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Mental Health Australia

Investing to Save

The Economic Benefits for Australia of Investment in Mental Health Reform

Mental Health Australia and KPMG

Final report
May 2018

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Foreword

At Mental Health Australia, our vision is for mentally healthy people and mentally healthy communities.

Investing to Save presents a major contribution towards that vision. It shows how we can, with the right targeted investments, improve the mental health of our community, and in turn the mental wealth of the nation.

There have been many reviews, inquires and other various investigations into Australia's mental health system. But this is a report unlike any other.

Investing to Save tackles a set of complex issues from a new perspective, and a new pragmatic approach to the scale of the task of reforming our mental health system.

As with any area of policy, in mental health we must decide where our priorities lie and direct our resources accordingly. But the simple question of 'where is money best spent in mental health?' is not so simple to answer. *Investing to Save* takes into account a range of complex issues, and presents actionable, scalable and context-specific solutions – solutions that not only provide demonstrable health and social benefits, but quantifiable economic returns to taxpayers and to the community. *Investing to Save* is a foundation for further action on mental health, beyond the measures that governments have prioritised for themselves.

Investing to Save provides tangible options to deliver additional economic and productivity gains for business and for the broader community. To start realising those returns, and start improving the mental health of our community, I hope that governments can join us on the long journey of reform, looking beyond budget and election cycles, by adopting measures which create the environment in which such returns on investment are truly possible. *Investing to Save* is a new beginning, not the end of mental health reform.

Investing to Save is not the whole story on mental health. Every day many thousands of professionals help many thousands of consumers and carers live contributing lives in the community and in a range of service settings, and that work must continue. But every day, many people also miss out on the services they need, or our ailing systems fail in crucial ways.

This report makes a vital contribution to remedying some of those failures with a very specific to-do list which makes economic sense. A list backed by evidence and sound economic modeling. A list for governments to act on now, using the governance framework and priorities that all governments have agreed in the Fifth National Mental Health and Suicide Prevention Plan.

The team at KPMG has produced a report we can all learn a great deal from. We thank them for their passion, their acumen and their professionalism to improve the mental health of the nation.

Jennifer Westacott
Chair, Mental Health Australia

Introduction

There is a clear economic case for improving the mental health and wellbeing of all Australians.

The social and moral imperative for improving the mental health and wellbeing of Australians is clear, with one in five Australians experience mental ill-health in any given year. The extent of mental health reform over the past 30 years reflects the desire of successive governments and sector leaders to deliver better mental health care. Despite this, the pathway forward can be unclear for governments and their partners in an era of fiscal constraints and competing demands.

Investing to Save outlines 'win-win' recommendations for investment in mental health: they deliver economic returns to government and the economy at the same time as achieving positive health and social outcomes for people experiencing mental ill-health. This is particularly the case where organisations and governments are able to intervene early, investing upfront to avoid significantly higher costs in the future.

More often than not, systemic reform is constrained by limitations in the available data: both data that tells us how we are currently spending our funding, and data that tells us how effective those investments are. Investing to Save addresses this by delivering recommendations with strong evidence bases and by supporting the collection of evidence in key areas where gaps currently exist.

In presenting an economic case for reform, it is important to keep the human element at the forefront: these recommendations are important not only because they will save governments and their partners money in the long run, but also because there is clear evidence to say that they will improve the lives of people with mental health issues, their families, their friends and their communities.

We are proud that KPMG is able to contribute to the ongoing discussion on mental health reform, both as a key advisor to governments and other organisations in the mental health sector, and as a large corporate employer in our own right. In particular, the recommendations relating to workplace mental health are a timely reminder of our own desire to provide a mentally safe and healthy workplace to our employees. Mental health forms one of our key pillars as an organisation so as ensure that it remains a focus at Board level well into the future.

We sincerely thank Mental Health Australia for the opportunity to partner with them on this report. *Investing to Save* is not a system-wide blueprint, but our hope is that these recommendations can spark immediate action that helps governments and others take the next steps towards systemic mental health reform.

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The findings in this report have been formed on the above basis.

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Executive Summary

This report presents the economic case for continued mental health reform. It highlights opportunities for governments and employers to generate more significant returns on their investment in mental health, focusing on a small number of targeted, practical interventions where the evidence base on "what works" is strong.

Executive summary

Australia's mental health sector has undergone considerable reform over the past 30 years; yet the prevalence of mental ill-health, and the significant costs it imposes on both individuals and their employers, make it clear that further reform is needed:

- At an individual level, one in five Australians in any given year experience mental ill-health. Almost half of the population experience mental ill-health at some stage in their lifetime.[1] When these individuals do not receive support to treat or manage their mental health, their capacity to lead a 'contributing'[2] life is diminished, along with their wellbeing and the wellbeing of their carers, family and friends.
- In the workplace, employees with mental ill-health are more likely to be absent from work, and less productive when at work.[3] This has a flow-on effect at a macroeconomic level, where mental ill-health costs the economy almost $60 billion a year.[4] The influence of mental ill-health on the workforce participation rate is such that realistic improvements in mental ill-health rates could improve workforce participation rates by 30 per cent. [5]

A large body of reviews, reports and inquiries prepared over the last 30 years have guided past reforms. Most of these reports have made the case for greater investment in mental health by costing the burden of disease or focusing on the social and moral imperative for reform. This report takes a different perspective, but one which complements and builds on the previous body of work.

In addition to the social benefits from reform, this report focuses on opportunities that also provide strong economic benefits and positive returns on investment. It aims to help governments and industry to make challenging decisions about how to best allocate scarce resources and funding. This approach recognises that there are always trade-offs in making decisions about complex social issues, and that economic evidence can shine a new light on the nature of these trade-offs.

The recommendations presented in this report offer 'win-win' scenarios, delivering both economic returns to governments and positive health and wellbeing outcomes to individuals. They do require upfront investment from governments and industry, but the positive returns provide a compelling case for investment. Without this investment, governments will be left to face a broad range of mental health costs – ranging from avoidable emergency department presentations, hospital beds, homelessness support, drug and alcohol treatments and the Disability Support Pension incurred by individuals, to the absenteeism, presenteeism and workforce participation rates affecting the broader economy.

Anyone seeking to develop recommendations on mental health reform would be confronted and constrained by the paucity of data in this space. It is challenging to untangle the complex funding arrangements in place, and even more challenging to use data to assess how effective current interventions are in the mental health space. Over the past decade, per capita non-hospital mental health funding has increased and hospital mental health funding has been stable; yet it remains entirely unclear whether this overall increase in funding has generated an improvement in outcomes.

This presents a major problem for policymakers and politicians in deciding how best to allocate funding. This report aims to progress the debate about reform beyond limitations in data by taking a pragmatic approach and focusing on interventions that have a clear evidence base outlining, to the best of the sector's knowledge, what works. Key recommendations also encourage governments to collect more detailed and better quality data, so that they can assess whether their investments in hospital and non-hospital mental health achieve optimal value for money and community outcomes.

In presenting recommendations for reform, this report does not aim to reinvent the wheel on past reports and studies, nor does it propose a plan for systemic reform. Instead, it focuses on a small number of practical interventions to move the debate on mental health reform *beyond:*

***Beyond** debates on adjusting mental health spending to match the cost of illness – we need to identify where investments can be made with returns to government*

***Beyond** the rhetoric of action without any follow-up – we need swift and determined action, similar to responses to family violence, disability and road trauma*

***Beyond** being limited by poor quality data – we need to fund according to the data we have and trial/evaluate to fill in the gaps*

***Beyond** debates about what people with a mental illness need – they are more than capable of telling us what they need*

Scope of this report

KPMG was engaged by Mental Health Australia to identify a limited number of practical recommendations for progressing mental health reform that had a strong economic argument; were supported by the evidence base or offered an innovation with clear potential benefits; and improved the health and wellbeing of Australians. The methodology used to develop recommendations is outlined in the chapter 'Context for this report'. At a high level, the methodology included:

- analysis of published mental health service and treatment data
- desktop review of past reports and inquiries on mental health
- an initial high-level literature review for potential recommendations, followed by a detailed literature review for agreed recommendations
- consultation with a small cohort of expert stakeholders
- development of a prioritisation framework to agree final recommendations
- cost-benefit analysis for agreed recommendations.

Key recommendations

From detailed analysis described above, Mental Health Australia and KPMG have developed the following three recommendations and ten sub-recommendations:

Recommendation 1: Support individuals with mental health issues to gain and maintain employment, and maintain the mental health and wellbeing of the workforce

1.1 Workplace mental health interventions

Work with employers to improve workplace mental health and wellbeing

$4.5 billion in savings

1.2 WorkCover incentive trial

Trial adjustments to Workers' Compensation insurance premiums according to workplaces' mental health risk profile

$500 million in savings

1.3 Peer workforce trial

Trial a paid peer workforce to build the evidence base

Savings not estimable

1.4 Supported employment for people with a severe mental illness

Provide supports to people with a severe mental illness to gain and maintain employment

$120 million over two years

Recommendation 2: Minimise avoidable emergency department presentations and hospitalisations

2.1 Housing First for 15 - 24 year olds

Adopt a Housing First model for young people aged 15 to 24 with a mental illness at risk of homelessness

$1.6 billion in short term savings, $4.8 billion in long-term savings

2.2 Assertive outreach post-suicide attempt

Provide community-based assertive outreach to people who have attempted suicide

$100 million in short term savings, $1.0 billion in long-term savings

2.3 National minimum data set for primary mental health

Measure the impact of primary care on the use of secondary care by linking the new Primary Mental Health Care Minimum Data Set to wider health and social data sets

Savings not estimable

Recommendation: 3 Invest in promotion, prevention and early intervention

3.1 Early interventions in physical health

Provide community-based collaborative care to people with co-morbid physical and mental illnesses

$1.8 billion in savings

3.2 Prevention and early intervention

Invest in prevention and early intervention, and build the evidence base for promotion

$90 million in the short term

3.3 e-Health early interventions

Use e-health as an enabler to deliver early intervention services

$442 million in savings

In total, these recommendations would generate between $8.2 billion and $12.7 billion from an investment of under $4.4 billion. Wider health-related quality of life measures such as Quality Adjusted Life Years (QALYs) or Disability Adjusted Life Years (DALYs) were not included in the modelling, suggesting that the savings below are underestimated.

This report highlights significant and powerful return on investment figures for mental health that have comparatively high impact when compared to other areas of health investment, such as heart disease or joint replacements. Many chronic disease ROI studies highlight returns of less than $1 for every $1 spent. A number of recommendations in this report see longer term savings of up to $10 for every dollar invested. This highlights that there are significant gains to be made, particularly when targeted interventions are applied early in a person's life.

Given the complexity of mental illness, it is potential that the savings from some recommendations will overlap. Where possible, this has been mitigated by remaining conservative in the investment scenarios and acknowledging overlap when summing up the overall potential savings.

Limitations

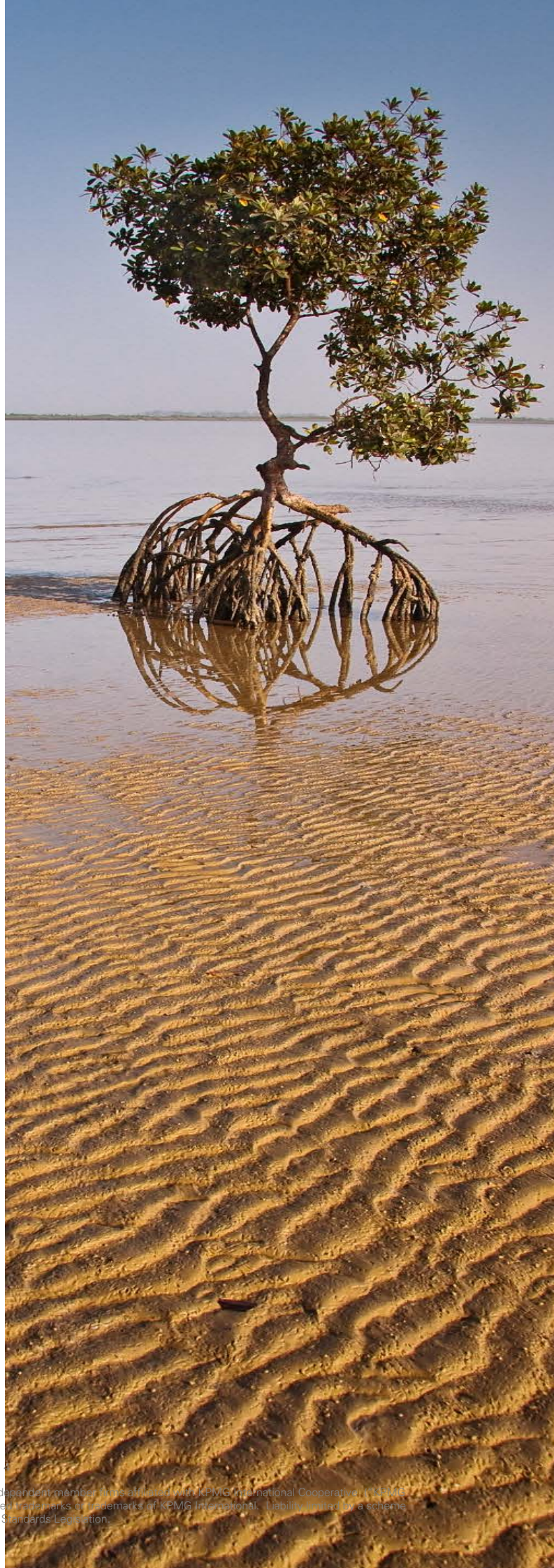
The scope of this report has been necessarily limited to a small number of targeted recommendations. Importantly, the report is not:

- a comprehensive evaluation of the entire mental health system
- economic modelling of all prospective mental health interventions
- a whole of government plan for reform.

KPMG and Mental Health Australia identified a range of potential areas for reform that are worthy of additional analysis, but are being progressed through other avenues or had considerable complexity that could not be addressed within the scope of this analysis. As such, the following areas have **not** been directly considered in formulating the recommendations in this report:

- investment in psychosocial disability via the National Disability Insurance Scheme and other programs
- the interface between mental health and:
  - the alcohol and other drugs system
  - the justice system
  - the aged care system
  - the education system.
- broader industry planning for the mental health workforce.

Additionally, the scope of this project has limited the report's capacity to focus on the needs of specific cohorts. In particular, it is recognised that Aboriginal and Torres Strait Islanders may require additional targeted, culturally appropriate supports, as will carers of individuals experiencing mental ill-health. The Fifth National Mental Health and Suicide Prevention Plan supports an ongoing focus on specific cohorts and it is intended that recommendations presented here will be interpreted within the context of requiring further consideration and adaptation. However, the recommendations presented are consistent with, and build on, the priorities of government as set out in the Fifth National Mental Health and Suicide Prevention Plan.



Glossary

ABS	Australian Bureau of Statistics
ACARA	Australian Curriculum, Assessment and Reporting Authority
AIHW	Australian Institute of Health and Welfare
CBT	Cognitive behavioural therapy
DALY	Disability-adjusted life year
DSP	Disability Support Pension
ED	Emergency department
GP	General practitioner
IHPA	Independent Hospital Pricing Authority
IPS	Individual Placement Support
LHD	Local Health District
LHN	Local Health Network
MHA	Mental Health Australia
MHE NMDS	Mental Health Establishments National Minimum Data Set
NDIS	National Disability Insurance Scheme
NHMRC	National Health and Medical Research Council
OECD	The Organisation for Economic Co-operation and Development
PC	Productivity Commission
PHaMs	Personal Helpers and Mentors
PHN	Primary Health Network
PMHCMDS	Primary Mental Health Care Minimum Data Set
PSID	US Panel Study of Income Dynamics
PST	Problem solving therapy
ROI	Return on investment
QALY	Quality-adjusted life year
RACGP	Royal Australian College of General Practitioners
RANZCP	Royal Australian and New Zealand College of Psychiatrists
RCT	Randomised controlled trial
SWA	Safe Work Australia

Context for this report

This section provides background context for this report and outlines the economic case for mental health reform.

