a treatment session goes for. The schedule also determines how much the Australian government will pay a provider for delivering a service. The Australian government is undertaking a review of MBS items. This review provides the opportunity to improve the delivery of comprehensive, holistic health treatment.

Shortcomings in the MBS model have been recognised in the past. The 2006 Better Access initiative, or Better Access to Psychiatrists, Psychologists and General Practitioners through the Medicare Benefits Schedule, saw new items relating to mental health services added to the MBS. The Better Access program has provided over 10 million services in the three years following implementation (Department of Health and Ageing 2010).

The number of sessions a person is eligible for under the Better Access program is capped. The program provides six sessions, plus a further four on referral from a GP or psychiatrist in a calendar year. In exceptional circumstances a further six services are available, totalling 16 services.

The grouping of services for mental health care in one program demonstrates an understanding of the need for coordinated delivery of care and services. Poorer levels of physical health among young people with a mental illness point to the need to expand the range of services available under the Better Access program.

Alternatively, the scope of chronic disease management plans coordinated by GPs could be expanded. The chronic diseases referral platform that GPs already utilise for people with physical health issues (i.e., diabetes) could be broadened to include mental illness as a condition, which would then allow referral for young people with a mental illness to sessions with allied health clinicians, including dietetics and exercise physiology.

The extension of available services to address the physical and sexual health needs of young people with a mental illness should not be at the expense of mental health care. Additional sessions are required to ensure young people can receive the treatment they need for their mental, physical and sexual health.

Adapting existing programs provides an opportunity to address the physical and sexual health of young people with a mental illness. This approach may require compromises on the format or scope in which services are delivered and will further expand the size of existing programs, potentially creating unintended expansion. Alternatively, a dedicated program for young people would provide a more targeted and measurable framework for improved service delivery.

Opportunity	Mechanism
<p>The Australian Government has announced a packaged care policy for people with a severe or complex mental illness. A targeted Youth Health Management Plan (YHMP) to increase monitoring and treatment of the wider health of young people with mental ill-health could be trialled by GPs over three years as part of this policy. A range of allied health and/or nursing services would need to be available through the YHMP including: sexual health nurses, social workers, exercise physiologists, accredited dieticians and dental nurses/hygienists, or dental assistants.</p>	<p>Primary Health Networks, Department of Health</p>

Workforce

Workforce capacity, staffing levels and funding is central to the ability of the health system to provide physical and sexual health care for young people with a mental illness. Existing staff shortages and system constraints on resources make workforce a key area of development in ensuring adequate provision of health care for young people. To implement early interventions in physical and sexual health care for this population will also require up-skilling of primary health care professionals and increased coordination of services.

Successive mental health plans have focused on the workforce requirements needed to deliver quality services. Broadening the skills base of primary health professionals will need to be incorporated into future health plans to address the complete health needs of young people with a mental illness.

Working together

Mental illness takes many forms and degrees of severity. The treatment of mental illness, therefore, depends on a range of skills provided by a variety of health professionals. At different times these professionals might include GPs, nurse practitioners, psychiatrists, psychologists, social workers, occupational therapists and mental health nurses. The role played will depend on the clinical stage of a person's illness.

To address the physical and sexual health needs of young people requires a broadening of the roles health workers can perform. Health workers engaging young people need to be willing and able to identify the various aspects of ill-health that they may be presented with and provide initial treatment or advice. This extension reflects the interconnection between health issues in mental and physical health. The integration of care and the requisite training it will require will be most beneficial when delivered in a compassionate service culture. To deliver integrated care will necessitate the education of the workforce to enable them to cross traditional demarcations and provide initial care for health symptoms beyond their specialty. In outlining the case for broadening capacity of the health workforce it has been argued that incentives are required that recognise the investment individual staff make to being educated (Delaney et al. 2013).

An expansion of the professions involved in providing care is also required. Additional health professionals might include exercise physiologists, sexual health nurses, dieticians or dental nurses and dentists. Evidence has shown that multi-disciplinary care is associated with improved outcomes and reduced hospital admissions in both acute and primary care settings (Considine et al. 2012). Being part of a team has also been identified as a positive work environment, providing opportunities to develop new skills (Freijser and Brooks 2013). However, negative patient experiences have been identified where teams are too big (Carey et al. 2014). A balance needs to be achieved between the inclusion of professions and a broadening of the skills possessed by health professionals working with young people.

A multi-disciplinary team approach maximises the breadth of available knowledge and skills. Being part of a team also provides a ready reference group for team members to consult on areas beyond their own expertise. At primary care level this may be achieved through the employment of specialist nurses in a general practice setting. In community health settings, youth-focused clinics and larger primary care providers a team approach becomes more feasible. At a hospital level resources need to be coordinated to maximise involvement from relevant professionals.

Optimising integrated care provided by teams requires inter-disciplinary relationships to support communication and shared care planning. The potential benefits of multi-disciplinary teams are reliant upon there being sufficient workforce, in numbers and disciplines, to form complete teams. Persistent workforce shortfalls undermine the capacity to build such teams, and reinforce the need to increase health funding across disciplines.

A team approach to providing health care also enables the inclusion of team members with experience in working with at-risk groups of young people. This might mean including an external youth worker who knows a patient's history and is trusted by the young person. A team member with cultural or language training will also be appropriate in some circumstances.

Continuous professional development is required for all disciplines to ensure health workers are informed of the latest evidence-based practices in the treatment of young people's health. Online training modules provide an accessible and affordable form of training that can be readily updated. The RACGP, for example, provide a range of online learning modules (along with face-to-face modules) with accreditation points toward the college's quality improvement and continuous professional development program.

Opportunity	Mechanism
Training in the monitoring and treatment of physical and sexual health is required for all disciplines working in public, private and non-government mental health services. Professional Bodies and the Australian Health Practitioner Regulation Agency need to make continuing professional education in this area a requirement of their membership and registration eligibility frameworks for related disciplines.	Australian Health Practitioner Regulation Agency, Professional Bodies

Communication

Communication within teams and between health professionals with a role in the treatment of a young person is critical. Successful communication is built on a respect for the role of different disciplines and requires the transfer of accurate and up-to-date information on which treatment decisions can be made. This includes concise medical updates with GPs or nurses responsible for ongoing treatment and monitoring once a young person leaves clinical or community mental health services. Utilisation of Personally Controlled Electronic Health Records (formally e-health records for short and now known as myHealth Record) can facilitate communication between service providers. The Australian government has recognised that the sharing of digital records will be essential in achieving the integration of health services by PNHs (Australian Government 2015). The newly established opt-out

default should increase the value of electronic health records in the provision of treatment for young people with a mental illness.

Training and education

Training and education is an integral aspect of developing a workforce capable of providing joint treatment. A coordinated approach will be required to develop the requisite skills and knowledge among existing staff, new staff and students studying a wide range of health disciplines. Continual assessment of training needs and its provision should contribute to improved capacity and staff retention.

Allied health professionals need a basic understanding of the interaction between mental health symptoms and treatments and physical and sexual health. Training in the role for physical interventions in mental health treatment needs to be included for people working in the mental health sector.

Examples of specialised training centres include the Health Education and Training Institute (in NSW) and more specialised Sydney Sexual Health Clinic. Such organisations could be used to facilitate the development and implementation of general knowledge training for mental health workers in the physical and sexual health needs of young people.

Ensuring the future workforce has a breadth of knowledge that enables them to deliver holistic health care requires working with universities to include general health subjects within specialist degrees. In Victoria, the need to develop curricula across a range of health disciplines has been identified (Department of Health 2012) and is being adopted by universities. Designing courses and subjects that align with the future direction of health services is important point of partnership in developing health policy.

**IMPLICATIONS**

To deliver holistic health care for young people will require an expansion of workforce capacity, coordinated services and improved communication. No longer can a health professional remain blinkered to the broader health effects a young person with a mental illness experiences. They have to be able to identify these effects and provide initial treatment and referral. Service delivery needs to be coordinated to ensure all health aspects are identified and treated. The potential benefits of capacity development and service integration will be dependent upon strong lines of communication between health practitioners at all levels of care.

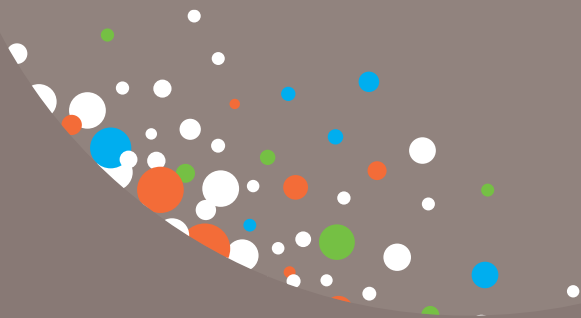
The coordination of services would be facilitated through a Youth Health Management Plan (YHMP). Such a plan would enable the provision of multiple sessions of more than one specialised treatment suited to an individual's specific health needs. The YHMP is a targeted program for young people similar to the Chronic Disease Management plan.

There is an opportunity to increase service capacity through mental health nurses at a primary care level. An expansion of the MHNIP, in combination with incentives to broaden the capacity of mental health nurses to provide physical and sexual health care, is required to realise the potential opportunity.