Context for this report

Mental health prevalence, cost and expenditure

The impact of mental ill-health is far reaching. Mental ill-health was Australia's third highest burden of disease in 2011, accounting for 12 per cent of the total burden of disease.[6] One in five Australians in any given year experience mental ill-health, with almost half of the population experiencing mental ill-health at some stage in their lifetime.[7] This includes:

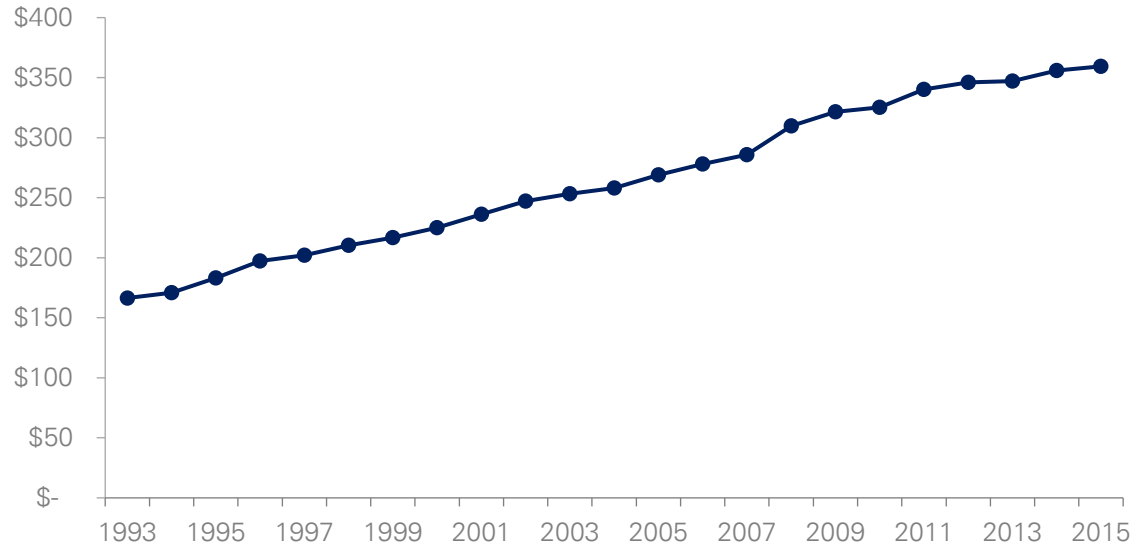
- 8.9 per cent of the Australian population with a diagnosis of depression[8]
- 11.2 per cent of the Australian population with a diagnosis of anxiety
- 1.5 per cent of the Australian population with a psychotic illness.[9]

Additionally, approximately 240,000 Australians were carers to someone with a mental illness in 2015, with 54,000 of these being primary carers.[10]

At a high level, mental ill-health has been estimated to cost the economy almost $60 billion a year.[11] Real mental health government expenditure has increased from $2.9 billion in 1993 to $8.5 billion in 2015, with real per capita expenditure increasing from $163 to $361 over the period.[12] While the funding and resources dedicated to help address mental ill-health have grown faster than inflation and faster than population growth, the overall investment is still well below the estimated cost burden.

> Investment in mental health remains below the estimated cost burden

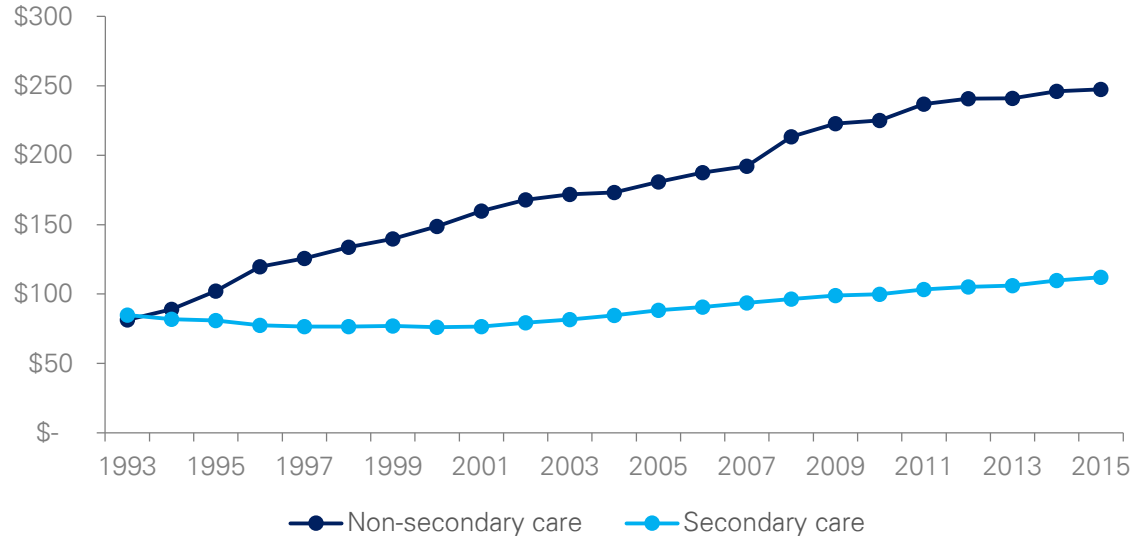
Figure 1: Real per capita expenditure on mental health, 1993-2015, total expenditure



Source: Australian Institute of Health and Welfare (AIHW) (2016) Health expenditure Australia 2014–15. Health and welfare expenditure series no. 57. Cat. no. HWE 67. (Canberra: AIHW)

A common recommendation in previous reports, reviews and inquiries on mental health reform has been that funding and expenditure target non-secondary care (encapsulating primary and community care) rather than secondary (acute / hospital) care. As indicated in Figure 2, at a high level this appears to be occurring.

Figure 2: Real per capita expenditure on mental health, 1993-2015, by type of care



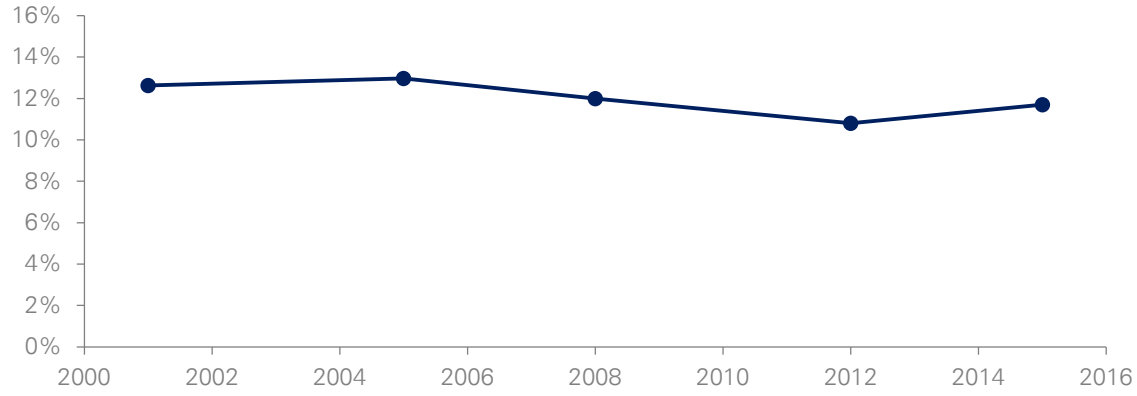
Source: Mental Health Australia and KPMG analysis of Australian Institute of Health and Welfare (AIHW) (2016) Health expenditure Australia 2014–15. Health and welfare expenditure series no. 57. Cat. no. HWE 67. (Canberra: AIHW)

However, despite this increase in expenditure, the prevalence of mental ill-health appears to have remained relatively stable over time, as outlined in Figure 3. This suggests that current non-secondary care expenditure is not achieving a reduction in mental ill-health.

This raises the question of whether non-secondary care expenditure is being effectively allocated. Figure 4 indicates that the use of GP services and pharmaceuticals appears to be relatively high, but access to community care appears to be lower.

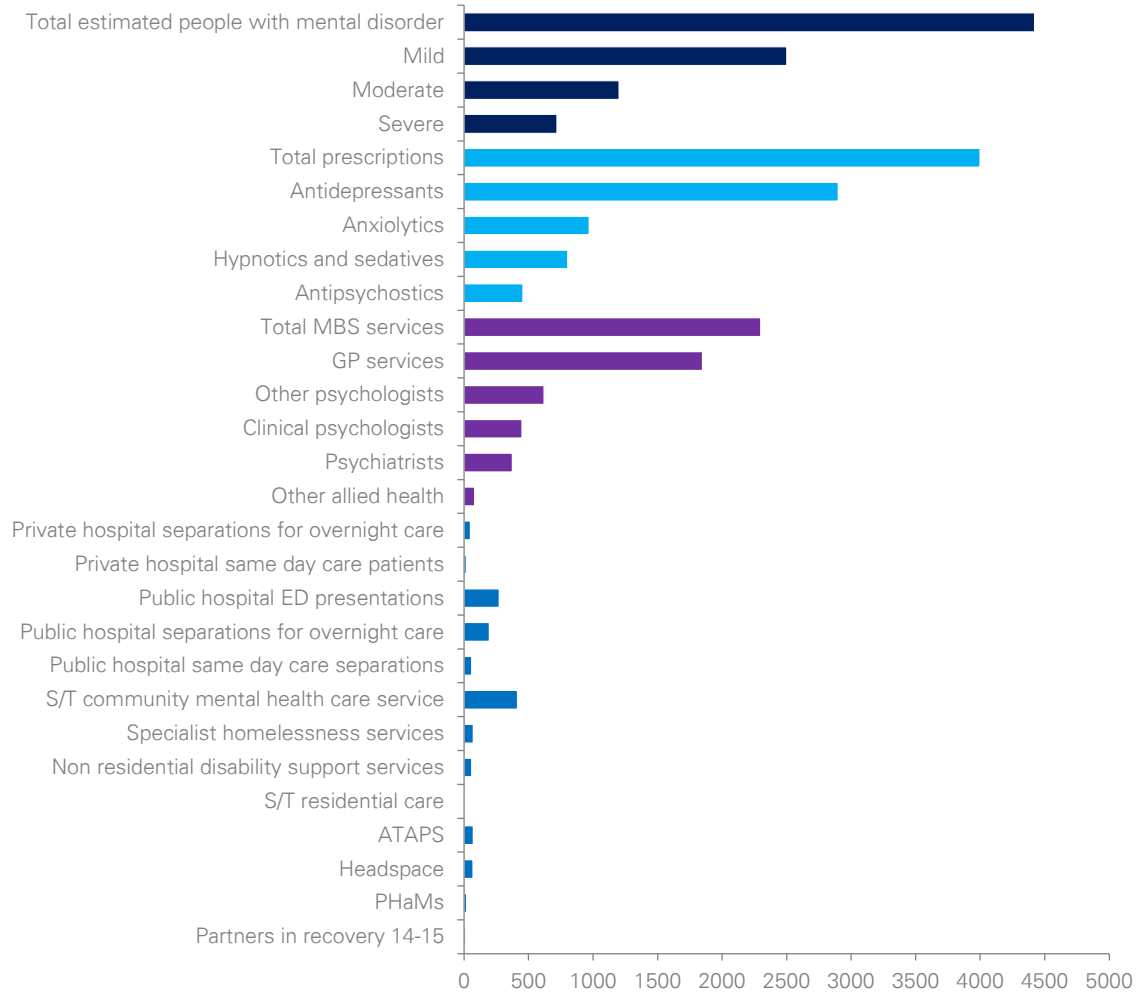
Investment in non-hospital care has risen, but the prevalence of mental ill-health has remained stable, suggesting that increased investment may not be achieving better outcomes

Figure 3: High or very high levels of psychological stress, 2000-2015



Source: ABS National Health Survey 2014/15

Figure 4: Number of people accessing mental health services in 2015-16 ('000s)



Source: MHA analysis of AIHW (2017) Mental Health Services in Brief and AIHW (2016) Health expenditure Australia 2014–15. Health and welfare expenditure series no. 57. Cat. no. HWE 67 (Canberra: AIHW) and Urbis (2015) Partners in Recovery Annual Report 2014-15) and Headspace Annual Report 2015-16.

While Australia has been investing more in primary mental health, there are significant opportunities to improve the cost-effectiveness and productivity of mental health services through better treatment pathways that are integrated and coordinated with increased community promotion, prevention, rehabilitation care and recovery services.[13] For example, collaborative care models consistently show superior outcomes, not just for mental health, but across a variety of measures, including physical functioning, epilepsy, diabetes, arthritis, cancer, cardiovascular disease and depression.[14] For those entering hospital, mental illness is a common comorbidity that negatively impacts rates of readmission and length of stay.

One of the difficulties in making a strong business case for mental health reform is the lack of linked, routinely collected data that can highlight the benefits of increased spending on mental health. For example, some community care interventions can reduce hospitalisations, but quantifying these savings is difficult as there is no linkage of patient or funding data across different primary, community and secondary care settings. More widely, while the social determinants of health are well established, there is no routine linkage of data across wider social jurisdictions such as health, housing, justice, tax and education. The benefits of mental health reform on homelessness or crime, for example, are therefore difficult to estimate.

Mental health and the labour market: a crucial lever for productivity

An economic case for mental health reform is predicated on reframing public discourse on mental health so that it is seen as a core component of governments' productivity agenda.

Australians in good mental health are more likely to be employed, and when employed are less likely to be absent from work and more productive while at work than those with mental health issues. The gains are significant. As outlined in Figure 7 (Chapter 2), one standard deviation improvement in mental health and wellbeing increases the probability of participation in the labour market by 30 percentage points, with larger effects found for females and older persons.[15] The marginal impact of mild depression on labour productivity is estimated to be 3.9 per cent, rising to 9.2 per cent for severe depression.[16]

These impacts are significant. Australia's recent productivity trajectory has been mediocre. As a result, in October 2017, the Productivity Commission released a series of reports entitled 'Shifting the Dial', aimed at improving Australia's productivity. Key amongst its recommendations were improving the health of all Australians, and improving the way in which Australian healthcare services are delivered.

It noted that healthy Australians are more productive and that, as the major funder, government can directly influence the productivity of our healthcare sector. As the above statistics show, the Productivity Commission's rationale applies many times over to mental health, where the productivity improvements from a mentally healthier workforce have the potential to drive Australia's productivity growth.

Finally, there is a macroeconomic case for investment in mental health reform. The benefits of a more productive mental health care sector, and of increased labour supply and improved labour productivity, have wide flow-on impacts across sectors, increasing investment, wages and incomes, and government taxation revenue.

> Mental health reform can be a significant driver of Australia's future prosperity and living standards

Scope and methodology

Scope and methodology

Scope of this report

KPMG was engaged by Mental Health Australia on a pro-bono basis to identify practical recommendations for progressing mental health reform that had a strong economic argument, were supported by the evidence base or offered a practical innovation, and improved the health and wellbeing of Australians. It should be noted that the scope of this report does not include:

- a comprehensive evaluation of the entire mental health system
- economic modelling of all prospective mental health interventions
- a whole of government plan for reform.

"Don't give us another 'white paper' on the issues... we need action"

- Senior mental health sector leader

Methodology for this report

A high-level overview of the methodology used to formulate recommendations in this report is presented in Figure 5, with further detail provided below.

Figure 5: Methodology for formulating this report

Past reports and inquiries reviewed

Considerable work has been undertaken by governments, mental health commissions, academics, think-tanks, peak bodies and leading practitioners and policymakers over a period of 30 years to further mental health reform. While there have been some differences of opinion across the sector, particularly where stakeholders have had a vested interest in competing for scarce resources, as a whole recommendations in past reports have been remarkably consistent.

Table 2 outlines some of the more recent major national-level reports that have been considered in formulating recommendations. This is supplemented by Table 1 in Appendix A, which provides a high-level summary of the key recommendations in past reports against each component of the mental health system, and then shows how the recommendations in this report align to previous recommendations.

Table 1: Key past reports

Year	Author	Title
2014	National Mental Health Commission	Contributing Lives, Thriving Communities – Review of Mental Health Programmes and Services
2013	Medibank Private	The Case for Mental Health Reform in Australia: A Review of Expenditure and System Design
2013	John Mendoza et al.	Obsessive Hope Disorder
2012-pres.	NHMRC Centre of Research Excellence in Mental Health Systems Improvement (CREMSI)	Ongoing research, final publication due in 2017
2011	Productivity Commission	Disability care and support
2011	Senate Community Affairs References Committee	Commonwealth funding and administration of mental health services
2010	University of Queensland; Deakin University	Assessing Cost-Effectiveness in Prevention
2008	Senate Community Affairs, Legislative and General Purpose Standing Committee	Towards recovery: Mental health services in Australia
2006	Gavin Andrews	Tolkien II A needs-based, costed stepped-care model for Mental Health Services
2006	Senate Select Committee on Mental Health	A national approach to mental health – from crisis to community
2006	Mental Health Council of Australia	Not for service. Experiences of Injustice and Despair in Mental Health Care in Australia
1993	Australian Human Rights Commission	Human rights and mental illness: Report of the National inquiry concerning the human rights of people with mental illness

Source: KPMG

Stakeholder consultation

Table 3 lists the stakeholders consulted as part of Phase 2: Prioritisation of recommendations and consultation. The methodology for this report did not include sector-wide consultation due to the limitations in scope for this project. However, the majority of recommendations presented here have built on recommendations in previous Mental Health Australia reports, which have been extensively tested with Mental Health Australia members and others in the sector.