Federal leadership is required to drive the design and implementation of holistic health care for young people with a mental illness. This role includes resources for smaller States and Territories and efficient coordination of health planning and information services.

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There is a need for Federal leadership on the development and implementation of a holistic treatment model to ensure all young people with a mental illness receive the care they need.



Addressing the physical and sexual health needs of young people with a mental illness

Developing a holistic model of health care for young people with a mental illness requires broader health monitoring at a primary care level and the coordination of services and staff at every point of contact with the health system. The need for broadening and coordinating health services is not uniform. Many individual primary care professionals will already be monitoring the health of young people they are in contact with, and there are examples of structural changes to facilitate the use of multi-disciplinary teams. The Australian government has committed to a leadership role in the reform of mental health services through a regional model of integration to be implemented by PHNs. These reforms include service delivery for young people. It is important that integration of primary health services results in the holistic treatment of the mental, physical and sexual health of young people.

A holistic model of health care needs to be based on evidence of what works. The National Standards for Mental Health Services states that:

“ 10.5.1 Treatment and support provided by the MHS reflects best available evidence and emphasises early intervention and positive outcomes for consumers and their carer(s).

Department of Health 2010, p. 26

Three levels of evidence

A three-tier hierarchy of available evidence allows for the categorisation of treatment programs and recognition of the extent a program can contribute to the development of a holistic treatment model for youth health. The hierarchy is:

1. Evaluated outcomes (pilots; research)
2. Consensus (Guidance and practice are based on expert consensus, clinical experience)
3. Work to be done

In analysing available evidence, the level of contribution to development needs to be identified.

The stages of treatment—prevention, early intervention and treatment, also need to be considered in the development of a holistic treatment model. These stages are not independent and a holistic treatment model will contain some overlap. The Australian government has set out a stepped care model that incorporates these stages of treatment. The intention of the stepped care model is to ensure people receive the right amount of care – not too much or not enough (Australian Government 2015).

Economic evaluations of physical health interventions for young people with mental health problems are rare. For this reason, judgements about the potential cost-effectiveness of service responses to the requirements of this group need to be inferred from a wider evidence base. In preparing this report, we chose to examine selected (non-exhaustive) evidence from economic evaluations of:

- Physical health interventions aimed at young people aged 12–25.
- Physical health interventions for 16–65 year olds with mental illnesses.
- Psychological and behavioural interventions for physical health for 16–65 year olds in the general population.

Prevention

Prevention does not mean stopping an illness or disorder from occurring, it means preventing such an illness going unnoticed and developing into something more serious. Awareness and education programs form a large part of prevention programs. Such programs aim to increase the general understanding and ability to recognise a health issue among young people, their families and the wider population. Programs that support self-engagement among young people and peer-to-peer awareness of behaviour support this prevention stage.

Monitoring the health of young people with a mental illness needs to encompass not only their mental health, but also their physical and sexual health. Recognising the potential overlap between health components as indicators or precursors to wider health problems underlines the need for a complete or holistic approach. A holistic approach extends to health education for young people, their own health self-monitoring, and observation by those people with a duty of care for a young person.

Improving health literacy and education is the starting point for developing healthy lifelong behaviours. Awareness and education programs should help young people to understand the developmental interrelation between physical, sexual and mental health as they move through adolescence and transition into adulthood. Increasing awareness and understanding about the interaction between different aspects of a person's health will also help prepare young people with a mental illness for the potential impact on their physical and sexual health.

Public awareness campaigns, fact sheets, online resources and school programs can all play a part in educating young people about the potential physical and sexual health impacts of mental illness. A number of organisations (e.g., ReachOut, BeyondBlue, Black Dog Institute and headspace) provide some or all of these prevention tools.

There is some evidence of the cost-effectiveness of awareness campaigns in improving people's physical health and activity levels. The benefits of a media campaign in the US promoting adolescent physical activity was calculated to cost US\$9 per person (2004 prices) who became more active (Peterson et al. 2008). A modelling study in the UK examined the potential cost-effectiveness of increased active travel among the general population, concluding that greater walking and cycling in urban areas would reduce health system costs (Jarrett et al. 2012). A specific study of a health promotion program in Belgium aimed at improving healthy eating and physical activity among individuals with mental illnesses living in sheltered accommodation did not find strong evidence of cost-effectiveness, but there was evidence for how it might be made cost-effective (Verhaeghe et al. 2014).

Training of care providers and professionals in contact with young people, such as teachers and social workers, to recognise a variety of signs indicating ill-health or the potential risks also forms part of this first stage of a holistic treatment model. For example, a one-day training program for teachers and other school staff in Canada significantly improved a teacher's ability to identify students at risk and connect them with appropriate services (Wei and Kutcher 2014). Increasing awareness among parents and education and health professionals of behavioural changes in a person or particular symptoms supports the prevention stage.

Changing practices

Improved engagement of young people and primary health care providers is required if perceptions and bias toward physical health are to be overcome and replaced with a holistic health model. Data show that young people generally perceive their physical health positively and that contact with primary health care is low. Increased engagement needs to be fostered in the primary care setting. Alongside youth engagement initiatives the level of confidence and skills GPs possess to screen young people for mental ill-health symptoms could also be improved. International evidence suggests that educating GPs in the psychology of adolescence will support engagement in mental health care of young people (Roberts et al. 2014).

Mental health skills training for GPs is one part of this broadened care. In the UK a mental health 'tool kit' has been developed that covers the variety of experiences and confidence among GPs in consulting with young people with a mental illness (Freer 2012). The expansion of tool kits to include physical and sexual health would help strengthen the skills and confidence of primary care health workers treating young people with a mental illness. The benefits of increased awareness and screening for a range of health risks among young people would provide greater opportunities for early intervention when and where services are accessed.

Changes to practice settings and staff approaches may also assist to increase engagement of young people. A review of young people's experiences has been used to determine assessable aspects of engagement (Ambresin et al. 2013). These aspects are:

- Accessibility;
- Staff attitude (respect, friendliness);
- Communication;
- Medical competency;
- Guideline-driven care;
- Age-appropriate environments;
- Involvement of young people in health care; and
- Health outcomes.

The provision of guidelines and training for health service providers, together with deliberate changes in organisational approaches and functions, has shown some promise for improving the youth-friendliness of primary services (Tylee et al. 2007). The potential role for practice nurses in engaging young people and increasing access through an alternative pathway is another area being explored, (Hart et al. 2012) including the feasibility of nurse-led clinics for young people as an alternative to general practice (Hegarty et al. 2013). The evidence points to the need for further development and piloting of this approach. The points of assessment listed above provide a framework for developing ideas and measuring outcomes.

The co-location and coordination of health services would optimise the delivery of mental, physical and sexual health services. The headspace model provides an example of this integrated approach. The variability in available services, however, limits the full potential for headspace centres to address the physical and sexual health needs of young people. Priority should be given to employing sexual health nurses at all headspace centres, and at a minimum establishing a relationship with local dieticians and exercise physiologists who can attend appointments as an associate at headspace or guarantee to 'bulk bill' referred patients.

Opportunity	Mechanism
headspace centres from ten Primary Health Networks which have General Practitioners on staff should be chosen as trial sites for the inclusion of a dietician, exercise physiologist and sexual health nurse to provide physical and sexual health monitoring and treatment for young people with a diagnosed moderate mental illness.	Primary Health Networks, headspace

Sexual health

There is a need for increased sexual health services for young people with a mental illness. Services need to be accessible, developmentally appropriate and provide quality clinical services. Sexual health education programs need to be evidence-based and enhance broader life-skills.

Sexual health services are predominantly provided by GPs and sexual health clinics. Clinics provide a range of services related to sexual health and may include additional health services. For example, the Sydney Sexual Health Centre (SSHC) provides sexual health care for young people within a youth clinic setting with mental health counselling services. The SSHC uses a multi-disciplinary approach employing sexual health specialist doctors, nurses, counsellors, health promotion officers and researchers. It remains, however, a specialist health clinic, which a young person with a mental illness could be referred to or may approach seeking help for a matter relating to their sexual health.

Successful sexual health programs for Aboriginal and Torres Strait Islander young people have incorporated consultation and engagement with young people, health professionals and elders. Project designs need to be culturally appropriate and implementation and delivery must be flexible and adaptable. Staff delivering programs need to be respected by the community, engage well with young people and be the same gender as the target group (Australian Institute of Health and Welfare 2013). Consultation with young people, respected health workers and good engagement are aspects of program design with wide application.

Interviews with young people¹ for this project raised the issue of teachers at secondary schools leading sexual health classes. While courses that combine personal development, health and physical education have the potential to provide comprehensive skills and knowledge for young people, the success of programs may be jeopardised by relying upon regular teaching staff for delivery. One solution is to have subject delivery by specialist educators who students may find more accessible (i.e., younger, culturally appropriate or same gender as class groups). Having a consistent teaching group would increase that trust and familiarity developed between student and educators.

Opportunity	Mechanism
There is a need to ensure that all young people have a sound level of literacy around their sexual health and wellbeing. Consideration should be given to developing a national curriculum for sexual health and wellbeing programs to ensure all secondary students receive the same level of education.	Council of Australian Governments, Department of Health

Sexual activity

Different preventative health initiatives will be necessary for young people with a mental illness who are already sexually active. Among this population, greater monitoring will be required for young people at increased risk of sexual assault, sexually transmissible infections (STIs) and pregnancy.

Evidence for what is cost-effective for human immunodeficiency virus (HIV) prevention among adults with a serious mental illness found that different approaches worked for men and women. For men, advocacy training was the most cost-effective preventative intervention, while a single session intervention was the dominant strategy for women (Johnson-Masotti et al. 2000). The risk of ‘getting it wrong’ is also evident. A US modelling study estimated that a loss of confidentiality in reproductive healthcare services for females under 18 years of age in Texas would result in increases in costs, rates of STIs and the number of unplanned pregnancies (Franzini et al. 2004).

Specialist sexual health clinics are funded by State and Territory governments. Clinics may be located within a hospital or independently. Grants to non-government organisations extend the availability of services. Access to MBS funding further extends the public (Australian government) funding of sexual health clinics including private clinics. Some clinics provide targeted services, including services for Aboriginal and Torres Strait Islander people and young people. For example; the Quarry Health Centre in Northbridge, Western Australia, is a project of Sexual and Reproductive Health WA that offers clinical, counselling and education services for people aged under 25 years.

¹ The Platform Team is made up of present and past (up to two years) clients of Orygen Youth Health Clinical Program.

Connecting with sexual health services can be challenging for young people. Although sexual health clinics recognise the sensitivity of sexual health issues and the need to be discreet, stigma and embarrassment can still present barriers. The separate location of many services, and for some young people even awareness that such services exist, may present additional barriers to access. Young people requiring sexual health care need to be supported by GPs and other primary health workers in accessing sexual health services.

If a young person is already receiving treatment for a mental illness then there is the opportunity to proactively monitor their sexual health. This opportunity will demand more of the treating health worker. For a GP this means extending the range of health issues and risks they screen. Recognising that screening includes further conversation and possibly the development of greater trust, this increased care will require more time with a patient. In order to provide sexual health care for young people with a mental illness mental health nurses working with young people will require additional skills. If a sexual health nurse is also employed at a clinic there is the potential for providing sexual health care through a teaming of a sexual health nurse with a mental health nurse or GP.

Opportunity	Mechanism
Mental health nurses play an important role in the management of people's mental health treatment. This role should be expanded to include accredited training in the monitoring of physical and sexual health symptoms. Incentives for nurses to undertake this training could be considered.	Council of Australian Governments, Australian College of Mental Health Nurses

Early intervention

Early intervention is a critical middle step between prevention and treatment. Without early intervention the gap between onset and treatment will in most cases be wider, with a corresponding risk a young person will develop more severe symptoms. Early intervention minimises the gap and potentially the level of treatment required, reducing longer-term health effects.

The potential of early intervention requires maintaining or increasing contact with young people or the means to engage young people that are hard to reach or at risk. Engagement initiatives, the use of new technologies, modifying existing primary health service settings to increase access or developing specific health services for young people all need to be explored in an effort to increase or maintain contact with young people.

New technologies

The promise of online and mobile platforms for delivering prevention, early intervention and treatment has driven the development of new programs, websites and 'apps'. The promise of new technologies in providing early interventions for young people experiencing depression or anxiety and not receiving treatment has been calculated for ReachOut by the assurance, tax, transaction consultants EY (Hosie et al. 2015). The promise is quantified as potentially:

- Enabling over 78,500 people to recover from their depression and/or anxiety; and
- Thereby avoiding over \$356.4 million in costs per annum.

However, a review of online services providing information about mental health and available services did not find an increase in help-seeking by young people (Kauer et al. 2014). The best online model for delivering information is still being determined. Determining which features work and which are unhelpful is necessary to direct the design of online services (Rice et al. 2014). The Australian government will need to consider the shortcomings of existing models in the development of the proposed digital mental health gateway.

The utility of mobile phone technology to monitor a young person's mental health is being explored by many researchers and health service providers. This approach seeks to overcome barriers between young people and GPs in the context

of mental health care. There is evidence that a mobile phone application used by young people that feeds information back to a GP increases understanding of a patient's health that can inform decisions about medication (Reid et al. 2013). A positive effect of self-monitoring depressive symptoms through a mobile application has also been found (Kauer et al. 2012). The suitability of mobile phones for delivering treatment is less certain. Although the flexibility, interactivity, and spontaneity of this technology is seen as an advantage, a lack of available evidence and issues about real-life feasibility, health literacy, ethical issues remain (Seko et al. 2014). It also remains that these approaches rely on pre-existing contact with a doctor.

The availability of apps targeting mental health and wellbeing has increased exponentially in the last five years. Young people are the largest consumers of these programs, which cover the range of screening, assessment, monitoring and intervening for a range of mental health and alcohol/other drug use issues. Importantly, however, very few of these apps have been systematically evaluated for effectiveness in research trials, thus little is known about the health outcomes of mobile phone apps. Experts have suggested the quality of mental health apps can be measured on four domains (Hides 2014). These domains are:

- Engagement: entertainment, interest, customisation, interactivity, appropriateness for target group.
- Functionality: performance, ease of use, navigation, gestural design.
- Aesthetics: layout, graphics, visual appeal.
- Information: accuracy of app description, goals, quality and quantity of information, visual information, credibility, evidence base.

It has been suggested that a clinician or primary health professional reads the descriptions, users' comments and any available evidence base for apps being considered for use by a patient, and furthermore, that it be trialled for at least ten minutes to judge its suitability. The practicality of this requirement is doubtful, a system of accreditation for reference by primary and specialist health professionals would be more efficient and consistent.

The rise in mental health platforms using new technologies has prompted the development of review sites. The National Institute for Mental Health Research at the Australian National University has developed the Beacon website (beacon.anu.edu.au). The website houses expert reviews and ratings of websites and mobile applications for a range of health issues. The Beacon website includes a rating system that indicates the level of evidence available for a website or application, including where something has been found not to work.

An engagement project for GPs and allied health practitioners working with Aboriginal and Torres Strait Islander people is also promoting the benefits of new technologies. The eMHPrac project (emhprac.org.au) aims to raise awareness and knowledge of available e-mental health services. The project is working on building referral pathways between primary health care and e-mental health programs.

The use of new technologies is not a single solution to ensuring early intervention opportunities are available. A trial sexual health awareness project that used SMS messaging found the project was 'well-liked' but that engagement was low (Lim and Eaton 2014). The continuing development and refinement of new technologies also needs to take into account concerns raised by health professionals. For example, one study of new technologies to monitor depressive symptoms identified concerns among GPs about the length of time required to complete, the risk of disengagement or limitations of the level of disclosure (Hetrick et al. 2014). It is important that successful applications of new technologies are the basis of further development and expanded trials.

The rate at which new apps and online programs for providing early interventions and treatment are being developed and released requires a system of evaluation and accreditation. Research is required to evaluate new programs to determine if and to what extent they provide improved health outcomes. This process, while a hurdle to rapid development is necessary to ensure young people being treated away from a personal setting are receiving appropriate and proven treatments. Where evidence is found, an accreditation system is required to make utilising new technologies and the potential benefits readily accessible to GPs and specialists working with young people.

Independent evaluation of new technologies is required to:

- Measure the health outcomes achieved;
- Identify any unintended negative outcomes; and
- The service gap being filled or comparison with other products already being used.

A system of accreditation is required to:

- Assist health professionals in selecting and recommending a program; and
- Provide relevant information for monitoring treatment.

Opportunity	Mechanism
<p>eHealth products and services utilising mobile and online platforms are delivering new opportunities for efficiency and improved engagement with young people. This possibility is to be harnessed by the Australian government through a proposed digital gateway to mental health services. The speed with which new programs can be developed demands that measurable outcomes remain a focus. The use of new technologies to deliver ehealth requires a system of evaluation and accreditation.</p>	<p>Orygen, The National Centre of Excellence in Youth Mental Health, National Drug and Alcohol Research Centre</p>

Specific interventions to address physical health in young people with mental health disorders

Early interventions to improve the physical health of young people with specific mental disorders have been identified for depression and psychosis.

Depression

A relationship has been established between physical activity and nutrition and depression. The opposite is also true. Among young people with depression there is the risk of reduced activity and poor nutrition, which can lead to weight gain and obesity. Poorer physical health may also further exacerbate depressive symptoms.

Left untreated, low physical activity, poor nutrition and smoking can contribute to cardiovascular disease, pulmonary disease and chronic obstructive pulmonary disease. The risk of these diseases accumulates from the onset of mental illness. The relationship between physical and mental health has to be reassessed. While physical and lifestyle-based early interventions can assist the treatment of depression, they can also be negatively affected in people with depressive symptoms. The imbalance in research on the potential of physical activity needs to be addressed through research into how young people with early signs of depression can be supported to quit smoking and increase their physical activity as early intervention measures.

The possibility of complementary early interventions for mental and physical health is worth investigating. For example, a combination of mood management and a tobacco cessation intervention was found to increase long-term quitting in people who were suffering, or had suffered, depression (van der Meer Regina et al. 2013). Fitness has also been identified as a motivating factor for young people trying to give up smoking (Australian Institute of Health and Welfare 2014a). This evidence suggests that addressing a young person's overall health has greater potential for achieving improved mental and physical health outcomes.