Table 2: Stakeholders consulted for this report

Role	Description
Mental Health Australia Board Member	Where the Board Member has another substantive role, this has been indicated: Jennifer Westacott, Chair, Mental Health Australia and CEO, Business Council of Australia Robyn Kruk, Board Member, Mental Health Australia Christine Morgan, CEO, Butterfly Foundation Jonathan Nicholas, CEO, ReachOut Georgie Harman, CEO, beyondblue
Other organisations	Dr Peggy Brown, CEO, National Mental Health Commission Prof Allan Fels, Chair, National Mental Health Commission David Murray, Chair, Butterfly Foundation

Source: KPMG

Prioritisation

Table 4 outlines the criteria used to prioritise recommendations in Phase 2: Prioritisation of recommendations and consultation.

Table 3: Criteria for prioritisation

Criterion	Key questions	Where is this analysis evident in the recommendations?
Prevalence / burden of disease	How many people could this intervention potentially impact?	Each recommendation has introductory text that considers this criterion.
Economic impact	What are the costs of this intervention? What are the economic benefits of this intervention? What is the return on investment for this intervention?	Each sub-recommendation has the sub-heading 'What is the economic impact of intervening in this area?'
Strength of evidence base	What is the quality of the available evidence base? How effective have the outcomes been in the identified evidence base?	Each sub-recommendation has the sub-heading 'What does the intervention involve, and how strong is the evidence base?'
Alignment with existing policy directions	Is this recommendation aligned with existing policy directions, or is it a recommendation that could be contentious?	Each sub-recommendation has the sub-heading 'Is this intervention aligned with existing policy directions?'
Ease of implementation	Are there existing opportunities that could be leveraged to implement this recommendation? What are the challenges of implementing this recommendation?	Each sub-recommendation has the sub-heading 'What are the opportunities or challenges of implementation?'

Source: KPMG

Assessment of the evidence base

Appendix D outlines the evidence base for each recommendation. KPMG and Mental Health Australia have not attempted to undertake a systematic review or identify all available evidence for each recommendation. Rather, a pragmatic approach to collecting evidence has been taken, relying on systematic reviews and meta-analyses where possible. Evidence has been rated according to the National Health and Medical Research Council (NHMRC)'s levels of evidence hierarchy.

Ratings of the quality of the evidence base have been adapted from the Cochrane GRADE Working Group grades of evidence:

- **High quality**: Further research is very unlikely to change our confidence in the estimate of effect.
- **Moderate quality**: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.
- **Low quality**: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.
- **Very low quality**: We are very uncertain about the estimate.

The outcomes of the evidence base have been rated as one of: Effective; Mixed; and Not effective.

Return on investment analysis

The methodology for this report differs from the traditional cost of illness approach as it does not seek to quantify all potential costs of mental health issues, but rather to identify the major direct returns available to employers or government through investing in mental health and wellbeing.

The specific methods used for modelling the return on investments varied according to the intervention being assessed. Intervention costs were sourced from the literature with unit cost data from relevant agencies such as the AIHW, IHPA or the ABS. Savings were considered across three broad areas:

- **Health sector savings –** due to a reduction in health service utilisation, e.g. reduced inpatient days
- **Employment savings –** due to improved labour productivity and supply, the reverse of which is sometimes referred to as presenteeism and absenteeism
- **Justice sector savings –** due to a reduction in justice service utilisation, e.g. reduced incarcerations.

Savings were only included in the modelling when the evidence base and magnitude of impact were significant and allowed for quantification. For example, justice sector savings were included in the analysis of the youth homelessness intervention as there is strong evidence that homelessness is associated with higher incarcerations and justice sector costs, but were excluded in all other analyses. This is not to suggest there are no potential justice sector savings from wider mental health reforms, but these are typically smaller in magnitude than the employment and health sector savings and more difficult to quantify given the current evidence base.

Similarly, health-related quality of life measures such as Quality Adjusted Life Years (QALYs) or Disability Adjusted Life Years (DALYs) were not included in the modelling, as the focus was on the return on investment when considered from the perspective of the employer (for workplace interventions) or the government (for health system interventions).

Some interventions, such as those to reduce homelessness and suicide, can have life-long impacts. For these interventions, the savings were split into short and long-term savings. In this context, the phrase 'short-term' considers a one to two year time-frame; the phrase 'long-term' refers to a time-frame three or more years into the future.

The context of return on investment

This report focuses on interventions that show a positive return on investment (ROI greater than one). As mental health issues occur early in the life course, and have such pervasive effects, including on employment outcomes, our report finds examples of interventions that not only improve health, but also improve economic outcomes. In health economics, these interventions are known as 'dominant' because they deliver both better outcomes and reduced costs. They are unusual because normally it costs money to improve health. In that context, an intervention with an ROI of just 1.0 is a very attractive intervention because it delivers health benefits with no net costs.

However it is important to note that these types of 'win win' interventions are not the only types of interventions that should be funded. Many healthcare interventions do not deliver a positive return on investment but generate improvements to health and wellbeing. A knee replacement for example, costs over $20,000 per surgery but delivers improvements to quality of life. It is deemed a cost-effective intervention because the health gains it delivers are deemed worth the cost, and it is funded by the government. This report in no way suggests that all mental health interventions need to be cost-saving to be funded.

The overlap of interventions and the potential for double counting

One of the challenges with mental health reform is the complexity of mental illness. There are typically a range of causal factors that contribute to mental illness, and therefore a range of potential areas to intervene. This means that interventions have the potential to overlap with each other: it could be that the effectiveness of one intervention is enough to render another intervention obsolete. An early-life intervention for mild depression could prevent a suicide later in life. These complexities over the life course are difficult to entangle: individual interventions are typically evaluated within a narrow scope rather than as part of a collective within a wider overall social investment perspective, and there is little data available to help inform the extent to which this occurs. Our analysis also reviewed the evidence-base on a case-by-case basis, and thus is potentially susceptible to double counting. We therefore took the following steps to help mitigate this potential bias:

- Where there was clear potential for double counting due to a large overlap between the potential target cohorts and associated savings, the intervention was excluded from the total potential investment and savings calculations. For example, the savings from e-health interventions have been excluded from the total investment and savings calculation due to a potential overlap with workforce interventions.
- When estimating potential investment scenarios, we did not necessarily apply the invention to 100 per cent of applicable target cohort. In particular, the workplace reforms in recommendation 1.1 were not applied to the entire cohort of the workforce with mental illness. This reduces the potential for the workplace interventions to overlap and double count the savings from subsequent interventions with much smaller and specific target cohorts (e.g. suicide prevention, or early intervention of psychosis).
- In estimating the savings from mental health reform, we have focused only on those where the evidence base allowed for quantification. There are a range of further benefits that we have not captured.

Macroeconomic analysis

KPMG's Computable General Equilibrium model (KPMG-CGE) of the national economy was used to investigate the economy-wide flow-on impacts of the labour productivity and supply improvements from investing in mental health and wellbeing. This modelling captures the benefits of reduced absenteeism and presenteeism across the economy, including lower wages and employment, reduced economic activity, and an associated reduction in taxation revenue. A long-run analysis was conducted to highlight the longer-term potential of mental health reforms on the wider economy and Australia's future prosperity.

Recommendations for reform

Recommendations for reform

This section outlines three recommendations for reform, each with several specific sub-recommendations. Sub-recommendations were selected in accordance with the set of criteria outlined in Table 5.

Table 4: Outline of the three recommendations for reform

1	**Support individuals with mental health issues to gain and maintain employment, and maintain the mental health and wellbeing of the workforce** **Recommendation 1.1:** Work with employers to improve workplace mental health and wellbeing **Recommendation 1.2:** Trial adjustments to Workers' Compensation insurance premiums according to workplaces' mental health risk profile **Recommendation 1.3:** Trial a paid peer workforce to build the evidence base **Recommendation 1.4:** Provide supports to people with a severe mental illness to gain and maintain employment
2	**Minimise avoidable emergency department presentations and hospitalisations** **Recommendation 2.1:** Adopt a Housing First model for young people aged 15 to 24 with a mental illness at risk of homelessness **Recommendation 2.2:** Provide community-based assertive outreach to people who have attempted suicide **Recommendation 2.3:** Measure the impact of primary care on the use of secondary care by linking the new Primary Mental Health Care Minimum Data Set to wider health and social data sets
3	**Invest in promotion, prevention and early intervention.** **Recommendation 3.1:** Provide community-based collaborative care to people with co-morbid physical and mental illnesses **Recommendation 3.2:** Invest in prevention and early intervention, and build the evidence base for promotion **Recommendation 3.3:** Use e-health as an enabler to deliver early intervention services

Recommendation 1

Support individuals with mental health issues to gain and maintain employment, and maintain the mental health and wellbeing of the workforce

How do mental health issues impact our workforce?

The workforce is one of the major primary factors that drive the economy, together with capital infrastructure and natural resources. Almost 12 million Australians, or half of the population, are currently in the workforce.

Mental health issues impact on both:

- the labour supply, as those with mental health issues are more likely to be absent from work (often referred to as **absenteeism**), and
- the productivity of the workforce, as output per worker is reduced due to mental health issues (**presenteeism**).

Both absenteeism and presenteeism reduce output and profitability for workplaces and the industry in which they work. There are also wider flow-on effects to the macro-economy from mental illness in the workplace. The labour market is the major conduit through which wider (or indirect) costs of mental health issues manifest as reduced labour participation and productivity result in lower wages, lower economic growth, lower taxation revenue, and higher consumer welfare.

How does being in the workforce impact our mental health and wellbeing?

The relationship between the workplace and mental health issues is endogenous, a two-way street. Improved mental health and wellbeing can lead to better workplace outcomes; similarly, improved workplace outcomes can improve mental health and wellbeing. There is strong evidence that employment has a positive relationship with mental health.

> 'Not only does [work] provide income, it also can impart a structure to the day, a sense of purpose, and opportunities for social interaction'[17]

Mental ill-health in the workplace is a significant issue

The ABS reports that in 2013/14, 25,400 people experienced workplace stress or mental illness.[18] Workplace mental illness causes significant absenteeism. In 73 per cent of cases, this led to an absence from work of five days or more, the highest proportion of all recorded workplace injuries and illnesses.

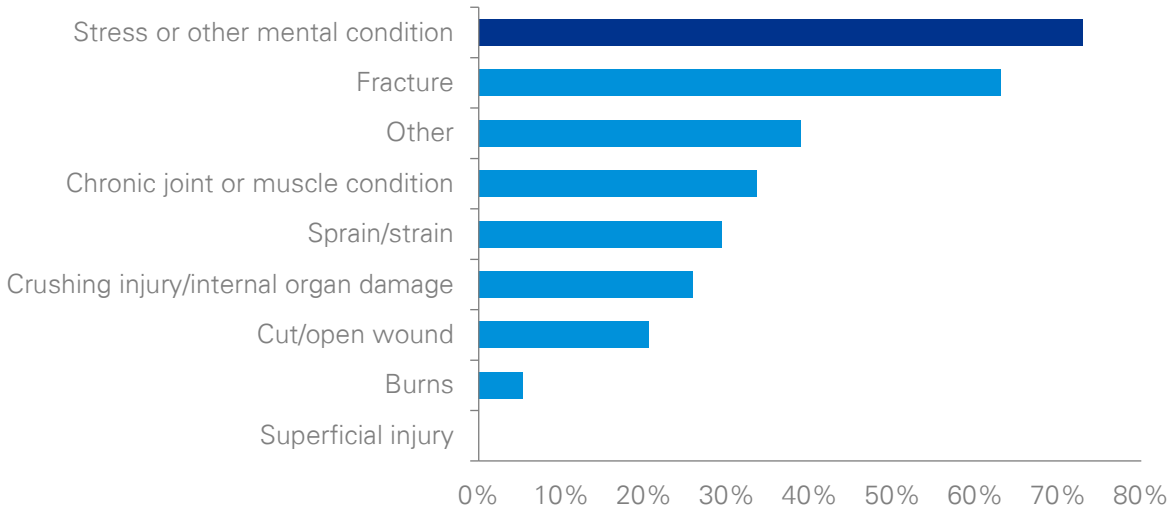
The reported ABS data does not fully capture the extent of mental health issues in the workplace. A recent Australian study found that almost **one-quarter** of the workforce suffer from mild depression that leads to absenteeism of 50 hours per person per annum.[19] A further eight per cent suffer from moderate or severe depression that leads to absenteeism of up to 138 hours per person per annum. Another Australian study highlighted that a one standard deviation reduction in mental health decreases the probability of participation in the labour market by 30 percentage points, with larger effects found for females and older persons.[20]

When at work, mental illness significantly impacts on labour productivity, sometimes referred to as presenteeism. The marginal impact of mild depression on labour productivity is estimated to be 3.9 per cent, rising to 9.2 per cent for severe depression.[21]

To put these numbers into context, over the last 20 years, labour productivity has grown at around 1.5 per cent per annum.[22] Since 2003, the majority of this growth has been due to 'capital deepening' – providing workers with more equipment and tools to perform their work. The contribution of multifactor productivity, the key residual that captures our ability to do more with less, has been stagnant.

> The connection between mental health and work is a two way street... employment improves mental health and wellbeing, and positive mental health and wellbeing enhance workplace productivity

Figure 6: Proportion of work-related injury or illnesses that led to an absence of five days or more



Source: ABS 63240DO004_201314 Work-Related Injuries, Australia, July 2013 to June 2014, KPMG

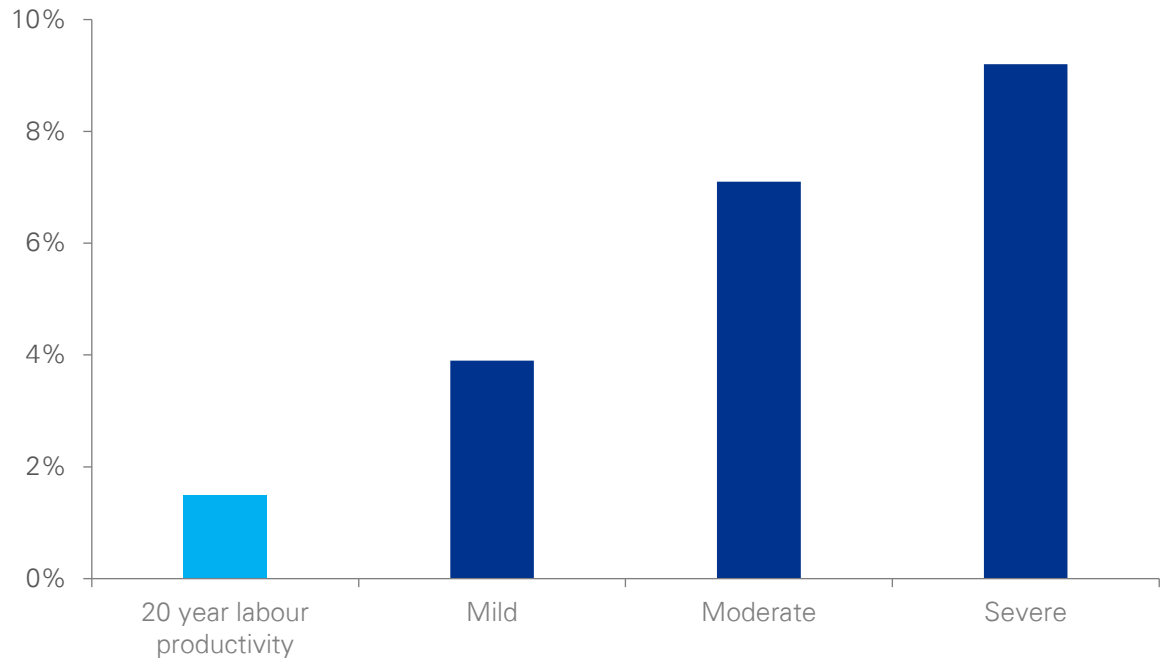
Workplace mental health reform as an investment for the future

Improvements in the mental health and wellbeing of the workforce have the potential to significantly improve multifactor and overall labour productivity. As the Productivity Commission notes,[23] this is important to Australia's prosperity:

Much like Australia has invested in parental leave arrangements in a bid to improve both social equality and economic outcomes, mental health reforms are an opportunity for Australian workplaces to improve employee health, and in doing so generate lasting economic returns for employers and improved future prosperity for the nation.