Psychosis

People with a psychotic illness also face a range of potential physical, sexual and oral health issues, with risk factors accumulating from onset. For example, obesity rates are higher among people suffering psychosis (Dickerson et al. 2006) and overlapping onset obesity and psychosis in a young person can act as a barrier to the maintenance of effective treatment (Álvarez-Jiménez et al. 2008a). Although weight gain begins early in psychotic illness, (Álvarez-Jiménez et al. 2008a, Foley et al. 2013) there is evidence that early lifestyle and life skills interventions in young people with first-episode psychosis can reduce medication-induced weight gain (Curtis et al. 2015). The potential physical health implications of obesity include an increased risk of diabetes and cardiovascular disease. The heightened risk of obesity associated with the side-effects of antipsychotic medications (Newcomer 2007) highlight the need for health clinicians to monitor the physical health of patients.

Different lifestyle interventions aimed at controlling or limiting weight gain in first-episode psychosis are available. These include cognitive behavioural interventions (Alvarez-Jimenez et al. 2006), nutritional counselling (including evidence for people aged 12–25 years) (Teasdale et al. 2015) and physical activity (Wu et al. 2007). Non-pharmacological interventions have been found to be effective when compared to treatment as usual in patients with schizophrenia spectrum disorders (Álvarez-Jiménez et al. 2008b).

Among people with a psychotic illness there is a high rate of smoking at onset. Further, this group are heavier smokers than those without a mental illness. The physical health risks of tobacco smoking increases the disease burden among this group. Smoking cessation interventions can be pharmacological, psychological or a combination. Interventions that use the drug bupropion alone, or in combination with psychological interventions such as CBT, achieve better outcomes than nicotine replacement or self-help and educational programs (Tsoi et al. 2010). The potential for early intervention to address smoking in young people being treated for psychosis is assisted by the reduced adoption of cultural norms around mental illness and smoking, including among some health professionals (Ratschen et al. 2011). However, the health challenge is large, with reported difficulty in quitting and sustained high rates of smoking following treatment (Myles et al. 2012).

Among young people with first-episode psychosis the presence of metabolic syndrome or abnormalities has been shown to be more than one in three (Curtis et al. 2011). Early recognition of metabolic complications and deployment of an evidenced-based early intervention can reduce the disease risk. More work is needed to develop guidelines for monitoring risks rather than waiting until these diseases are established (Eapen et al. 2013). Internationally, the Healthy Active Lives (HeAL) statement is a consensus on a key set of principles, processes and standards to support young people experiencing psychosis to lead healthy, active lives. This statement extends the guidelines from the RACGP for age-related health checks for 14–19 year olds (Royal Australian College of General Practitioners 2012). The guidelines include measuring a young person's weight and height, along with assessments of nutrition and physical activity, sexual activity and the assessment and screening of depressive disorders.

The HeAL statement (www.iphys.org.au) provides direction for a holistic model of treatment for young people experiencing psychosis. The stated goals include:

- Confronting perceptions that poor physical health is inevitable;
- Supporting the engagement of young people in treatment choices;
- Ensuring mental and physical health outcomes are equally valued; and
- Encouraging specialists and primary care practitioners to collaborate on physical health outcomes.

Action is now needed to achieve these objectives. A step toward achievement would be the establishment of guidelines for distribution to health professionals working with young people being treated for psychosis. Guidelines for providing holistic health care would formulate a collaborative approach to care between young people receiving treatment, primary care providers and specialists working in hospitals and community mental health services. The development of guidelines should include versions for different forms of mental ill-health, while remaining sufficiently general to maximise application and adoption by the health workforce.

Personality disorders

There is an emerging body of evidence of the physical and sexual health risks linked with personality disorders. The available evidence points to the role of sexually transmissible diseases, tobacco use and lifestyle factors in effecting poor health outcomes. To date most of the evidence is for adult populations, with some studies of select age ranges within the young person range of 12–25 years. The evidence indicates that the physical and sexual health of young people with a personality disorder is an area of concern. More research is required in this area.

Opportunity	Mechanism
<p>More research is needed to measure and identify which interventions work for identifying and providing effective early treatment for potential physical and sexual health issues for young people with a mental illness and to centrally curate existing evidence.</p>	<p>Orygen, The National Centre of Excellence in Youth Mental Health, National Health and Medical Research Council</p>

Orygen, The National Centre of Excellence in Youth Mental Health is currently developing a National Youth Mental Health Research Framework. This framework will provide a basis for the evaluation of the evidence base for the early intervention and treatment of physical and sexual health symptoms in young people with a mental illness. Where gaps are identified a research agenda could be developed in consultation with the National Health and Medical Research Council (NHMRC).

Research findings should be centrally curated and routinely revised. This information should be easily accessible and widely promoted to health professionals working with young people.

Summary

The potential for early intervention in the physical and mental health of young people with anxiety and depressive symptoms and psychotic illnesses is promising. Beneficial aspects of an intervention would include increasing physical activity, reducing sedentariness, improving diet quality and the cessation of smoking. The application of pharmacological or psychological approaches overlaps with the treatment of more advanced conditions.

Cost-effective early interventions

There are few existing cost-benefit analyses of physical and sexual health programs for young people (or adults) with a mental illness. The available evidence indicates that early interventions involving more direct participation are more likely to be cost-effective. For example, a UK trial of 16 weeks of exercise supervised by a qualified exercise professional plus other facilitated exposure to exercise opportunities at a leisure centre for inactive people with a risk of coronary heart disease; mild to moderate depression, anxiety or stress, or both was a little over 50% likely to be cost-effective (Murphy et al. 2012). In contrast, an Australian modelling study showed that providing vouchers to a commercial diet program to the general population in an attempt to address overweight and obesity was not a cost-effective strategy (Cobiac et al. 2010). Early interventions that support participation are more likely to be cost-effective.

Treatment

It is important to establish holistic treatment models that include a focus on the physical and sexual health of young people being treated for a mental illness. Monitoring of physical and sexual health needs to occur alongside mental health treatment. Where treatment for a mental illness incorporates medication there are additional requirements for monitoring of a person’s physical and sexual health. The health of a person undergoing treatment for a mental illness can be negatively affected by the medication prescribed to them.

Opportunity	Mechanism
<p>The HeAL statement on the holistic treatment of young people with psychosis provides a model that could be extended to depression and personality disorders. The HeAL statement includes five-year targets for achieving improved physical health outcomes for young people. Options include:</p> <ul style="list-style-type: none"> ▪ Active approaches to booking appointments and sending reminders. ▪ Routine annual full physical (including oral/dental) examinations for young people commenced on medication. ▪ Training in physical healthcare monitoring to be provided to mental health clinical teams. ▪ Incorporation of the importance of physical healthcare monitoring in training curricula for students in mental health and allied professions. 	<p>Department of Health, Professional Bodies, Universities</p>

The HeAL statement includes five-year targets for achieving improved physical health outcomes for young people. These targets should be adopted by Professional Bodies and distributed to registered practitioners as guidelines to tackle the poor physical and sexual health outcomes young people with a mental illness can experience. Professional Bodies should measure and report annually on the adoption of guidelines and outcomes achieved.

Cost-effective treatments

There are specific examples of programs utilising psychological treatments. Due to the specificity of the programs and the inclusion of adults these examples provide only indicative direction for policy development. More cost-benefit analysis for interventions and treatments are required as part of research programs and trials developed for young people with a mental illness.

Cognitive behavioural therapy (CBT) has been identified as likely to be cost-effective in two studies related to physical health treatment. A UK trial concluded it was highly probable that group CBT for adults with moderately troublesome subacute and chronic lower back pain would be a cost-effective intervention (Lamb et al. 2010). A Japanese trial concluded that CBT is highly likely to be a cost-effective addition to usual care for patients with major depression who were also suffering from chronic insomnia (Watanabe et al. 2014). The potential effectiveness of CBT treatment needs to be measured in the treatment of physical health issues among young people with a mental illness.

The cost-effectiveness of pre-hospitalisation interventions has also begun to be examined. A US cost study of home and community-based intervention for families [also known as multi-systemic therapy (MST)] of adolescents with poorly controlled diabetes found that such an intervention was cost-saving due to significantly fewer hospital admissions in the MST group (Ellis et al. 2008).

While these studies suggest treatment is likely to be cost-effective, with investment delivering savings in the long-term, there is much work to be done in assessing the potential savings.

Health monitoring

The increased rates of detrimental physical health outcomes among people suffering schizophrenia (including side-effects of medications) underline the importance of health monitoring. For young people already being treated for a mental disorder with psychotropic medication, a two-step diagnostic tool for physical health monitoring and intervention has been developed. The HETI Positive Cardiometabolic Health algorithm utilises a number of standard measurements and tests to support GPs, with an adolescent version available for treating young people (Curtis J et al. 2011).

The monitoring of physical health is a standard aspect of primary health care and should be included alongside treatment monitoring of mental health. This monitoring should include a role for dental nurses to ensure dental/oral health is also monitored. The potential side-effects of medications prescribed for mental disorders should be specifically monitored as part of regular health monitoring.