> The negative impact of depression on productivity dwarves historical labour productivity gains

Figure 7: Negative marginal impact of depression on labour productivity



Source: KPMG analysis of McTernan et al (2013); Australian Bureau of Statistics (2016), '5260.0.55.002 Estimates of Industry Multifactor Productivity, Australia'

> Productivity improvement will be the primary determinant of income growth in the future.

Recommendation 1.1: Work with employers to improve workplace mental health and wellbeing

Why this recommendation?

- Mental health issues in the workplace cost the economy $12.8 billion each year. Select interventions may be able to save $4.5 billion a year.
- The evidence base identifies a range of preventative and targeted interventions that are potentially effective in improving individual mental health and wellbeing and achieving positive organisational outcomes.
- There are opportunities for governments to expand the range of levers they have to encourage workplace mental health reform through activities such as workplace mental health benchmarking tools in development in New South Wales.

Who is this intervention targeted towards?

This set of interventions is targeted towards employees in the workforce. Almost 12 million Australians, or half of the population, are currently in the workforce.

What does the intervention involve, and how strong is the evidence base?

Workplace mental health interventions are typically delivered by employers to support employees to manage their mental health issues. A wide range of interventions have been trialled and implemented globally, ranging across:

- primary interventions, which are universally-targeted preventative interventions aimed at mitigating a broad range of psychosocial risks
- secondary interventions, which may be either targeted universally or to a specific group of employees, and which are preventative measures that address specific psychosocial risks
- tertiary interventions, which are targeted specifically at employees who have been absent from work due to psychological illness or work-related psychological injury

Table 6 outlines the interventions that workplaces with strong mental health policies should aim to offer. While some of these interventions (such as job control) can be delivered at no or low cost by all employers, other interventions may impose cost burdens upon small businesses. Where possible, small businesses should assess psychological risks and hazards in their workplace, and invest in interventions such as cognitive behavioural therapy (CBT)-based resilience training where warranted. Proposed implementation of any of these interventions would need to be carefully considered to avoid discrimination against people with a mental illness and to ensure that processes are handled with regard to confidentiality and privacy concerns.

Table 5: Workplace mental health and wellbeing interventions and evidence base.

	Intervention	Description	Quality of the evidence base	Outcomes
Primary	Job control	Employees' roles are designed so that employees have increased control over how, when and where their work is completed.	● **Moderate:** A number of systematic reviews have been undertaken in this area, but additional research is required.	● **Effective:** Although it can be difficult to distinguish the effect of this specific intervention, most studies have identified that job control is effective in reducing absenteeism.
Secondary	CBT-based resilience training / stress management	Employees attend three sessions with a non-clinical counsellor / therapist where they are trained in CBT techniques to manage their stress levels or to cope with setbacks at work	● **High:** Several systematic reviews have identified a strong evidence base for this intervention.	● **Effective:** Individual-level interventions (e.g. CBT) are effective in reducing stress and improving wellbeing. However, there is no proven positive effect on absenteeism.
	Mental health wellbeing screening checks	Employees are screened for depression, and individuals with heightened depression scores are referred to psychological services	● **Low:** A small number of RCTs have been undertaken in this area.	● **Effective:** Wellbeing screening checks are effective in increasing employee wellbeing and reducing lost work days, but only when appropriate post-screening procedures are in place.
	Manager mental health training	Managers receive a four hour face to face basic mental health training program which combines both mental health literacy and communication training.	● **Low:** A small number of RCTs have been undertaken in this area.	● **Effective:** This intervention is effective in reducing work related sick leave.
	Worksite physical activity	Employees participate in a group program with a fitness coach where they exercise twice a week for 12 or more weeks	● **Low** to ● **moderate:** At least two RCTs have been conducted in this area.	● **Mixed:** Worksite physical activity programs are effective in improving mental health in the short term, but this is only sustained if the individual continues to exercise.

	Intervention	Description	Quality of the evidence base	Outcomes
Tertiary	PST-based return to work programs	Employees attend a number of sessions with a psychologist who provides work-focused PST, integrating work into treatment	**Moderate:** A 2012 Cochrane review identified that a moderate level of evidence was available for this intervention.	**Effective:** This intervention is effective in supporting employees to return to work, and has a positive effect for both individuals and organisations.

Source: KPMG, Sources listed in Appendix A

Appendix B outlines the range of interventions considered and the rationale for excluding particular interventions in this analysis.

Additionally, several reviews of the literature on workplace mental health and wellbeing initiatives have been undertaken in recent years with little variation in results. Key Australian reviews include:

- SafeWork NSW (2017), Mentally Healthy Workplaces in NSW Discussion Paper
- University of Tasmania (2017), An Integrated Approach to Workplace Mental Health: Nine priorities for implementation in Australia
- Harvey et al. for the National Mental Health Commission and the Mentally Healthy Workplace Alliance (2014), Developing a Mentally Healthy Workplace: A Review of the Literature
- Victorian Health Promotion Foundation (2012), Reducing Stress in the Workplace: An evidence review.

At least two cost-benefit analyses have also been conducted in Australia in the past five years:

- SafeWork NSW (2017), Mentally Healthy Workplaces in NSW: A return-on-investment study
- Pricewaterhouse Coopers (2014), Creating a Mentally Healthy Workplace: Return on investment analysis.

These reviews identify a consistent evidence base, although they take varying approaches to assessing return on investment. It is recommended that governments, universities and other stakeholders do not produce or commission further literature reviews on workplace mental health, but instead redirect funding to strengthening the evidence base in areas where there are known gaps.

What is the economic impact of intervening in this area?

Context

The potential economic savings to employers intervening to improve workplace mental health and wellbeing are large. Mental ill-health costs employers an average of $3,200 per employee with mental illness per annum in absenteeism and presenteeism, and up to $5,600 for employees with severe mental illness.[24] Given the current prevalence of employees with mental health issues, the cost of workplace mental ill-health to Australia in 2015/16 is $12.8 billion, consisting of:

- $348 million in direct costs from mental-health related workplace injuries
- $2.6 billion in absenteeism, from reduced days of work for employees with mental health issues
- $9.9 billion in presenteeism, from reduced productivity for employees with mental health issues.

Simple strategies such as increased job control and formal therapeutic training would produce a collective $4.6 billion in workplace mental health savings

Return on investment

Indicative costs and benefits for each intervention are derived from multiple sources within the literature as documented in Appendix D. Job control and well-being programs were costed based on employee (staff and manager) time devoted to improved management and training costs. Physical intervention costs were based on employee time and fitness staff costs. CBT-resilience training was based on the cost of eight individual sessions. Problem-solving therapy (PST) costs were based on 6 return to work sessions. Reductions in absenteeism were modelled to range from 0.6 days per year from improved job control, 0.8 days per year from CBT-resilience training to 9.5 days for PST-based return to work; presenteeism productivity improvements were modelled to range between $377 per employee for job control and physical interventions, increasing to $1,769 per employee for CBT-resilience training.

The selected interventions all show positive returns on investment to the employer based purely on reduced absenteeism and presenteeism. Job control programs show a return of $1.30 for every dollar invested, with the potential for this to grow as good management techniques become increasingly common business-as-usual practices, rather than costly changes to current practices. Health screening and physical interventions are becoming increasingly popular and show excellent return on investments of $1.70 and $2.00 respectively. CBT-based resilience is the most expensive intervention, but still delivers $1.70 per every dollar invested. PST-based return to work programs deliver $4.70 per dollar invested.

Table 6: Return on investment per employee for selected workplace interventions

	Job control	CBT-based resilience training / stress management	Health screening	Worksite physical activity	PST-based return to work programs
Intervention costs	$395	$1,172	$375	$412	$512
Absenteeism savings	$151	$188	$290	$452	$2,385
Presenteeism savings	$377	$1,769	$702	$377	-
Total savings	$527	$1,957	$992	$828	$2,385
ROI	1.3	1.7	2.0	2.0	4.7

Potential savings

The ROI analysis highlights the strong economic case for the investing in these interventions. In the short to medium-term, applying health screening (and associated CBT treatment to those found to be at risk) to 50 per cent of the workforce would cost employers $1.0 billion but deliver $2.0 billion in savings. Applying job control interventions to 25 per cent of the workforce would add $1.2 billion in costs but return $1.6 billion; applying physical activity interventions to 10 per cent of the workforce would cost $0.5 billion but return $1.0 billion. Combined, investment of $2.7 billion in these interventions would deliver $4.5 billion in savings. Longer-term, these interventions could be rolled out to the entire workforce.

At a smaller scale, applying PST-based return to work programs to 10,000 people with workplace mental ill-health would cost $5 million, but return $26 million.

Is this intervention aligned with existing policy directions?

Yes, to a limited extent. Safe Work Australia and state and territory-based workplace health and safety regulators include workplace mental health in their remit, but historically there has been limited political focus on workplace mental health reform. Leading states and territories include:

- New South Wales, where SafeWork NSW released a discussion paper in October 2017 on taking a "dual approach" to workplace mental health that is risk-based and enables identification of mentally healthy workplaces. The discussion paper was considered at the 'Sydney Summit: Mentally Healthy Workplaces in NSW' in November 2017.
- Western Australia, where the Western Australia Mental Health Commission announced a partnership in September 2017 to collaborate with University of Western Australia to develop mental health and wellbeing resources for workplaces.
- Victoria, where WorkSafe Victoria, VicHealth and SuperFriend formed a Victorian Workplace Mental Health Collaboration in May 2016 that produces resources and case studies for workplaces.
- Queensland, where the Mental Health at Work Action Plan (2016-2020) includes clear strategies for workplace mental health reform, led by Workplace Health and Safety Queensland. WorkCover Queensland and the Office of Industrial Relations have also recently announced the Leading Well Queensland Collaboration with SuperFriend to engage senior business and industry leaders to showcase organisations that are building mentally healthy workplaces.

The Mentally Healthy Workplace Alliance and beyondblue also encourage a coordinated approach by government, business and the community to mental health and wellbeing through the Heads Up campaign, with the National Mental Health Commission representing the Commonwealth Government.

What are the opportunities or challenges of implementation?

Workplaces have a clear **opportunity to support the mental health and wellbeing of the workforce in three ways**: engaging in preventative activity (to prevent psychological harm) and to promote positive mental health and wellbeing (irrespective of illness); supporting employees with mental health issues to recover as early as possible; and supporting individuals with an existing mental health issues to stay at work rather than take time off (if appropriate). Other key opportunities include:

- **Coordinating the delivery of evidence-based materials and resources:** A host of material, resources and guidance is already available online to help workplaces and employers understand what works in achieving outcomes at an individual and organisational level, what they can do to help, and what interventions might cost for them. There may be opportunities for state-based agencies responsible for workplace health and safety to collaborate nationally, potentially with Safe Work Australia, so as to minimise duplication of effort. There is also opportunity for peak bodies of industry and employer groups and unions to collaborate with specialist workplace mental health providers to minimise duplication and aid promotion and distribution.
- **Helping each actor seeking to influence workplace mental health and wellbeing to understand the levers they have to improve workplace mental health:** Workplaces are directly responsible for providing psychologically safe work environments. Therefore, there are important roles for state and territory governments, state-based workplace health and safety agencies, not-for-profits and peak bodies to support employers to achieve their requirements under the law. However there are also opportunities for the same actors to work together to promote mental health and wellbeing that will benefit the workplace and the worker. Recommendation 1.2 considers opportunities for governments to trial innovative levers for improving workplace mental health and wellbeing.

Table 7: Potential levers for key actors to influence workplace mental health reform

Actor	Lever	Potential activity
State and territory workplace health and safety regulators	Community education	Provide research, resources and guidance to workplaces on creating mentally healthy workplaces
	Regulation and monitoring	Benchmark employers against targets to monitor progress in improving workplace mental health and wellbeing Develop and implement state-wide strategies for improving workplace mental health and wellbeing, which may include revision of state regulatory frameworks
	Organisation	Continue to build strong and constructive relationships with key stakeholders (e.g. employer peak bodies) to influence the implementation of reform
State and territory agencies (health departments, and if applicable, state mental health commissions)	Organisation	Invest in programs that can support cultural change in workplaces, such as leadership training for managers and executives Commission rigorous evaluations of workplace mental health and wellbeing interventions to build the evidence base

Actor	Lever	Potential activity
	Payment	Investigate subsidising the costs of delivering workplace mental health and wellbeing initiatives for small and medium-sized businesses
Safe Work Australia	Regulation	Support harmonisation of workplace mental health and wellbeing practice by identifying good practice at a state level and influencing other states and territories Liaise with organisations such as WorkSafe Victoria and WorkSafe WA to explore potential harmonisation of good practice Encourage best practice guidance development and uptake
Commonwealth agencies (such as the Departments of Health and Employment)	Organisation / regulation	Support national legislative and policy reform to strengthen employers' obligations to creating mentally healthy workplaces Monitoring and reporting
Non-government actors (e.g. Mentally Healthy Workplace Alliance, icare, SuperFriend, the Black Dog Institute, beyondblue and WayAhead)	Community education	Promote the benefits of investing in workplace mental health and wellbeing initiatives Provide research, resources and guidance to workplaces on creating mentally healthy workplaces Provide other supports to workplaces Provide evidence based programs and initiatives tailored to industry and workplaces Establish and support communities of practice
Employers / workplaces	Organisation	Proactively deliver evidence-based mental health and wellbeing interventions to ensure a mentally healthy workplace by: Encouraging and promoting protective factors Recognising psychosocial risks by undertaking risk assessments Acting to prevent psychological harm Where possible make reasonable adjustments to roles and responsibilities for employees with mental health issues (irrespective of cause – i.e. not only work-related injury, but all causes of illness)
Industry leaders	Community education	Promote workplace mental health and wellbeing through networks, and where relevant, supply chains
Insurers	Payment	Explore opportunities to reduce premiums of mentally healthy workplaces / increase premiums of workplaces that do not have strategies for minimising risk of poor mental health and wellbeing of employees (Recommendation 1.2)

Challenges for implementing workplace mental health and wellbeing interventions may include:

- **Harmonisation of workplace mental health and wellbeing supports across Australia:** State-based workplace health and safety regulators have historically been the lead actors in supporting workplace mental health reform. In order to ensure that employees are able to access workplace mental health and wellbeing supports no matter where they are located, Safe Work Australia and state-based bodies such as WorkSafe Victoria and WorkSafe WA would need to agree on a common approach.
- **The range of interventions required:** Several reports, including SafeWork NSW and University of Tasmania, have called for a holistic approach to care. Workplaces may require additional guidance on how to implement reform in a way that does not impose a significant burden, particularly on small and medium-sized businesses.

Where does data, research and evaluation need to be improved?

Data, research and evaluation can be improved by:

- establishing a mental health-focused ABS sub-report that specifically monitors workplace mental health issues
- establishing a ABS survey to monitor health-related absenteeism and presenteeism
- ceasing the commissioning of literature reviews on workplace mental health
- funding trials and evaluations of interventions with weaker evidence bases.

Recommendation 1.2: Trial adjustments to Workers' Compensation insurance premiums according to workplaces' mental health risk profile

Why this recommendation?

- Governments have few direct levers to improve workplace mental health and wellbeing. The proposed intervention represents an opportunity to trial a new lever.
- Employers could save an estimated $0.5 billion if five per cent of individuals in each category of mild, moderate and severe mental illness were able to reduce the severity of their mental health issues as a result of a supportive workplace environment.

Who is this intervention targeted towards?

This intervention is targeted towards state-based workplace health and safety regulators, SafeWork Australia, and state and Commonwealth departments responsible for supporting changes to workplace health and safety policy and regulation.

A trial of adjustments to Workers' Compensation schemes has the potential to cement Australia's credentials internationally as a leader in promoting positive workplace mental health

What does the intervention involve, and how strong is the evidence base?

This recommendation builds on the workplace mental health programs and interventions of Recommendation 1.1 by suggesting the trial of a new lever for workplace mental health reform.