Side-effects of medication

It is important that people are informed about the potential side-effects of medication prescribed for a mental illness. It is also important that a supervising health professional monitors a patient for potential side-effects. Early interventions to address lifestyle and behaviours that may otherwise exacerbate negative side-effects provide an opportunity to limit possible effects.

The National Standards for Mental Health Services states that:

“ 10.5.3 The MHS is responsible for providing the consumer and their carer(s) with information on the range and implications of available therapies.

Department of Health 2010, p. 26

The links between physical and mental health led the Lancet Psychiatry editorial team to suggest a six-month attachment to general practice be introduced to psychiatry training (The Lancet Psychiatry 2014). The connection between mental and physical health underlines the need for regular health assessments for people with a mental illness. Despite national and international guidelines such practices are not occurring (National Mental Health Commission 2013).

Opportunity	Mechanism
The side-effects of some medication used to treat mental illness can contribute to poor physical and sexual health outcomes young people. Drugs with fewer, or lower, negative physical or sexual effects on a young person’s health should be first-line options when determining treatment for young people.	Professional Bodies

Weight gain is a common side-effect of medication used in the treatment of psychotic illnesses, including bipolar disorder and schizophrenia, and these medications are increasingly used off-label for the treatment of depression. Young people taking antipsychotic medication face an increased risk of cardiovascular disease and Type 2 diabetes.

For people with a mental illness there are also potential sexual health implications. Behaviour may influence risk of sexual disease transmission and medications can affect sexual function.

For example, researchers have found elevated HIV infection rates among individuals with a severe mental illness (Senn and Carey 2008). Medications prescribed for depression (Khazaie et al. 2015) and schizophrenia (Üçok et al. 2007) can affect sexual function. The relationship between sexual and mental health needs to be considered when treating mental illness and in developing holistic health services for young people.

Smoking increases the metabolism of some medications prescribed for mental disorders. If a person quits smoking the dosage of their medication should be reviewed (Campion et al. 2014) to examine the opportunity to reduce the prescribed dose. The opposite is also the case. For example, a patient leaving hospital where the opportunity to use tobacco has been prevented or limited may resume or increase their smoking rate, effectively reducing their treatment dosage. The potential for prescribing lower dosages provides an incentive that health professionals may be able to use to encourage a person to reduce or cease smoking.

The Australian government's National Tobacco Campaign included a targeted youth campaign in 2006–2007. Young people (12–24 years) were encouraged to 'reject smoking' and parents who smoke were encouraged to quit as a discouragement (or positive example) for their children (Department of Health 2013). A review of the campaign found a higher incidence of quitting behaviours among 18–24 year olds. While not exclusively a result of the campaign, pre and post-surveys found increases in the proportion of young adults reading the health warning on cigarette packs (22 percentage point increase) and discussing smoking and health at home (21 percentage points) (The Social Research Centre 2007). It is now eight years since there was a targeted campaign to reduce smoking among young people. The Quit program in Victoria does not include a targeted campaign to reduce tobacco use by 12–17 years olds. The rationale for this is that whole of population campaigns have been found to be as effective as targeted campaigns (Quit Resource Centre 2015). While rates of smoking among young people are declining, the rate among young people with a mental illness remains high. A targeted campaign for young people with a mental illness would be warranted.

Developing specific cessation programs for young people with a severe mental illness would be likely to succeed, increasing their long-term physical health outcomes. A recent trial of a bespoke smoking cessation trial for adults with a severe mental illness generated high rates of quitting (Gilbody et al. 2015). The advantages of quitting smoking are not straightforward for people with a mental illness. Weight gain (5 kilograms in the first year) is linked with quitting, (Robertson et al. 2014) which may exacerbate other health issues young people face. Cessation treatment needs to be combined with lifestyle programs for weight management as it is with mental health medication. This complexity further illustrates the interconnectedness of health interventions and treatments.

There is a need to consider the broader effects of treatments for physical, sexual and mental illness. Consideration needs to be given to how treatments may be combined to ensure the cost of improving one aspect of a young person's health is not a negative effect to their overall health.



IMPLICATIONS

The development of new approaches to service delivery will be a missed opportunity if engagement with young people is not improved. The headspace model has been successful but has not reached all demographic groups of young people equally. Opportunities exist for exploring new ways of engaging young people at general practices, such as offering youth-specific hours.

Online platforms and mobile phone technology are opening up new opportunities for prevention and early intervention. The Australian government is preparing to establish a digital gateway to these services in 2016-17. An accreditation framework is required to inform the utilisation of these new technologies in providing treatment for young people.

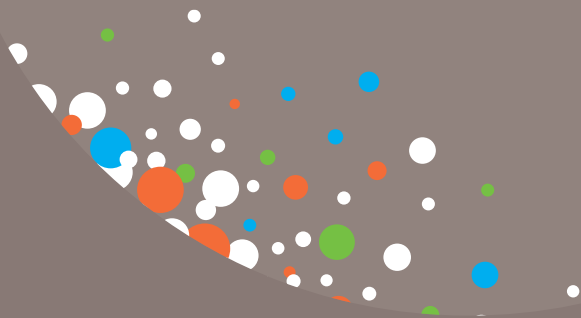
Access to dieticians, exercise physiologists and sexual health nurses is required for young people with a mental illness.

The relationship between depressive symptoms, physical activity, nutrition and increased risks of obesity, cardiovascular disease and Type 2 diabetes in young people with psychosis highlights the importance of providing early interventions to increase activity levels, nutrition and smoking cessation. The HeAL screening tool provides an example of how the need for intervention can be readily identified.

The physical health effects of medications prescribed for treating mental illnesses, in particular psychosis, increases the need for behavioural-based interventions.

The evidence base for the cost-effectiveness of prevention, early intervention and treatment for co-occurring mental and physical/sexual health needs to be strengthened.

A suite of policies that provides care at different stages of an illness will maximise the potential benefits and outcomes for young people, their community and society.



A whole of health approach

A whole of health approach, one that will also be applicable to a wider population of young people, is the foundation for addressing the physical and sexual health needs of young people with a mental illness. A suite of policies that provides care at different stages of an illness will maximise the potential benefits and outcomes for young people, their community and society.

The policies outlined below do not make specific reference to the requirements of Aboriginal and Torres Strait Islanders, disadvantaged, difficult to reach young people or those from culturally diverse backgrounds. Where relevant, it is assumed that consultation with community leaders, young people, experienced health workers and other stakeholders will be undertaken in developing and implementing policies.

Planning for success

Mental health plans have provided policy direction and momentum for improved mental health services in Australia for more than two decades. To address the specific requirements of delivering not just mental, but physical and sexual health services for young people, a plan for young people is needed. No longer is a combined child and adolescent plan or a handful of mentions in a plan for people at all life stages sufficient.

Federal leadership is required to develop a mental health plan for people aged between 12 and 25 years. However, this plan has to go further and include the physical and sexual health of young people with a mental illness. States and Territories need to be supported to adopt and implement the plan. Where resources are limited due to economies of scale then financial support will be warranted. A young person is deserving of access to whole of health services where ever they live in Australia.

Focusing services

The co-occurrence of physical, emotional and sexual development and peak onset of mental ill-health between the ages of 12 and 25 years can mean young people need to access a range of health services. These particular requirements demand a specific focus on young people from health services and the structures in which they are funded and delivered. A YHMP would facilitate the early intervention and treatment of young people with a mental illness and their physical and sexual health care. Such a plan would ensure access to primary, specialist and allied health services that reflects the whole of health needs young people can have.

Existing and emerging tools are available to support communication between, and integration of, a range of health services. The Australian government has made integration of services a key feature of the Primary Health Networks. The Positive Cardiometabolic Health algorithm is an example of an early intervention tool that can be used across the health system. Such tools require a commitment to providing a whole of health approach, a commitment from organisations, management and the workforce. Guidelines for such collaborations would be a development of action from the words of the HeAL statement.

The development of prevention, early intervention and treatment options using mobile technologies and online platforms is providing a new opportunity in service delivery. These tools are undergoing rapid development that needs to be formed into evidence-based options for enhanced health services. Electronic health records also provide an opportunity for improved communication and collaboration between primary and specialist services. These developments place increased demands on the workforce required to deliver health services.

Working together

A whole of health approach requires greater inclusion of allied health services and increased roles for nurses. Mental health nurses already provide an important service in the monitoring and treatment of young people with a diagnosed mental illness. Nurses are well placed to provide early interventions for associated physical and sexual health needs young people with a mental illness can have. To maximise the possibility of early intervention mental health nurses need to be equipped to provide this role, through training and resources.

Likewise there is a need for sexual health and dental health nurses in community mental health services and primary care. The availability of allied health services needs to be expanded to include dietitians, exercise physiologist and alcohol and other drug counsellors.

Providing a whole of health approach to the care of young people with a mental illness will identify the need for physical and sexual health care and a means of primary care. The earlier this need can be identified, the greater the opportunity for interventions that will minimise the additional health effects of mental illness on a young person's life, now and into the future. The policy opportunities identified in this policy white paper provide directions for the future planning of access, service provision and workforce development to realise this potential.