In each state and territory, insurers provide workers' compensation coverage for a range of workplace injuries, including psychological or psychiatric injury. Insurers have few levers to prevent psychological or psychiatric injury beyond the provision of online resources and guidance to employers on reducing psychosocial risks in the workplace.

This trial intervention incentivises workplaces to improve their psychosocial risk profile by adopting a risk-based approach to mental health premiums within industries as well as across industries. The key components of this intervention would include:

- benchmarking the mental health and wellbeing of workplaces against an industry standard (with variation in industry standards to accommodate high-risk occupations such as emergency services). This could be conducted using benchmarking tools such as that developed by SafeWork NSW; modified versions that reflect a wider range of workplace initiatives; and/or employer-driven metrics that allow workplaces to highlight their improvements across a range of mental health and wellbeing outcomes.
- adjusting for workplaces who take on employees with a known / diagnosed mental illness prior to commencing employment, to ensure that employers are not disincentivised from employing people with a mental illness
- revising workers' compensation insurance premiums according to the outcomes of the benchmarking exercise
- providing (or referring to existing) guidance and resources to employers to help them improve their workplace's mental health and wellbeing performance.

There is no identified evidence base for this recommendation. A trial would develop an evidence base to identify the potential of this intervention to improve workplace mental health and wellbeing.

What is the economic impact of intervening in this area?

Context

The potential economic savings to employers from intervening to improve workplace mental health and wellbeing are around $12.8 billion, as per Recommendation 1.1. There is potential for policy changes to compensation insurance schemes to further incentivise employers to improve the mental health and wellbeing of their employees to help realise these savings

Return on investment

The return on investment to both employers and government should be evaluated as part of the trial. There is potential for this intervention to be a 'win-win' for employers in reducing tax burden and improving workforce productivity. There are also indirect benefits to the economy that suggest the policy can be a positive for government. KPMG's CGE modelling analysis found indirect benefits from labour productivity gains of approximately 35 per cent, such that a $1.00 direct benefit to the workforce has wider indirect benefits to the economy of another $0.35 (see Chapter 4).

Potential savings

The savings from this intervention would need to be evaluated as part of the trial; however, if such a policy were to generate improvements in workplace mental health and wellbeing that shifted five per cent of individuals in each category of mild, moderate and severe mental illness into a lower severity of illness category, employers could save $0.5 billion; with wider flow-on benefits of another $0.15 billion.

Is this intervention aligned with existing policy directions?

This intervention has not been trialled in Australia to date. However, it is aligned with broader state, territory and Commonwealth policy to improve workplace mental health and wellbeing, as outlined in Recommendation 1.1.

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What are the opportunities or challenges of implementation?

This recommendation presents an **opportunity to trial a new lever for governments to positively influence workplace mental health and wellbeing**, and develop an evidence base on the effectiveness of this lever. As identified in Recommendation 1.1, governments have few direct levers for improving workplace mental health and wellbeing beyond additional taxation or regulation, which are generally inappropriate levers for achieving positive workforce practice.

Challenges that may be faced in implementing a trial include:

- **the potential need to amend legislation** in each state and territory for workers' compensation insurers to be able to adjust premiums.
- **harmonisation** of workers' compensation insurance schemes across Australia, if the trial were to be successful.
- **designing an appropriate benchmarking tool** that can reflect the range of different initiatives that a workplace could potentially undertake.
- **ensuring appropriate safeguards** are in place to promote the ongoing employment of people with a mental illness.

Where does data, research and evaluation need to be improved?

Data, research and evaluation can be improved by:

- collecting more detailed mental health data to expand on the current ABS and Safe Work Australia datasets which typically capture more severe workplace mental illness events, but have less coverage of mild and moderate mental illness and its impact on absenteeism and presenteeism.
- benchmarking mental health data by industry over time.

Recommendation 1. 3: Trial a paid peer workforce to build the evidence base

Why this recommendation?

- In addition to the social and wellbeing benefits of peer work, peer workforces represent a potential opportunity to increase employment rates and reduce Disability Support Pension costs by employing people with lived experience as peer workers. The number of people receiving Disability Support Pensions for mental disorders has increased by 51 per cent in the period from 2001 to 2014, but prevalence rates of mental illness have been stable.
- There is emerging evidence that this model achieves positive outcomes for the consumers that peer workers support, but this evidence base needs to be strengthened. The evidence also indicates that employment can improve the mental health and wellbeing of people with a mental illness.
- Peer workforce models currently operate or are being rolled out in at least two states, so this intervention would be inexpensive to trial and evaluate.

Who is this intervention targeted towards?

This intervention is targeted towards people with lived experience of mental ill-health who have the opportunity to be trained as mental health support workers. Peer workers provide additional support to individuals who are receiving care from qualified health professionals to improve their mental health. Data is not publicly available on the number of qualified peer workers in the workforce.

> The peer worker model shows great promise in improving the supports to people experiencing mental ill-health

What does the intervention involve, and how strong is the evidence base?

Peer workers currently operate in a range of settings in Australia, such as beyondblue's Online Forums. In this proposed intervention, peer workers would:

- provide in-person follow-up support to people with complex mental health needs post-discharge from clinical settings
- provide supports to adults in community mental health settings, including referrals to services as required, with the support of a qualified supervisor.

The potential benefits of a peer workforce are potentially dual. For the people undergoing the intervention, a peer worker can provide support by offering an understanding of what the experience of having mental ill-health is like and embodying a future where living a contributing life is possible. For the peer worker, peer work can offer paid employment, which can assist with long-term maintenance of their mental health.

From an economic perspective, there are two potential benefits to implementing a paid peer workforce:

- peer work represents a relatively low-cost option for increasing the mental health workforce, although peer workers will require appropriate supervision and training from qualified health professionals
- paid employment may limit the reliance of some individuals on the Disability Support Pension.

To date there is not a strong evidence base to indicate whether peer work is effective in achieving positive outcomes for individuals undergoing a mental health intervention, although the emerging evidence is positive.

It is recommended that an existing state-based peer workforce initiative – potentially the NSW Peer Workforce Initiative – be used as a trial and evaluated rigorously to assess whether peer work achieves positive outcomes for both the peer workers and the individuals they support. Peer workers under this intervention would be required to have completed a Certificate IV in Mental Health Peer Work. Future peer work models would also further require clarification of the appropriate types and levels of supervision support, as well as clarification of the peer worker role in the referral pathway.

Table 8: Evidence base summary for Recommendation 1.3

Quality of the evidence base	Outcomes of the evidence base
● **Low** – While a number of RCTs and evaluations have been undertaken in this area, a 2013 Cochrane Review identified that the quality of the evidence base on mental health peer work is low. It recommended more high-quality and well-reported RCTs.	● **Mixed** – Due to limitations in the evidence base, the 2013 Cochrane Review was not able to identify any evidence that peer workers achieve better outcomes for consumers than professional staff. However, individual lower-quality studies have identified positive outcomes for consumers working with a peer worker.

What is the economic impact of intervening in this area?

Context

The National Disability Insurance Scheme (NDIS) will impact upon demand for mental health peer workers. It is expected that the NDIS demand growth will require a doubling of the disability workforce, or an increase of around 75,000 FTEs over the period to 2020. There is potential for the peer workforce to help meet this expected demand. In addition, the peer workforce could be used to support individuals who are not eligible for the NDIS, as well as in traditional roles helping patients transition from hospital back to their communities.

Return on investment

The return on investment to both employers and government should be evaluated as part of the trial. There is potential for this intervention to be a 'win-win-win' for employers, peer workers and consumers in reducing workforce shortages, increasing the financial stability of the peer workforce, and improving outcomes of people with mental health issues. While the evidence base still needs to be developed, the available literature suggests a return on investment of around $3.50 per dollar invested. A United Kingdom study reports a return on investment of $3.81 for every dollar invested, based on inpatient savings.[25] An Australian pilot reported a social return on investment of $3.27 for every dollar invested.[26]

Potential savings

Given the required growth in the disability workforce plus the effectiveness of peer workers in helping patients transition out of hospital, 1,000 places should be funded nationally specifically for peer workforce positions. This could be split equally between community care and hospitals to improve access in both areas. The cost of developing a peer workforce (including wages, training and administration) needs further research; however, they are estimated at around $90,000 to $100,000 per worker, based on a previous pilot[27] and current government investments[28] (see Appendix B for calculations). Such an investment would cost $100 million, with potential savings of $350 million.

Is this intervention aligned with existing policy directions?

Yes, in some jurisdictions:

- New South Wales, where $1.8 million has been committed to a Peer Workforce Initiative that creates new peer worker roles across the state from 2017-18[29]
- Victoria, where peer workers provide post-discharge supports to people with complex mental health needs.[30]

In other states, such as Queensland and South Australia, state-based mental health commissions have researched peer workforces. The Commonwealth Government also provides support for the concept of a peer workforce by funding and accrediting the Certificate IV in Mental Health Peer Work qualification.

What are the opportunities or challenges of implementation?

Given that state-based peer workforce initiatives are already underway, there is a clear **opportunity to trial the effectiveness of the intervention in an Australian context.** The cost to establish a rigorous trial, or potentially even a randomised control trial with a control group outside the state of trial, would be low.

Evaluators of a peer workforce initiative will need to ensure that the evaluation includes an overall assessment of the net financial return to the worker, given the complexities of Australia's tax and welfare system.

Where does data, research and evaluation need to be improved?

Data, research and evaluation can be improved by:

- sharing data on peer workforce costs across jurisdictions
- evaluating the peer workforce trial and publish results to build the evidence base.

Recommendation 1.4: Provide supports to people with a severe mental illness to gain and maintain employment

Why this recommendation?

- People with a severe mental illness experience additional barriers to gaining and maintaining employment. The impact of these barriers on young people with a severe mental illness is particularly high, as these barriers can affect earning potential throughout the adult years.
- There is a strong evidence base behind the Individual Placement Support (IPS) model, although it continues to be trialled in Australia.
- A roll-out of the IPS model to 10,000 people with a severe mental illness could generate a return of investment of $1.90 in the short term and $2.30 in the long term.

Who is this intervention targeted towards?

This intervention is targeted towards people with a severe mental illness, particularly young adults experiencing first episode psychosis, transition-age youth, people with criminal justice involvement and individuals receiving government disability benefits.

> By providing young people with extra support to find and maintain a job, we are setting them up for employment throughout their adult lives

What does the intervention involve, and how strong is the evidence base?

The Individual Placement Support (IPS) model focuses on eight core practice principles that underpin the delivery of support to participants:

- competitive employment
- systematic job development
- rapid job search
- integrated services
- benefits planning
- zero exclusion
- time-unlimited supports
- worker preferences.

Despite its highly defined nature, the IPS centres on participants' preferences, and tailors unique, individualised responses to a person's goals and interests.

Many countries, including Australia, have implemented the IPS model to varying extents. The model has been evaluated in 24 RCTs in North America, Europe, Asia and Australia. In each and every one of these Trials, the IPS model has significantly outperformed the comparison employment support systems available. Specifically for young people, access to IPS in the early stages of their illness, has demonstrated successful vocational outcomes with success rates reported at approximately 85 per cent.

Table 9: Evidence base summary for Recommendation 1.4

Quality of the evidence base	Outcomes of the evidence base
● **High:** 24 RCTs, as well as a systematic review of 17 RCTs have identified a strong evidence base for this intervention.	● **Effective:** This intervention is effective in supporting individuals with severe mental health issues gain meaningful employment. Evidence is growing in its broader effectiveness (i.e., people with mild to moderate mental illness).

What is the economic impact of intervening in this area?

Context

Fewer than 20 per cent of people with a serious mental illness are employed. [31] The Personal Helpers and Mentors (PHaMs) program, the Australian Government initiative to increase recovery opportunities for people whose lives are affected by mental illness, reported that 95 per cent of its participants had experienced limitations relating to working and employment due to their mental illness. [32] People experiencing mental health issues in Australia are three times as likely to be unemployed than those who have no mental health issues.[33]

It is estimated that about 75 per cent of mental health disorders have developed by the age of 24.[34] Due to the age of onset there are often negative impacts on educational attainment and transition to the workforce for young people experiencing mental illness, with many not completing Year 12, and poor employment outcomes. Consequently, young adults and teenagers with mental health conditions are at high risk of entering welfare support such as the Disability Support Pension. These realities make the effective management of youth mental illness a critical priority for mental health services.

While services exist to support people with employment opportunities, the complexity of available support services can prevent participants, including young people, to effectively navigate the system to best meet their support needs.

Return on investment

A number of economic evaluations have found that the IPS model is a dominant intervention relative to treatment as usual.[35] The costs of implementing IPS in Australia are still to be determined in practice, however a report from Canada found the indicative incremental costs of the IPS program per participant were AUS$5,200. This was shown to reduce healthcare costs in the subsequent 12 months by around AUS$6,200, plus deliver significantly superior employment outcomes worth an additional A$460 in wages. An Australian study showed wage benefits for IPS recipients of $2,900 when converted to today's dollars. More recently, a recent meta-analysis of 17 studies and 2 follow-up reviews found an overall average relative risk for employment of 2.40 for IPS relative to traditional vocational rehabilitation, suggesting large economic returns to IPS, with benefits continuing to remain evident after 2 years.

Based on these data, the resulting return on investment suggest a short term gain of $1.60 for every dollar invested, rising to $2.30 once longer term employment outcomes are considered. We suspect that the employment benefits continue to accrue long after 2 years, suggesting our long-term estimates are conservative.

Potential savings

An incremental investment of $52 million could potentially provide IPS to 10,000 people with severe mental health issues, and return over $90 million in the first year, and $120 million over two years.

Table 10: Return on investment per person for individual placement support

	Short-term	Long-term
Cost	$5,200	$5,200
Health savings	$6,200	$6,200
Employment savings	$2,900	$5,800
Total savings	$9,100	$12,000
ROI	1.8	2.3

Is this intervention aligned with existing policy directions?

While the evidence-base is clear that IPS is an effective supportive employment model, implementation of the model has taken time. As part of its Youth Employment Strategy aimed at tackling youth unemployment, the Commonwealth government has committed $13.6 million to trial the IPS model which is being implemented by 14 headspace sites across Australia. The primary objective of the IPS model as it has been implemented in this trial is to improve the employment and vocational education outcomes of young people with mental illness up to the age of 25, who are at risk of disengaging from education or employment and who are therefore at risk of long term welfare dependency. It should be noted that IPS has traditionally been applied to people with severe to moderate mental illness. This is different to the parameters of the IPS Trial, which is focussing on young people with mild to moderate mental illness.

This Australian trial commenced in November 2016 and will continue through to 30 June 2019. It is being delivered through headspace community mental health organisations across 14 sites in all states and territories, excluding the ACT.

What are the opportunities or challenges of implementation?

The strong evidence supporting the IPS model and its effectiveness provides government with the **opportunity to implement a proven intervention with long-term savings implications.**

Potential challenges to implementing an IPS model include the need for:

- funding and delivery integration and co-location between mental health and employment services, which historically have been segregated.
- clear leadership within government and service providers supporting the adoption of a new way of providing employment supports.[36]
- high fidelity in the application and adherence to the eight key principles of the IPS model. An unsuccessful trial of the IPS model appeared to be due to a lack of adherence to the evidence-based model.[37]

Where does data, research and evaluation need to be improved?

Data, research and evaluation can be improved by further trial and evaluation to understand the effectiveness of the IPS model to broader cohorts (i.e., mild to moderate mental illness).

Recommendation 2

Minimise avoidable emergency department presentations and hospitalisations

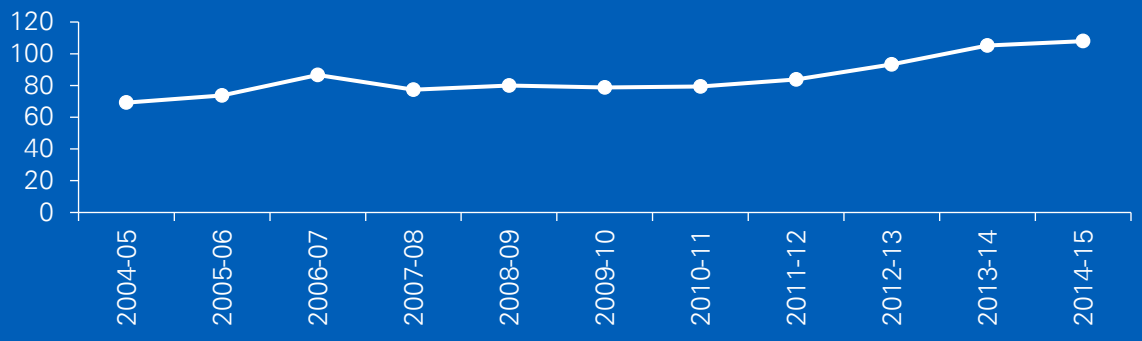
Individuals experiencing mental illness can incur a range of avoidable costs across the health and social services system, including in emergency department (ED) presentations, hospitalisations, juvenile and criminal justice, homelessness services and/or drug and alcohol services.