References

- Abdellatif, HM 2012. Review Analysis & Evaluation: There is Limited Evidence to Support the Association between Severe Mental Illness and Poor Oral Health. *The Journal of Evidence-Based Dental Practice*, 12, 141-143.
- Álvarez-Jiménez, M, González-Blanch, C, Crespo-Facorro, B, Hetrick, S, Rodríguez-Sánchez, J, Pérez-Iglesias, R, et al. 2008a. Antipsychotic-Induced Weight Gain in Chronic and First-Episode Psychotic Disorders. *CNS Drugs*, 22, 547-562.
- Alvarez-Jimenez, M, Gonzalez-Blanch, C, Vazquez-Barquero, JL, Perez-Iglesias, R, Martinez-Garcia, O, Perez-Pardal, T, et al. 2006. Attenuation of antipsychotic-induced weight gain with early behavioral intervention in drug-naive first-episode psychosis patients: A randomized controlled trial. *The Journal of Clinical Psychiatry*, 67, 1253-60.
- Álvarez-Jiménez, M, Hetrick, S, E, González-Blanch, C, Gleeson, JF & Mccorry, P, D 2008b. Non-pharmacological management of antipsychotic-induced weight gain: systematic review and meta-analysis of randomised controlled trials. *The British Journal of Psychiatry*, 101-107.
- Ambresin, A-E, Bennett, K, Patton, GC, Sanci, LA & Sawyer, SM 2013. Review article: Assessment of Youth-Friendly Health Care: A Systematic Review of Indicators Drawn From Young People's Perspectives. *Journal of Adolescent Health*, 52, 670-681.
- Australian Bureau of Statistics 2010. Mental Health of Young People, 2007 Canberra: ABS.
- Australian Bureau of Statistics 2012. Australian Social Trends June 2012: Sexually transmissible infections. Canberra: ABS.
- Australian Bureau of Statistics 2015. Australian National Accounts: National Income, Expenditure and Product: Table 8. Household Final Consumption Expenditure. Online: ABS.
- Australian Government 2008. Budget Measures 2008-09: Budget Paper No. 2. Canberra: Commonwealth of Australia.
- Australian Government 2009. Fourth National Mental Health Plan: An agenda for collaborative government action in mental health 2009-2014. Canberra: Commonwealth of Australia.
- Australian Government 2010a. Budget Measures 2010-11: Budget Paper No. 2. Canberra: Commonwealth of Australia.
- Australian Government 2010b. A National Health and Hospitals Network for Australia's future: Delivering better health and better hospitals for all Australians. Canberra: Commonwealth of Australia.
- Australian Government 2011. Budget 2011-12: Delivering better hospitals, mental health and health services Canberra: Commonwealth of Australia.
- Australian Government 2013. Budget Measures 2013-14: Budget Paper No.2. Canberra: Commonwealth of Australia.
- Australian Government 2014. Primary Health Networks: Grant Programme Guidelines. Canberra: Commonwealth of Australia.
- Australian Government 2015. Australian Government Response to Contributing Lives, Thriving Communities - Review of Mental Health Programmes and Services. Canberra: Commonwealth of Australia.
- Australian Institute of Health and Welfare 2011. Young Australians: their health and wellbeing 2011. Canberra: AIHW.
- Australian Institute of Health and Welfare 2012. Comorbidity of mental disorders and physical conditions 2007. Canberra: AIHW.
- Australian Institute of Health and Welfare 2013. Demonstration projects for improving sexual health in Aboriginal and Torres Strait Islander youth: Evaluation report. Canberra: AIHW.
- Australian Institute of Health and Welfare 2014a. National Drug Strategy Household Survey 2013, Specific population groups chapter: Online data tables. Canberra: AIHW.
- Australian Institute of Health and Welfare 2014b. National Drug Strategy Household Survey detailed report 2013. Canberra: AIHW.
- Callaghan, P 2004. Exercise: a neglected intervention in mental health care? *Journal of Psychiatric and Mental Health Nursing*, 11, 476-483.
- Campion, J, Shiers, D, Britton, J, Gilbody, S & Bradshaw, T 2014. Primary Care Guidance on Smoking and Mental Disorders: 2014 update. In: Royal College of General Practitioners & Royal College of Psychiatrists (ed.).
- Carey, C, Lally, J & Abba-Aji, A 2014. Are psychiatric team meetings patient centred? A cross-sectional survey on patient views regarding multi-disciplinary team meetings. *Irish Journal of Psychological Medicine*, FirstView, 1-9.
- Chanen, AM, Jovev, M & Jackson, HJ 2007. Adaptive functioning and psychiatric symptoms in adolescents with borderline personality disorder. *The Journal Of Clinical Psychiatry*, 68, 297-306.
- Cobiac, L, Vos, T & Veerman, L 2010. Cost-effectiveness of Weight Watchers and the Lighten Up to a Healthy Lifestyle program. *Australian and New Zealand Journal of Public Health*, 34, 240-7.
- Considine, R, Tozer, J, Milne, H & Chappe, M 2012. Evaluation of the GP Super Clinics Program 2007-2008.
- Curtis J, Newall H & K., S 2011. Positive Cardiometabolic Health: An early intervention framework for adolescents on psychotropic medication (Adolescent version). Sydney: Health Education and Training Institute.
- Curtis, J, Henry, C, Watkins, A, Newall, H, Samaras, K & Ward, PB 2011. Metabolic abnormalities in an early psychosis service: a retrospective, naturalistic cross-sectional study. *Early Intervention in Psychiatry*, 5, 108-14.
- Curtis, J, Watkins, A, Rosenbaum, S, Teasdale, S, Kalucy, M, Samaras, K, 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*.
- Daley, A 2008. Exercise and Depression: A Review of Reviews. *Journal of Clinical Psychology in Medical Settings*, 15, 140-147.
- De Hert, M, Correll, CU, Bobes, J, Cetkovich-Bakmas, M, Cohen, DaN, Asai, I, et al. 2011. Physical illness in patients with severe mental disorders: Prevalence, impact of medications and disparities in health care. *World Psychiatry*, 10, 52-77.
- Delaney, KR, Robinson, KM & Chafetz, L 2013. Development of integrated mental health care: critical workforce competencies. *Nursing Outlook*, 61, 384-91.
- Department of Health. 1997. 2.4.7 Homeless young people [Online]. Online: Australian Government. Available: <http://www.health.gov.au/internet/publications/publishing.nsf/Content/mental-pubs-r-recons-toc-mental-pubs-r-recons-2-mental-pubs-r-recons-24-mental-pubs-r-recons-247> [Accessed 1 May 2015].
- Department of Health 2010. National Standards for Mental Health Services. Canberra: Commonwealth of Australia.