This set of recommendations focuses on minimising avoidable ED presentations and hospitalisations for several reasons:

- ED presentations and hospitalisations are costly, and reducing avoidable ED presentations and hospitalisations has the potential to represent significant savings to state and territory governments
- a wide range of individuals with mental illness experience avoidable ED presentations and hospitalisations, whereas a smaller subsection of individuals will experience homelessness, drug and alcohol issues, or involvement with the justice system
- the avoidable nature of many ED presentations and hospitalisations implies that the individual has not received optimal care.

Without targeted action, the rate of mental health-related emergency department presentations is likely to continue its dogmatic rise into the future

Figure 8: Mental health-related emergency department presentations in public hospitals per 10,000, 2004-05 to 2014-15x



Source: AIHW (Australian Institute of Health and Welfare) 2016. Mental health expenditure in Australia – Services provided in public emergency departments. Table ED.2. Canberra: AIHW

Recommendation 2.1: Adopt a Housing First model for young people aged 15 to 24 with a mental illness at risk of homelessness

Why this recommendation?

- Homelessness generates significant personal and economic costs. A conservative estimate is that homelessness costs $626 million a year in 15 to 24 year olds.
- People with a mental illness experiencing homelessness have higher rates of costly inpatient care than other people with a mental illness.
- For every $1 spent on Housing First models, $3 is generated in the short term and $6.70 is generated in the longer term – this is supported by a strong evidence base that Housing First models work.
- This intervention requires a major up-front investment, but generates significant savings. If 50 per cent of the cohort were provided with this intervention, a $0.5 billion investment would generate $1.5 billion in savings in the short term and $4.8 billion in the long-term.

Who is this intervention targeted towards?

This intervention is targeted towards young people aged between 15 and 24 years who have a diagnosed mental illness and are at risk of homelessness or are experiencing homelessness (in accordance with the ABS definition of homelessness).

In 2014, an estimated 504,000 people (2.7 per cent of the Australian population) had a diagnosed mental health condition lasting for six months or more, and had experienced at least one episode of homelessness.[38] There is clear evidence to indicate that people with a mental illness experiencing homelessness have high rates of service usage, with average annual inpatient expenditure of $47,425 per person as reported in one Australian study.[39]

Mental illness and homelessness are strongly associated, both because the social disability resulting from severe mental illness can affect the capacity to find and retain accommodation, and because being homeless affects mental and physical health.[40]

Early intervention provides the best opportunity to reduce longer-term service costs by diverting the individual from homelessness and providing them with treatment for their mental illness. The evidence base indicates that the longer an individual's mental illness is untreated – particularly for illnesses such as schizophrenia – the longer it takes to stabilise their health.[41] Over a third of respondents to AHURI's Intergenerational Homelessness Survey (n=647) experienced their first episode of primary homelessness prior to the age of 18, indicating the importance of intervening early.[42]

What does the intervention involve, and how strong is the evidence base?

Housing First initiatives are targeted to individuals with a severe or complex mental illness who have experienced or are at risk of homelessness. Intervention models vary internationally, but common features include:

- the provision of permanent, secure housing
- property and tenancy management support
- Assertive Community Treatment, which delivers assertive outreach through a multidisciplinary team who take a collective approach to managing the individual in need.

Individuals can either be housed in a single-site setting (usually a block of units), or scattered setting (where they may be living in a house or units away from other individuals receiving Housing First Initiatives).

As summarised in Table 12, there is a strong evidence base behind Housing First models, although further research is required on the specific elements of the model supporting the achievement of outcomes. New South Wales has operated a Housing First variant, the Housing and Accommodation Support Initiative (HASI), since 2003.

> Housing First models have the potential to change the life trajectory of many vulnerable young people

Table 11: Evidence base summary for Housing First models

Quality of the evidence base	Outcomes of the evidence base
● **High** – A systematic review of Housing First models in 2016 identified that the evidence base underpinning the Housing First model is methodologically strong. Several RCTs have been conducted on Housing First models internationally, and an in-depth evaluation has been conducted on the Housing Accommodation Support Initiative (HASI) in New South Wales. However, studies have not identified the specific components of the Housing First model that reduce hospitalisations.	● **Effective** – Studies have consistently identified that Housing First and related models are effective in reducing avoidable hospitalisations.

What is the economic impact of intervening in this area?

Context

A recent Australian study found that 42,000 young people aged between 15 and 24 were homeless in 2014/15, with an annual cost in health and justice services of $626 million more than for unemployed youth.[43] The latest ABS statistics[44] (2011 – soon to be updated), suggest another 22,500 children under the age of 15 are homeless, suggesting this annual health and justice cost estimate of $626 million is undervalued by $337 million.

There are long-term negative employment implications from childhood homelessness. The adult employment rate across Australia is around 61 per cent.[45] That rate drops by around six per cent on average for a person suffering mental illness[46]. Those experiencing homelessness after the age of 15 have an employment rate in adulthood of 24 per cent; those experiencing homelessness before the age of 15 have an employment rate in adulthood of just 10 per cent.[47] The lifetime costs from reduced employment for this cohort of at-risk children is conservatively estimated at $13.9 billion.

The interaction between homelessness and mental health is stark: over half of all homeless individuals have at some point been diagnosed with at least one mental illness.[48] Those individuals who are homeless with a mental health issue spend significant time in hospital. A recent study of a housing intervention targeted specifically at people with mental health issues found that the average hospitalisation costs before the intervention were $47,425 per person per year.[49]

Return on investment

Indicative costs of $34,500 per annum per person for an intensive homelessness intervention are sourced from a similar NSW trial,[50] but can vary largely depending on the capital outlay costs. The benefits of reduced homelessness that are considered are:

- Reduced mental health inpatient hospitalisations of 49.4 days per person per year based on the NSW trial data,[51] costed at $1,956 per day[52] based on AIHW child and youth expenditure costs
- Justice cost savings of $8,242 per person per year[53]
- Life-time employment benefits based on the impact of homelessness on employment as described above,[54] and discounted lifetime earnings of $600,000.[55]

The resulting return on investment suggest a short term gain of $3.00 for every dollar invested, rising to $9.30 once longer term employment outcomes are considered.

Potential savings

An investment to halve child and youth homelessness in people with mental health issues would cost around $0.5 billion but deliver savings of $1.5 billion in the short-term and $4.8 billion in the longer-term.

Table 12: Return on investment per person for intensive homelessness intervention

	Short-term	Long-term
Cost	$34,500	$34,500
Health savings	$96,626	$96,626
Justice savings	$8,242	$8,242
Employment savings	-	$215,302
Total savings	$104,868	$320,171
ROI	3.0	9.3

Is this intervention aligned with existing policy directions?

Yes, to a limited extent. Examples include:

- New South Wales has funded the Housing and Accommodation Support Initiative since 2003
- Victoria has funded at least two Mental Health and Homelessness Support Initiatives since 2009 through the National Partnerships Agreement for Mental Health.

As a result of political cycles, however, state governments have historically tended to trial and then fail to refund housing and homelessness initiatives or fail to scale up initiatives despite evaluations indicating the success and longer-term cost effectiveness of these programs. A longer-term investment is needed.

What are the opportunities or challenges of implementation?

Housing First models provide an **opportunity to apply an evidence-based solution to an intractable problem in a way that generates considerable long-term savings**, and further builds the evidence base in an Australian context.

While Housing First models require a considerable upfront investment, there are opportunities for the Commonwealth and state/territory governments to identify how property assets could be effectively leveraged to obtain private investment. These opportunities include:

- using a social impact bond to attract private investment, measured against the achievement of effective outcomes for young people in the Housing First model but inclusive of property assets. The Aspire social impact bond in South Australia is an example of a homelessness bond.
- obtaining private investment through the National Housing Finance and Investment Corporation (NHFIC) announced in the 2017 budget.
- public-private partnerships between state governments and local not-for-profits to build and manage social housing used to deliver Housing First models.

Housing First interventions focused on young people will also need to consider articulated pathways to employment and vocational education once participants are in stable housing and have stable mental health. The Youth Foyer model, which provides stable housing and links to education and employment through a strengths-based model, may not be directly applicable (as it requires individuals to commit to "the deal" of participation, which can be challenging for individuals with a mental illness), but is worth considering for adaptation. Youth Foyers operate in all Australian states and territories except Northern Territory and Tasmania.

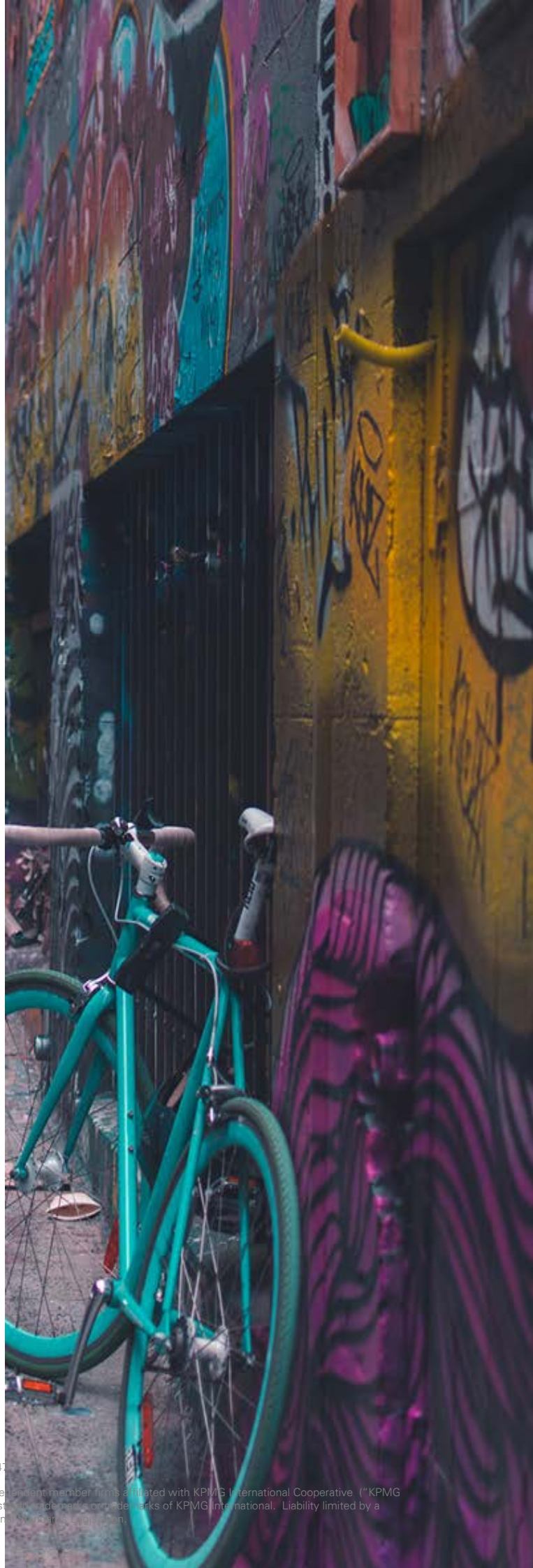
Potential challenges in adopting a Housing First model include:

- **upfront costs of the intervention**, as the costs of the HASI program ranged from $11,000 to $58,000 per person (in 2010) depending on the intensity of the individual's support needs, as well as $200 to $500 in administrative costs. While the evidence is clear that this investment saves the government considerably in the medium to longer term, it requires state and territory governments to choose to invest in this area.
- **cost of housing**, as the cost of purchasing housing is likely to be challenging, particularly in inner-city Sydney and Melbourne. There are opportunities to operate Housing First models in urban hubs away from the inner city (e.g. Greater Western Sydney and Broadmeadows in Melbourne).
- **sustaining bipartisan support** for Housing First across political cycles.
- application of the Housing First model across **regional areas**.

Where does data, research and evaluation need to be improved?

Data, research and evaluation can be improved by:

- ensuring sustainability of funding sources, so that programs found to be cost effective are scaled up rather than defunded
- improving data collection on unit costs
- continuing to build evidence around the effectiveness of Housing First models in different settings across Australia through trial and evaluation



Recommendation 2.2: Provide community-based assertive outreach to people who have attempted suicide

Why this recommendation?

- Suicide cost the Australian economy more than $1.6 billion in 2016, with 2,866 lives lost annually.
- Evaluations are currently underway on assertive outreach models in Australia, but evidence from other jurisdictions indicates that assertive outreach models can conservatively be estimated to reduce suicide rates by 20 per cent. This would save $347 million a year, with a return on investment of $1.3 for every $1 spent.
- Investment to halve the rate of suicide across Australia would require a $500 million investment, generating savings of $1.0 billion.
- Assertive outreach and other suicide prevention interventions are strongly aligned to current policy directions, including the Fifth National Mental Health and Suicide Prevention Plan, providing impetus for reform.

Who is this intervention targeted towards?

This intervention is targeted towards individuals who have attempted suicide and who have sought treatment for injury relating to a suicide attempt in hospital. In 2014/15, there were around 37,000 hospitalisations due to self-harm.[56]

> The known highest risk factor of future suicide attempts is a past attempt. Support in this period is imperative to save lives

What does the intervention involve, and how strong is the evidence base?

Community-based assertive outreach refers to a range of targeted supports, which can be either clinical or non-clinical, for individuals who have attempted suicide.[1] It is a preventative intervention that aims to reduce the risk of a subsequent suicide, in recognition of clear evidence that the strongest risk factor for suicide is a previous suicide attempt. Assertive outreach is predicated on evidence about the critical risk periods for someone who has attempted suicide.

Assertive outreach is typically delivered by community mental health services or not-for-profit providers following discharge from hospital after a suicide attempt. Examples of existing assertive outreach programs in Australia include:

- **beyondblue's *The Way Back Support Service,*** which is community-based and includes:
  - one-to-one, non-clinical care and practice support to individuals in the community post-discharge
  - Participating hospitals assess and refer individuals who have attempted suicide to The Way Back Support Service
  - support coordinators contact the individual within 24 hours of discharge from hospital to develop a Safety Plan together. The Safety Plan includes goals that encourage re-engagement in daily life and minimise barriers to follow-up care
  - support coordinators keep in regular contact.
- **The Victorian Department of Health and Human Services' *Hospital Outreach Post-suicidal Engagement (HOPE) Initiative***. Models vary across the six trial hospital sites, but typically include a mix of clinical and non-clinical support, such as:
  - one-three brief intervention sessions with a psychologist, a session of family work, and support worker support assistance
  - initial consultation with two mental health clinicians, then psychologist and social worker support for duration of engagement. Family support worker available.
  - psychosocial support workers providing practical supports to individuals to return to work or study
  - most models include contact within 24 hours and direct contact within 72 hours.

It is acknowledged that models of suicide prevention support for Aboriginal and Torres Strait Islander people are likely to require tailoring for cultural appropriateness, particularly in regions where the context for suicide attempts differ from those of mainstream communities.

There are other effective suicide prevention models beyond assertive outreach. Two models that warrant further investigation but have not been included in the economic analysis in this paper due to data limitations are:

- Zero Suicide, which adopts a systematic approach to quality improvement in suicide prevention
- the LifeSpan model delivered by the Black Dog Institute, which combines nine strategies that have strong evidence for suicide prevention into one community-led approach incorporating health, education, frontline services, business and the community. Improving crisis and aftercare support for people who have made a suicide attempt is a key strategy of the LifeSpan framework.

Table 14 outlines the evidence base for community-based assertive outreach.

[1] This type of assertive outreach differs from outreach interventions targeted specifically to individuals with a severe mental illness or other complex needs, such as the Assertive Outreach program delivered by Northern Sydney Local Health District.

Table 13: Evidence base for community-based assertive outreach

Quality of the evidence base	Outcomes of the evidence base
Moderate – A 2016 systematic review identified that the evidence base for intensive outpatient care with outreach was emerging, due to the small number of RCTs undertaken in this area. However, strong evidence is available for components of the model, including: • CBT-based support from a psychologist • Time-based interventions • The evaluations of the beyondblue and Victorian DHHS initiatives will considerably strengthen the Australian evidence base on assertive outreach.	**Effective** – Studies have consistently identified that assertive outreach models are effective in reducing hospitalisations, and can also have positive individual effects.

What is the economic impact of intervening in this area?

Context

KPMG have previously reported on the economic burden of suicide in Australia in 2013.[57] Updating these figures to 2017, we find:

- direct costs, including coronial, ambulance and policing costs of $24 million per annum
- costs due to the loss of future earnings of $1.6 billion over the life course.

Identifying those at risk of suicide is difficult. While ideally interventions would target all those at risk, attempted suicide is a pre-cursor to repeat attempts and can be used to highlight those at high risk.

Return on investment

Indicative costs of $4,000 per person for an assertive outreach intervention are assumed. The benefits from suicide reduction are based on:

- a recent Australian study that found a population preventable fraction for such interventions of 1.1 per cent[58]
- medical cost savings derived from an Australian study into the economic costs of suicide[59]
- long-term benefits from discounted lifetime earnings of $600,000.[60]

The resulting return on investment suggest short-term costs that have a long-term gain of $1.80 for every dollar invested.

Potential savings

Victoria has committed $27 million to a combination of assertive outreach and place based trials[61] in an attempt to halve the number of suicides over the next decade. Across Australia, an estimated investment of around $0.5 billion will be required to achieve that goal. The long-term savings from achieving this would be $1 billion.

Table 14: Return on investment per person for assertive outreach program

	Short-term	Long-term
Cost	$4,000	$4,000
Health savings	$533	$533
Employment savings	-	$6,600
Total savings	$533	$7,133
ROI	0.1	1.8

Is this intervention aligned with existing policy directions?

Yes. Suicide prevention is a clear priority for Commonwealth and state governments at present. Commonwealth focus on suicide prevention includes:

- the Fifth Mental Health and Suicide Prevention Plan (2017), which has effective suicide prevention as one of its eight targeted priority areas
- the National Suicide Prevention Strategy (2015), which supports suicide prevention planning by PHNs

All states and territories have a current state-wide suicide prevention plan, strategy or framework except for New South Wales, which is in the process of updating their suicide prevention strategies, and the ACT.

What are the opportunities or challenges of implementation?

There is a clear **opportunity to build on existing momentum in the suicide prevention area**. Assertive outreach programs are already being trialled and evaluated in pilots across Australia, which will provide state and territory governments with evidence-based models to adopt. More broadly, the strong focus on suicide prevention in the Fifth Mental Health and Suicide Prevention Plan is likely to provide the impetus needed to effectively trial, evaluate, scale and implement this intervention.

Some considerations for implementation include:

- **limitations in the evidence base,** as the evidence base on assertive outreach is relatively small, and at present there is limited evidence available on 'what works' in long-term suicide prevention. For this reason, it is important that assertive outreach is linked to longer-term psychological and pharmacotherapy interventions.
- **achieving consistency**, as existing reforms in this area have been undertaken on a local level. State and territory governments may experience challenges to agreeing to program parameters.

Where does data, research and evaluation need to be improved?

Data, research and evaluation can be improved by:

- Continuing to build the evidence base for community-based assertive outreach after suicide attempts through trial and evaluation
- Supporting the outcomes of evaluations currently underway to be translated into policy and practice
- Using evaluations to collectively agree on roles and responsibilities for suicide prevention, so that people with a previous suicide attempt are prioritised across all systems.

Recommendation 2.3: Measure the impact of primary care on the use of secondary care by linking the new Primary Mental Health Care Minimum Data Set to wider health and social data sets

Why this recommendation?

- The establishment of the Primary Mental Health Care Minimum Data Set (PMHC-MDS) is a positive step forward by the government. There is an opportunity to link this data with wider health and social data sets to measure the extent to which investments in primary care are effectively reducing demand for secondary and tertiary mental health services, as well as other social welfare services
- Linking the PMHC-MDS would support both Commonwealth and state/territory governments to generate savings by providing transparency on the effectiveness of primary mental health programs, allowing Governments to re-direct funding that is not proven to be invested in effective programs
- A linked PMHC-MDS would support mental health service providers to track an individual's journey across the mental health system and allow for a social investment framework approach for the analysis of mental health reform that acknowledges the social determinants of health and mental health.

Who is this intervention targeted towards?

This recommendation is targeted towards the Commonwealth Department of Health in the first instance, as the department responsible for administering primary healthcare data and setting outcomes for PHNs, and the Australian Institute of Health and Welfare (AIHW) and the Australian Bureau of Statistics (ABS) as institutions of health and social data respectively.

> If we do nothing else, measuring outcomes effectively across primary and tertiary services for mental health is essential…we can't continue to have the same cost shifting debates in the decades to come

What does the intervention involve, and how strong is the evidence base?

It is recommended that:

- the PMHC-MDS is linked to the Mental Health Establishments National Minimum Data Set (MHE NMDS), which includes all specialised mental health services managed or funded by state or territory health authorities.
- the Commonwealth fund the Department of Health, AIHW and ABS to invest further in the PMHC-MDS and to link to wider health and social data sets. The New Zealand Integrated Data Infrastructure should be used as an exemplar of what is possible in terms of linking health, housing, education, tax and social welfare data.

The National Mental Health Commission, the Grattan Institute and the Productivity Commission have all identified that the Australian primary mental health system is not currently able to measure primary mental health outcomes. The lack of a minimum data set has two impacts:

- the Commonwealth Government is not able to effectively measure the extent to which investments in primary care reduce costs at a secondary and tertiary care level
- the Commonwealth Government is not able to accurately assess whether mental health-focused primary care services delivered, such as Better Access, are effectively targeted, or where funding is best allocated.

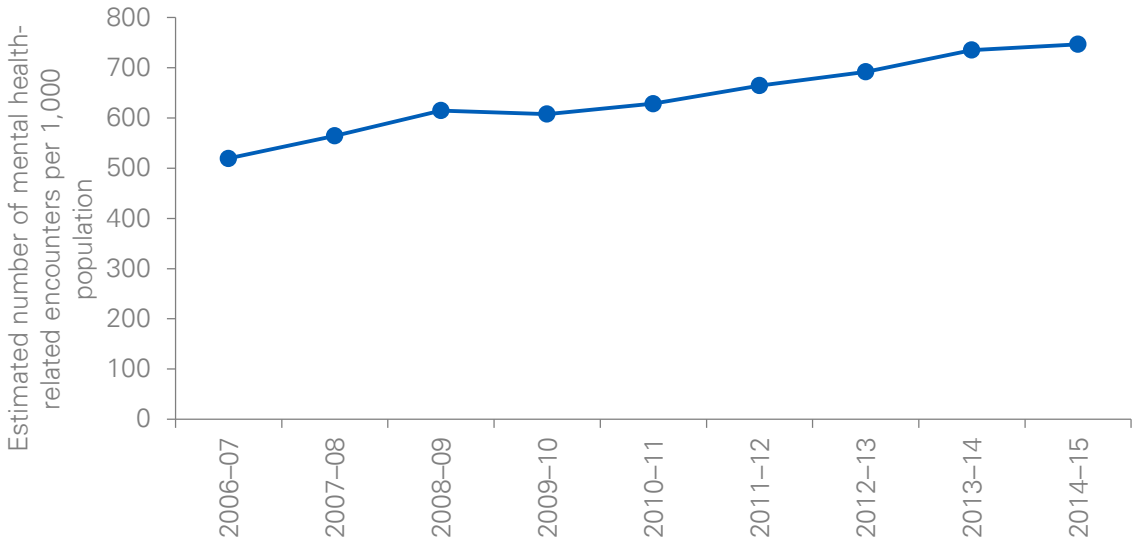
At an individual level, the lack of a minimum dataset impedes the ability for care providers to track an individual's journey, relying on consumer uptake of e-health records.

There is some evidence to indicate that mental health-related general practice encounters are not reducing state and territory secondary and tertiary care costs as effectively as possible:

- Figure 9 indicates that mental health-related general practice encounters have risen between 2006-7 and 2014-15
- Figure 10 indicates rates of pre-admission community mental health contacts have remained relatively stable in the same period, while Figure 11 shows increases in the rate of admissions, indicating that the rate of unplanned admissions has increased over this period.

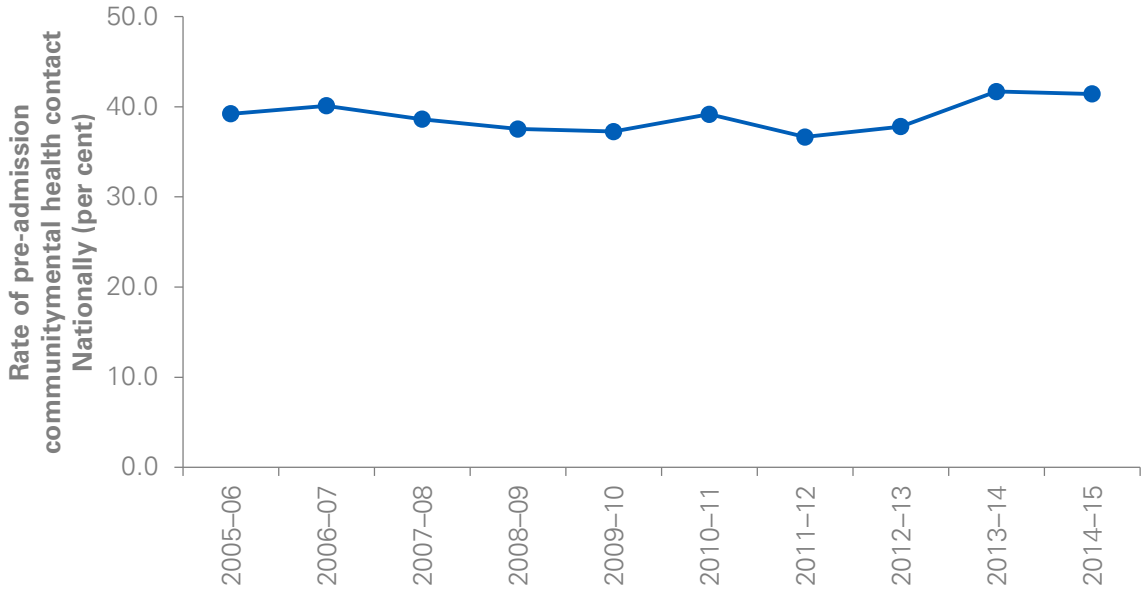
At a research level, limitations in data impede the ability of researchers to assess the effectiveness of mental health interventions or to provide guidance on the implementation of interventions. An investment in linked datasets, including the legislative and cultural changes associated with linked datasets, will allow researchers to better understand and address mental ill-health.

Figure 9: Estimated number of mental health related general practice encounters per 1,000 population



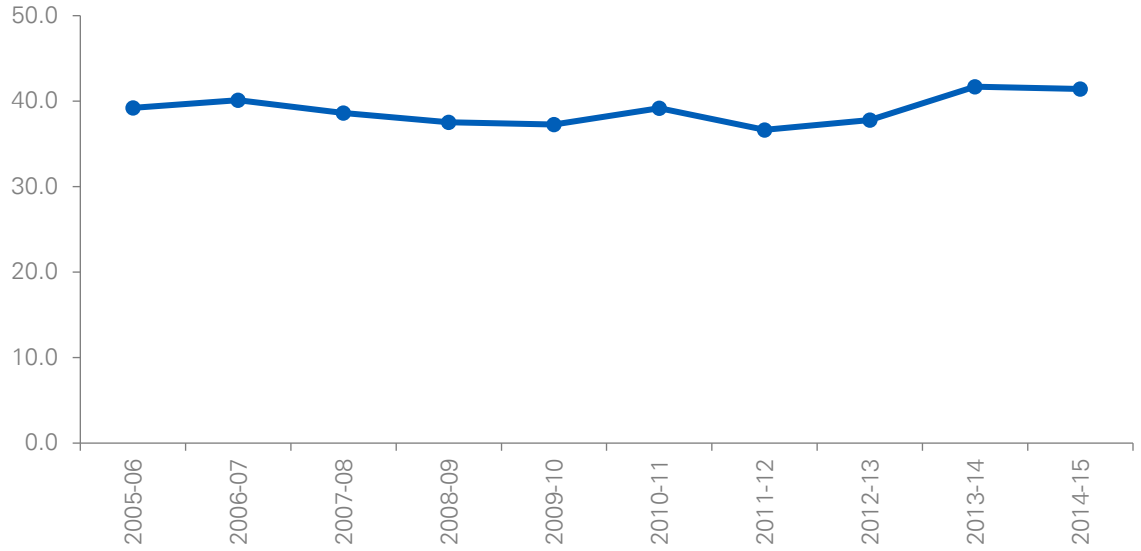
Source: AIHW. BEACH survey data 2015.

Figure 10: Rate of pre-admission community mental health contact (per cent) nationally, 2004-05 to 2014-15



Source: AIHW. MHSA. 2015.

Figure 11: Overnight admitted mental health-related inpatient separations per 10,000 population



Source: AIHW. MHSA (2015) Table ON.1: Overnight admitted mental health-related separations(a) and patient days and non-mental health separations and patient days, 2010–11 to 2015–16

What is the economic impact of intervening in this area?

Context

The Federal Government has committed over $1 billion towards a new model of primary mental health care.[62] The redesign aims to provide a more 'stepped' model of care that better matches services to patient need rather than providing a 'one size fit all' approach.[63] The initiative is an excellent one, but without appropriate data collection and evaluation, the realised gains could fall short of their potential. Further, it is not a fait accompli that all preventative measures are cost saving;[64] indeed much of the literature suggests that expenditure on primary care does not necessarily lead to reduced hospitalisation costs.[65]

Return on investment

The return on investment of significant changes in models of care such as that underway in primary mental healthcare needs to be evaluated. Once implemented, the marginal costs of routine data collection reduce to business-as-usual costs, and provide on-going opportunities to improve the efficiency of the service delivery models.

Is this intervention aligned with existing policy directions?

Yes, there is broad agreement that Australia needs to evaluate the way in which primary care delivers savings:

- the Productivity Commission recommended the development and publishing of performance indicators of PHN's impact on hospitalisation rates[66]
- the Grattan Institute recommended new agreements between the Commonwealth, states and the PHNs to set goals to manage chronic care and accountability for failure to meet them, including a Minimum Data Set for primary care that can be linked to hospitalisations[67]
- the OECD highlighted Australia's complex mix of state and federal funding, ability to identify cost-effective programs across levels of funding and poor system coherence from the perspective of the consumer.

What are the opportunities or challenges of implementation?

This recommendation presents a clear **opportunity for the Commonwealth Government to better inform intergovernmental discussions on divisions of health funding** by collecting evidence on the degree to which investments in primary care are effectively reducing demand for secondary and tertiary mental health services, as well as wider social welfare services.

This recommendation would almost certainly support both Commonwealth and state/territory governments to generate savings by providing transparency on the effectiveness of primary mental health programs, allowing governments to re-direct funding that is not proven to be invested in effective programs.

However, governments have historically found establishing data sets challenging for a range of reasons, including:

- **lack of expertise** in defining, collecting and maintaining large data sets
- **cultural unwillingness to share data** due to privacy concerns, even where the legislation supports sharing of de-identified data
- **political difficulties in sharing data** between Commonwealth and state/territory departments
- **perceived expense** in establishing and maintaining a national data set, although new technologies mean that collecting, storing and analysing data has become relatively inexpensive compared to the expense of maintaining datasets and technologies established in the 1990s and 2000s.

Given the size of the primary healthcare budget, this recommendation creates an ideal opportunity to generate long-term savings for taxpayers and improve outcomes for individuals.

Where does data, research and evaluation need to be improved?

Once a Primary Mental Health Minimum Data Set has been collected and linked, data, research and evaluation can be improved by:

- using data from the minimum data set to assess the effectiveness of primary mental health programs
- integrating primary, secondary and tertiary data to analyse individual mental health journeys through all levels of the mental health system and provide more targeted care
- using a minimum data set to inform conversations about the division of health funding between Commonwealth and state/territory governments
- Allowing researchers access to these data so that a wide range of stakeholders can help to provide analysis that can inform policy.

Recommendation 3

Invest in promotion, prevention and early intervention

There is widespread recognition across the health and social services sector that investment needs to shift away from acute or crisis responses and towards prevention and early intervention. However, governments face considerable challenges in shifting the cost curve, including:

- the imperatives of the short-term political cycle, as the benefits of prevention and early intervention are often long-term and challenging to demonstrate to voters in the short term
- limited long-term evidence in some areas as to what is effective, where longitudinal data is not collected or where datasets are not linked to demonstrate the full benefits of the intervention
- the major up-front costs involved in delivering preventative or early interventions.