- Department of Health 2012. New directions for alcohol and drug treatment services: A roadmap Melbourne: Victorian Government.
- Department of Health. 2013. Education: *The history of the National Tobacco Campaign* [Online]. Australian Government. Available: <http://www.health.gov.au/internet/main/publishing.nsf/Content/tobacco-educat> [Accessed 20 May 2015].
- Department of Health. 2015. Tobacco key facts and figures [Online]. Online: Australian Government. Available: <http://www.health.gov.au/internet/main/publishing.nsf/Content/tobacco-kff> [Accessed 3 March 2015].
- Department of Health and Ageing 2010. Outcomes and proposed next steps: Review of the Access to Allied Psychological Services Component of the Better Outcomes in Mental Health Care Program. Canberra: Australian Government.
- Department of Social Services 2013. Characteristics of Disability Support Pension Recipients. Online: Australian Government.
- Dickerson, FB, Brown, CH, Kreyenbuhl, JA, Fang, L, Goldberg, RW, Wohlheiter, K, et al. 2006. Obesity among individuals with serious mental illness. *Acta Psychiatrica Scandinavica*, 113, 306-313.
- Eapen, V, Shiers, D & Curtis, J 2013. Bridging the gap from evidence to policy and practice: reducing the progression to metabolic syndrome for children and adolescents on antipsychotic medication. *The Australian and New Zealand Journal of Psychiatry*, 47, 435-42.
- Edwards, CA, Britton, ML, Jenkins, L, Rickwood, DJ & Gillham, KE 2014. Including a client sexual health pathway in a national youth mental health early intervention service-project rationale and implementation strategy. *Health Education Research*, 29, 354-9.
- El-Gabalawy, R, Katz, LY & Sareen, J 2010. Comorbidity and associated severity of borderline personality disorder and physical health conditions in a nationally representative sample. *Psychosomatic Medicine*, 72, 641-647.
- Ellis, D, Naar-King, S, Templin, T, Frey, M, Cunningham, P, Sheidow, A, et al. 2008. Multisystemic therapy for adolescents with poorly controlled type 1 diabetes: reduced diabetic ketoacidosis admissions and related costs over 24 months. *Diabetes Care*, 31, 1746-7.
- Fok, ML-Y, Stewart, R, Hayes, RD & Moran, P 2014. Predictors of Natural and Unnatural Mortality among Patients with Personality Disorder: Evidence from a Large UK Case Register. *PLoS ONE*, 9, 1-9.
- Foley, DL, Mackinnon, A, Watts, G, Shaw, JE, Magliano, DJ, Castle, D, et al. 2013. Cardiometabolic Risk Indicators That Distinguish Adults with Psychosis from the General Population, by Age and Gender. *PLoS One*, 8, 8pp.
- Franzini, L, Marks, E, Cromwell, PF, Risser, J, Mcgill, L, Markham, C, et al. 2004. Projected economic costs due to health consequences of teenagers' loss of confidentiality in obtaining reproductive health care services in Texas. *Archives of Pediatrics & Adolescent Medicine*, 158, 1140-6.
- Freer, M 2012. A toolkit for GPs: The mental health consultation (with a young person).
- Freijser, L & Brooks, P 2013. Addressing Workforce Challenges for Youth Mental Health Reform. Melbourne.
- Galletly, CA, Foley, DL, Waterreus, A, Watts, GF, Castle, DJ, Mcgrath, JJ, et al. 2012. Cardiometabolic risk factors in people with psychotic disorders: the second Australian national survey of psychosis. *The Australian and New Zealand Journal of Psychiatry*, 46, 753-61.
- General Practice Mental Health Standards Collaboration. Correspondence received 14 May 2015.
- Gilbody, S, Peckham, E, Man, M-S, Mitchell, N, Li, J, Becque, T, et al. 2015. Bespoke smoking cessation for people with severe mental ill health (SCIMITAR): a pilot randomised controlled trial. *The Lancet Psychiatry*, 2, 395-402.
- Happell, B, Platania-Phung, C, Scott, D & Hanley, C 2015. Access to dental care and dental ill-health of people with serious mental illness: views of nurses working in mental health settings in Australia. *Australian Journal of Primary Health*, 21, 32-37.
- Hart, C, Parker, R, Patterson, E, Hegarty, K & Sancu, L 2012. Potential roles for practice nurses in preventive care for young people A qualitative study. *Australian Family Physician*, 41, 618 -621.
- Hayes, L, Smart, D, Toubourou, JW & Sanson, A 2004. Parenting influences on adolescent alcohol use. Melbourne.
- Health Translations Online Directory. 2015. *Linking Physical And Mental Health Care...It makes Sense For Families, Carers And Friends* [Online]. Victorian Government. Available: http://www.healthtranslations.vic.gov.au/bhcv2/bhcht.nsf/PresentDetail?Open&s=Linking_Physical_And_Mental_Health_Care...It_makes_Sense_For_Families,_Carers_And_Friends [Accessed 5 March 2015].
- Healthcare Management Advisors 2012. Evaluation of the Mental Health Nurse Incentive Program: Final Report
- Hegarty, K, Parker, R, Newton, D, Forrest, L, Seymour, J & Sancu, L 2013. Feasibility and acceptability of nurse-led youth clinics in Australian general practice. *Australian Journal of Primary Health*, 19, 159-165.
- Hetrick, S, Simmons, M, Sancu, LA & Gunn, J 2014. Primary care monitoring of depressive symptoms in young people. *Australian Family Physician*, 43, 147-150.
- Hides, L. 2014. Are SMARTapps the future of youth mental health? *InPsych* [Online]. Available: <http://www.psychology.org.au/Content.aspx?ID=5850> [Accessed 27 March 2015].
- Hosie, A, Vogl, G, Carden, J, Hodinott, J & Lim, S 2015. A Way Forward: Equipping Australia's Mental Health System for the Next Generation.
- Jacka, FN, Kremer, PJ, Berk, M, De Silva-Sanigorski, AM, Moodie, M, Leslie, ER, et al. 2011. A Prospective Study of Diet Quality and Mental Health in Adolescents. *PLoS ONE*, 6, e24805.
- Jackson, HJ & Burgess, PM 2000. Personality disorders in the community: a report from the Australian National Survey of Mental Health and Wellbeing. *Social Psychiatry and Psychiatric Epidemiology*, 35, 531-8.
- Jarrett, J, Woodcock, J, Griffiths, UK, Chalabi, Z, Edwards, P, Roberts, I, et al. 2012. Effect of increasing active travel in urban England and Wales on costs to the National Health Service. *Lancet*, 379, 2198-205.
- Johnson-Masotti, AP, Pinkerton, SD, Kelly, JA & Stevenson, LY 2000. Cost-effectiveness of an HIV risk reduction intervention for adults with severe mental illness. *AIDS Care*, 12, 321-32.
- Kauer, SD, Mangan, C & Sancu, LA 2014. Do Online Mental Health Services Improve Help-Seeking for Young People? A Systematic Review. *Journal Of Medical Internet Research*, 16, 18.
- Kauer, SD, Reid, SC, Crooke, AHD, Khor, A, Hearps, SJC, Jorm, AF, et al. 2012. Self-monitoring Using Mobile Phones in the Early Stages of Adolescent Depression: Randomized Controlled Trial. *Journal of Medical Internet Research*, 14, e67.

- Kessler, RC, Berglund, P, Demler, O, Jin, R, Merikangas, KR & Walters, EE 2005. Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, 62, 593-602.
- Khazaie, H, Rezaie, L, Rezaei Payam, N & Najafi, F 2015. Antidepressant-induced sexual dysfunction during treatment with fluoxetine, sertraline and trazodone; a randomized controlled trial. *General Hospital Psychiatry*, 37, 40-45.
- Kisely, S, Quek, L-H, Pais, J, Laloo, R, Johnson, NW & Lawrence, D 2011. Advanced dental disease in people with severe mental illness: systematic review and meta-analysis. *The British Journal of Psychiatry*, 199, 187-193.
- Lamb, SE, Hansen, Z, Lall, R, Castelnuovo, E, Withers, EJ, Nichols, V, et al. 2010. Group cognitive behavioural treatment for low-back pain in primary care: a randomised controlled trial and cost-effectiveness analysis. *Lancet*, 375, 916-23.
- Lawn, S. 2011. *Mental illness is no excuse for turning a blind eye to smoking* [Online]. Online: The Conversation. Available: <http://theconversation.com/mental-illness-is-no-excuse-for-turning-a-blind-eye-to-smoking-1643> [Accessed 5 March 2015].
- Lawrence D, Johnson S, Hafekost J, Boterhoven De Haan K, Sawyer M, Ainley J, Zubrick SR 2015. The Mental Health of Children and Adolescents. Report on the second Australian Child and Adolescent Survey of Mental Health and Wellbeing. Canberra: Department of Health.
- 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 (Clinical Research Ed.)*, 346, f2539-f2539.
- Lawrence, D, Holman, C & Jablensky, A 2001. *Duty to care: Preventable Physical Illness in People with Mental Illness.*, Perth, The University of Western Australia.
- Lim, M & Eaton, K 2014. Sexual Health and Youth (SHY) SMS Project: final report. Melbourne.
- Mai, Q, Holman, CDJ, Sanfilippo, FM, Emery, JD & Stewart, LM 2010. Do users of mental health services lack access to general practitioner services?
- McCloughen, AK-TMC 2012. Physical health and wellbeing of emerging and young adults with mental illness: An integrative review of international literature. *International Journal of Mental Health Nursing*, 21, 274-288.
- Mccreadie, RG, Stevens, H, Henderson, J, Hall, D, Mccaul, R, Filik, R, et al. 2004. The dental health of people with schizophrenia. *Acta Psychiatrica Scandinavica*, 110, 306-10.
- Mitchell, A, Patrick, K, Heywood, W, Blackman, P & Pitts, M 2014. 5th National Survey of Australian Secondary Students and Sexual Health 2013. Melbourne: Australian Research Centre in Sex, Health and Society.
- Morgan, AJ, Parker, AG, Alvarez-Jimenez, M & Jorm, AF 2013a. Exercise and Mental Health: An Exercise and Sports Science Australia Commissioned Review. *Journal of Exercise Physiology Online*, 16, 64-73.
- Morgan, VA, Mcgrath, JJ, Jablensky, A, Badcock, JC, Waterreus, A, Bush, R, et al. 2013b. Psychosis prevalence and physical, metabolic and cognitive co-morbidity: data from the second Australian national survey of psychosis. *Psychological Medicine*, 1-14.
- Morgan, VA, Waterreus, A, Jablensky, A, Mackinnon, A, Mcgrath, JJ, Carr, V, et al. 2011. People living with psychotic illness 2010: Report on the second Australian national survey. Canberra.
- Morrison, Z 2009. Homelessness and sexual assault. ACSSA (Australian Centre for the Study of Sexual Assault) Wrap. Melbourne: Australian Institute of Family Studies.
- Muir, K, Mullan, K, Powell, A, Flaxman, S, Thompson, D & Griffiths, M 2009. State of Australia's young people: A Report on the social, economic, health and family lives of young people. Canberra: Commonwealth of Australia.
- Muir, K & Powell, A 2012. Walking a well-being tightrope: young people in Australia. *Journal of Population Research*, 29, 293-313.
- Murphy, SM, Edwards, RT, Williams, N, Raisanen, L, Moore, G, Linck, P, et al. 2012. An evaluation of the effectiveness and cost effectiveness of the National Exercise Referral Scheme in Wales, UK: a randomised controlled trial of a public health policy initiative. *Journal of Epidemiology and Community Health*, 66, 745-53.
- Myles, N, Newall, HD, Curtis, J, Nielsens, O, Shiers, D & Large, M 2012. Tobacco use before, at, and after first-episode psychosis: a systematic meta-analysis. *The Journal of Clinical Psychiatry*, 73, 468-75.
- National Health and Medical Research Council. 2015. *Alcohol guidelines: reducing the health risks* [Online]. online: Australian Government. Available: <https://www.nhmrc.gov.au/health-topics/alcohol-guidelines> [Accessed 24 April 2015].
- National Mental Health Commission 2013. A Contributing Life, the 2012 National Report Card on Mental Health and Suicide Prevention. Sydney: National Mental Health Commission.
- National Mental Health Commission 2014a. The National Review of Mental Health Programmes and Services: Volume 1. Sydney.
- National Mental Health Commission 2014b. The National Review of Mental Health Programmes and Services: Volume 2. Sydney.
- New South Wales Health 2009. Linking physical and mental health care... it makes sense - Information sheet for mental health services. Sydney: NSW Health.
- New South Wales Health 2014. Healthy, Safe and Well: A Strategic Health Plan for Children, Young People and Families 2014-24. Sydney: NSW Government.
- Newcomer, JW 2007. Metabolic considerations in the use of antipsychotic medications: a review of recent evidence. *The Journal of Clinical Psychiatry*, 68 Suppl 1, 20-7.
- Okely, T, Salmon, J, Vella, S, Cliff, D, Timperio, A, Tremblay, M, et al. 2013. A Systematic Review to Inform the Australian Sedentary Behaviour Guidelines for Children and Young People. Canberra.
- Orygen Youth Health Beyond Awkward: Talking with young people with mental health issues about their sexuality, gender identity, sexual safety and exual activity. Melbourne: Orygen Youth Health.
- Patulny, R, Muir Kristy, Powell Abigail, Flaxman Saul & Ioana, O 2013. Are we reaching them yet? Service access patterns among attendees at the headspace youth mental health initiative. *Child and Adolescent Mental Health*, 18, 95-102.
- Peterson, M, Chandlee, M & Abraham, A 2008. Cost-effectiveness analysis of a statewide media campaign to promote adolescent physical activity. *Health Promotion Practice*, 9, 426-33.
- Phongsavan, P, Merom, D, Bauman, A & Wagner, R 2007. Mental illness and physical activity: therapists' beliefs and practices. *Australian and New Zealand Journal of Psychiatry*, 41, 458-459.

- Quirk, S, El-Gabalawy, R, Brennan, S, Bolton, J, Sareen, J, Berk, M, et al. 2015a. Personality disorders and physical comorbidities in adults from the United States: data from the National Epidemiologic Survey on Alcohol and Related Conditions. *Social Psychiatry and Psychiatric Epidemiology*, 50, 807-820.
- Quirk, SE, Williams, LJ, Chanen, AM & Berk, M 2015b. Personality disorder and population mental health. *The Lancet Psychiatry*, 2, 201-202.
- Quit Resource Centre. 2015. Youth & smoking [Online]. Quit Victoria. Available: <http://www.quit.org.au/resource-centre/communities/youth-and-smoking> [Accessed 20 May 2015].
- Ratschen, E, Britton, J & McNeill, A 2011. The smoking culture in psychiatry: time for change. *The British Journal of Psychiatry*, 198, 6-7.
- Reid, SC, Kauer, SD, Hearps, SJC, Crooke, AHD, Khor, AS, Sancu, LA, et al. 2013. A mobile phone application for the assessment and management of youth mental health problems in primary care: health service outcomes from a randomised controlled trial of mobiletype. *BioMed Central Family Practice*, 14, 84-92.
- Reilly, S, Planner, C, Gask, L, Hann, M, Knowles, S, Druss, B, et al. 2013. Collaborative care approaches for people with severe mental illness. *Cochrane Database of Systematic Reviews* [Online]. Available: <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD009531.pub2/abstract>.
- Rice S M, Goodall J, Hetrick S E, Parker a G, Gilbertson T, Amminger G P, et al. 2014. Online and social networking interventions for the treatment of depression in young people: a systematic review. *Journal Of Medical Internet Research*, 16.
- Rickwood, DJ, Telford, Nic R, Parker, Alexandra G, Tanti, Chris J and Mcgorry, Patrick D 2014. headspace — Australia's innovation in youth mental health: who are the clients and why are they presenting? *Medical Journal of Australia*, 200, 4.
- Roberts, J, Crosland, A & Fulton, J 2014. Patterns of engagement between GPs and adolescents presenting with psychological difficulties: a qualitative study. *British Journal of General Practice*, 64, e246-e254.
- Robertson, L, Mcgee, R & Hancox, RJ 2014. Smoking cessation and subsequent weight change. *Nicotine & Tobacco Research: Official Journal Of The Society For Research On Nicotine And Tobacco*, 16, 867-871.
- Rodgers, RF & Paxton, SJ 2014. The impact of indicated prevention and early intervention on co-morbid eating disorder and depressive symptoms: a systematic review. *Journal of Eating Disorders*, 2, 30.
- Rosenbaum, S, Tiedemann, A, Stanton, R, Parker, AG, Waterreus, A & Ward, PB (2015). Implementing evidence-based physical activity interventions for people with mental illness: an Australian perspective. *Australasian Psychiatry*.
- Royal Australian College of General Practitioners 2012. Guidelines for preventive activities in general practice 8th ed.
- Sarris, J, Logan, AC, Akbaraly, TN, Amminger, GP, Balanzá-Martínez, V, Freeman, MP, et al. 2015. Nutritional medicine as mainstream in psychiatry. *The Lancet Psychiatry*.
- Sawyer M G, Arney F M, Baghurst P A, Clark J J, Graetz B W, Kosky R J, et al. 2000. The Mental Health of Young People in Australia: Child and Adolescent Component of the National Survey of Mental Health and Well-Being. Canberra.
- Scollo, M 2013. The pricing and taxation of tobacco products in Australia. In: Scollo, MM & Winstanley, MH (eds.) *Tobacco in Australia*. 4th ed. Melbourne (online): Cancer Council Victoria.
- Seko, Y, Sean, K, David, W & Kwame, M 2014. Youth Mental Health Interventions via Mobile Phones: A Scoping Review. *CyberPsychology, Behavior & Social Networking*, 17, 591-602.
- Senn, TE & Carey, MP 2008. HIV, STD, and Sexual Risk Reduction for Individuals with a Severe Mental Illness: Review of the Intervention Literature. *Current Psychiatry Reviews*, 4, 87-100.
- Surgenor, LJ & Maguire, S 2013. Assessment of anorexia nervosa: an overview of universal issues and contextual challenges. *Journal of Eating Disorders*, 1, 29.
- Teasdale, S, Harris, S, Rosenbaum, S, Watkins, A, Samaras, K, Curtis, J, et al. 2015. Individual dietetic consultations in first episode psychosis: a novel intervention to reduce cardiometabolic risk. *Community Mental Health Journal*, 51, 211-4.
- The Lancet Psychiatry 2014. Physical and mental health: activate and integrate. *The Lancet Psychiatry*, 1, 163.
- The Social Research Centre 2007. National Tobacco Youth Campaign Evaluation. North Melbourne.
- Tsoi, DT, Porwal, M & Webster, AC 2010. Interventions for smoking cessation and reduction in individuals with schizophrenia. *The Cochrane Database of Systematic Reviews*, Cd007253.
- Tylee, A, Haller, DM, Graham, T, Churchill, R & Sancu, LA 2007. Youth-friendly primary-care services: how are we doing and what more needs to be done? *The Lancet*, 369, 1565-1573.
- Üçok, A, Incesu, C, Aker, T & Erkoç, Ş 2007. Sexual dysfunction in patients with schizophrenia on antipsychotic medication. *European Psychiatry*, 22, 328-333.
- Van Der Meer Regina, M, Willemsen Marc, C, Smit, F & Cuijpers, P. 2013. Smoking cessation interventions for smokers with current or past depression. *Cochrane Database of Systematic Reviews* [Online]. Available: <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD006102.pub2/abstract>.
- Verhaeghe, N, De Smedt, D, De Maeseeneer, J, Maes, L, Van Heeringen, C & Annemans, L 2014. Cost-effectiveness of health promotion targeting physical activity and healthy eating in mental health care. *BioMed Central Public Health*, 14, 856.
- Wade, D, Harrigan, S, Edwards, J, Burgess, PM, Whelan, G & Mcgorry, PD 2006. Course of substance misuse and daily tobacco use in first-episode psychosis. *Schizophrenia Research*, 81, 145-50.
- Watanabe, N, Furukawa, TA, Shimodera, S, Katsuki, F, Fujita, H, Sasaki, M, et al. 2014. Cost-effectiveness of cognitive behavioral therapy for insomnia comorbid with depression: Analysis of a randomized controlled trial. *Psychiatry and Clinical Neurosciences*.
- Wei, Y & Kutcher, S 2014. Innovations in Practice: 'Go-to' Educator Training on the mental health competencies of educators in the secondary school setting: a program evaluation. *Child and Adolescent Mental Health*, 19, 219-222.
- Weir, K 2013. Smoking and mental illness. Monitor on Psychology. Online: American Psychology Association.
- Wu, MK, Wang, CK, Bai, YM, Huang, CY & Lee, SD 2007. Outcomes of obese, clozapine-treated inpatients with schizophrenia placed on a six-month diet and physical activity program. *Psychiatric Services*, 58, 544-50.

35 Poplar Road
Parkville VIC 3052
1300 679 436
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