In the international longitudinal studies that are available the findings are stark. In the United Kingdom, Goodman, Joyce and Smith (2011) noted:

Large effects are found due to childhood psychological problems on the ability of affected children to work and earn as adults and on intergenerational and within-generation social mobility. Adult family incomes are reduced by 28 per cent by age 50, with sustained impacts on labor supply, marriage stability, and the conscientiousness and agreeableness components of the "Big Five" personality traits. Effects of psychological health disorders during childhood are far more important over a lifetime than physical health problems. [68]

In the United States, Smith and Smith (2010) noted:

Large effects are found on the ability of affected children to work and earn as adults. Educational accomplishments are diminished, and adult family incomes are reduced by 20 per cent or $10,400 per year with $18,000 less family household assets. Lost income is partly a consequence of seven fewer weeks worked per year. There is also an 11 per cent point lower probability of being married… …The long-term economic damages of childhood psychological problems are large—a lifetime cost in lost family income of approximately $300,000, and total lifetime economic cost for all those affected of 2.1 trillion dollars. [69]

The National Mental Health Commission has indicated the need to shift funding:

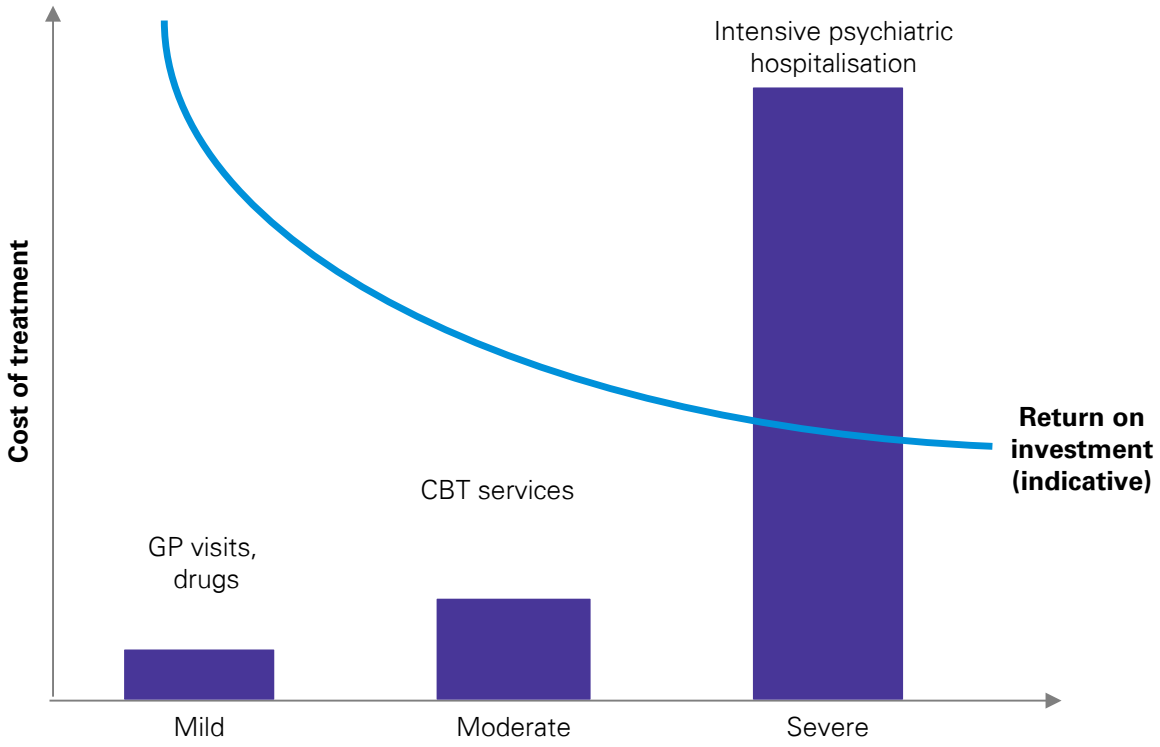
- away from Disability Support Pensions, acute care, carer payments and MBS payments
- towards self-help, prevention and early intervention, psychosocial / non-clinical supports, and primary and community mental health services

There is strong agreement about the need for earlier intervention, but debate about when and who for, particularly given the long lead time to achieving outcomes – in many cases, years or decades. To circumvent the debate, three recommendations have been presented that provide a concrete starting point for focused investment:

- co-ordinated care for people with physical and mental health co-morbidities
- early interventions for specific groups at risk of prolonged mental ill-health
- support for e-mental health interventions.

Over time, this kind of investment in early intervention will start to generate a concrete shift in mental health spending, with spending on acute care reducing over time. Overall, our analysis has shown ROI for mental health is greatest where the interventions are provided to those with mild or emerging mental health conditions. If investment in the mental health supports was focused more heavily on prevention and early intervention, this is likely to generate a cost shift in mental health service delivery over time.

Figure 12: ROI for mental health spending



Source: KPMG

Recommendation 3.1: Provide community-based collaborative care to people with co-morbid physical and mental illnesses

Why this recommendation?

- The economic cost of premature death of people with a mental illness in Australia amounts to $15 billion annually. Of this cost, 80 per cent is attributable to physical health comorbidities.
- Using the PHNs to roll out collaborative care models to 50,000 people with a severe or complex mental illness who may not otherwise be eligible for community mental health supports would generate savings of $315 million.
- Commonwealth and state policy directions unanimously reinforce the need for more integrated, coordinated, holistic care approaches with the consumer at the centre. This is strongly supported by the evidence base.

Who is this intervention targeted towards?

This intervention is targeted towards individuals with complex co-morbid physical and mental illnesses. Across Australia, almost 475,000 people have a serious mental illness;[70] of these almost 60 per cent or 285,000 people with serious mental illness have at least one physical comorbidity.[71]

The evidence is clear that this cohort experience additional barriers to access in receiving treatment, including:

- stigmatisation of people with mental disorders
- physical health complaints being incorrectly perceived as psychosomatic symptoms
- suboptimal practice related to assessing the potential trade-offs between treatment aimed at controlling symptoms of mental illness and potential for adverse impacts on physical health
- observed lower quality of care offered by clinicians to patients with serious mental illness
- the complexity and time intensity of coordinating both medical and psychiatric medications.[72]

80 per cent of the $15 billion cost of premature death in people with mental ill-health is attributable to physical health conditions

What does the intervention involve, and how strong is the evidence base?

Collaborative care models build a team of professionals around the consumer to manage both their physical and mental health, led by a care manager with a general practitioner, consultant psychiatrist and/or psychiatric nurse, and may include others such as a pharmacist, support worker or allied health provider. The care manager is responsible for developing a structured management plan with the consumer, scheduling follow-ups, and liaising with other professionals in the team.

Professionals transfer knowledge to each other in the process of providing care across physical and mental health.

Table 16 outlines the evidence base for collaborative care. It should be noted that further research, beyond existing studies such as the TrueBlue study, is needed to understand how effective collaborative care models are in the Australian context; however, the strongly positive results of the UK literature base warrant including it as a recommendation.

Table 15: Evidence base for collaborative care models

Intervention	Quality of the evidence base	Outcomes
Collaborative care	● **High:** Multiple systematic reviews have identified the strength of the evidence base. However, there is a need for: More research into multiple chronic conditions and longer follow-up The applicability of collaborative care models from the UK to the Australian context	● **Effective:** This intervention has been proven to be more effective than 'usual care'. Outcomes include: • reducing illness burden • improving physical outcomes (especially for hypertension) • small to moderate positive impact on depression outcomes • cost effectiveness from a healthcare and societal perspective • reduced healthcare utilisation (emergency department and inpatient psychiatric care) • enhanced productivity • improved depressive symptoms and depression free days • additional QALYs • lower outpatient health costs

What is the economic impact of intervening in this area?

Context

Broadly, it has been reported that the economic cost of premature death of people with mental illnesses amounts to $15 billion annually.[73] The AIHW have previously published that economic costs of comorbidities increase in line with rising health service utilisation that could be prevented, including: hospital admissions and re-admissions; and primary care and general practice consultations. It is estimated that introduction of more optimal treatment with optimal coverage based on best practice could reduce and avert the burden of serious mental illness by 28 per cent and reduce the impact of serious mental illness and comorbidities by almost one-third.[74]

In primary care, the *Better Access* program and GP Mental Health Treatment Plans provide patients with rebates for up to 10 allied mental health services per calendar year with psychologists, occupational therapists and social workers. It has been reported that this initiative has been very positive in fostering collaboration between general practice and psychology, and led to improved patient outcomes.[75] However there is still some uncertainty as to the effectiveness of this program in targeting particularly those in high need, and with how this model of care could better co-ordinate across physical and mental illness.

Return on investment for collaborative care

The additional costs of collaborative care versus standard care is sourced from a wide range of studies at around $1,240 per patient. A recent meta-analysis into the use of collaborative care for patients with comorbid depressive disorder and chronic medical conditions highlighted improved outcomes across a variety of measures, including physical functioning, epilepsy, diabetes, arthritis, cancer, cardiovascular disease and depression.[76] An RCT that specifically investigated the absenteeism impacts of collaborative care found a reduction of 13 days across a 12 month period,[77] which translates to a benefit of $3,213 using current Australian average wages and an ROI of 3.0. This excludes any benefits from reduced use of health services that are likely to follow from improved mental and physical health, but is consistent with a modelling analysis of collaborative care which found a similar ROI.[78]

Potential savings

Delivering collaborative care to 50,000 Australians would cost $63 million and deliver $187 million in savings. Longer term, a wider roll-out that delivers collaborative care to all 500,000 Australians with serious mental illness would cost $0.6 billion and deliver savings of $1.9 billion.

Table 16: Return on investment per person on collaborative care

	Short-term
Cost	$1,240
Employment savings	$3,213
ROI	3.0

Is this intervention aligned with existing policy directions?

Continued and enhanced investment in timely and holistic mental healthcare for people in the physical health system through increasing the reach of collaborative care models is strongly aligned to existing policy directions, including:

- the 2016 National Mental Health Commission Equally Well: Quality of life – equality in life includes as the provision of integrated and coordinated care, provided seamlessly across health and mental health settings in order to improve physical health and psychosocial recovery.[79]
- the Fifth National Mental Health and Suicide Prevention Plan (2017) identifies improving the physical health of people living with mental illness and reducing early mortality as a key priority area which suggests action around integrating and better coordinating physical and mental health care.[80]
- Queensland Mental Health, Drug and Alcohol's Improving mental health and wellbeing 2014-2019 strategic plan aims to achieve continuity of care and integrated pathways between general health and specialist mental health and more seamless access to the full spectrum of services and supports required for holistic care.[81]
- South Australia Mental Health and Wellbeing Plan 2010-2015 suggests facilitating co-morbid physical and mental health problems be addressed holistically, improving overall outcomes.[82]
- the WHO Mental Health Action Plan 2013-2020 recommends enhanced integration and coordination of holistic prevention, promotion, rehabilitation, care and support, aiming to meet both mental and physical healthcare needs and facilitating recovery in general health and social services.[83]

What are the opportunities or challenges of implementation?

There are clear **opportunities for PHNs to commission collaborative care through flexible funding packages** under programs such as Health Care Homes. More broadly, PHNs will be able to coordinate the range of community supports, promote integrated physical and mental health in the services it commissions, and develop models of care that are integrated with the acute care system.

PHNs are supported by Commonwealth government guidelines, which promote consistent and equitable access to collaborative care models, and seek to break down siloed practice across the health and mental health sectors.

Key challenges in implementation include:

- **consistencies in collaborative care models:** PHNs are able to commission services according to local needs as identified in health and service needs assessments. While PHNs have been encouraged to consider ways to better integrate physical and mental health, collaborative care models are not explicitly mandated.
- **silos between the physical and mental health workforces:** Previous reviews and reports have identified considerable structural barriers to addressing both physical and mental health co-morbidities. PHNs will need to work with general practitioners, psychologists, psychiatrists, pharmacists and other allied health workers to promote integrated care for physical and mental health.

Collaborative care models not only save lives, but they also demonstrate a strong return on investment of $3 for every $1 invested

Where does data, research and evaluation need to be improved?

Data, research and evaluation can be improved by:

- researching other interventions that improve integrated care between the physical and mental health systems
- researching long-term impacts and outcomes resulting from collaborative care models.

Recommendation 3.2: Invest in prevention and early intervention, and build the evidence base for promotion

Why this recommendation?

- Preventative or early intervention activity for 50,000 children and young people experiencing an initial onset of depression or anxiety (or at risk for depression due to having one parent with a depressive disorder) would cover its costs in the short term and deliver $200 million in long-term benefits (with a return on investment of $7.90 for every $1 spent).
- Early interventions for individuals experiencing initial onset of psychosis would save $90 million in the short term (with a return on investment of $2.30 for every $1 spent) and $270 million in long-term benefits (with a return on investment of $10.50 for every $1 spent).

Who is this intervention targeted towards?

This set of tailored interventions is targeted towards two specific groups:

- children and young people who have at least one parent with a diagnosed depressive disorder
- individuals experiencing their first episode of psychosis.
- These groups were selected on the strength of the evidence base and the feasibility of delivering targeted interventions to these groups.

A third intervention strongly supported by the evidence base is targeted towards all individuals with a depressive disorder. However, the Better Access program is already in place to support these individuals, so they are not included in this recommendation.

What does the intervention involve, and how strong is the evidence base?

Broadly, promotion, prevention and early intervention constitute three related but distinct sets of interventions in the mental health space:

- **promotional interventions** are universally targeted and aim to increase public awareness and understanding of mental illness.
- **preventative interventions** can be either universally or specifically-targeted interventions that aim to reduce the likelihood of mental illness by building up protective factors, such as resilience.
- **early interventions** are usually targeted at individuals who are exhibiting early symptoms of mental illness and aim to mitigate the impact of the illness by both building up protective factors and lowering psychosocial risks.

A wide range of promotional, preventative and early interventional activities have been trialled or implemented across Australia and globally, ranging from universal to targeted interventions. Interventions that warrant further research but were not included here because of the relatively weak evidence base supporting their outcomes are:

- promotion of mental health and wellbeing. In general, while promotional activities are usually included alongside prevention and early intervention, there is a paucity of evidence on mental health promotion.
- resilience-building interventions in children and young people across multiple modes (including CBT, PST, strengths-based approaches, art programs and peer support). Resilience has gained popular currency in recent years, but there is not yet a high quality evidence base centred on specific interventions that can be adopted.
- psychosocial interventions focused on social cohesion and connectedness that enable people to build strong networks, relationships and communities. The literature recognises that social cohesion and connectedness have a fundamental role to play in mental health and wellbeing, but few specific, targeted interventions were identified

The interventions included in this recommendation are outlined in Table 18.

Table 17: Evidence base for promotion, prevention and early intervention

Intervention type	Intervention	Quality of the evidence base	Outcomes
Prevention	CBT for children and young people whose parents have a depressive disorder	**High:** There is a large, high quality evidence base of multiple, systematic reviews of RCTs	**Effective:** Effective in the prevention of depression and anxiety symptoms in the short term. However, long-term effectiveness is not clear. As a majority of mental health disorders begin before the age of 24, interventions will have the biggest impact when targeted at a young age.
Early intervention	CBT for individuals experiencing initial onset of a depressive disorder	**High:** There is a large, high quality evidence base of multiple, systematic reviews of RCTs in this area.	**Effective:** The evidence reports that fewer depressive symptoms at post-intervention and follow-up exist for those exhibiting early symptoms of depression.
	Community-based assertive outreach for individuals experiencing initial onset of psychosis	**Moderate:** A small number of high quality studies support this intervention.	**Effective:** Early intervention was cost-effective when compared to standard care and improved vocational and quality of life outcomes.

What is the economic impact of intervening in this area?

Context

The lifetime economic costs of childhood mental illness have been investigated using the US Panel Study of Income Dynamics (PSID).[84] This study followed groups of siblings and their parents for up to 40 years prospectively collecting information on education, income, work, and marriage. It found childhood mental illness reduces lifetime family income by approximately US$300,000 or around AUS$390,000 at historical exchange rates of AUS$0.77/US$1.00. In Australia, there are approximately 144,000 children up to the age of 18 who suffer depression, suggesting that the overall economic potential for early intervention to reduce childhood mental illness is around $48 billion.

There are also early intervention opportunities for treatment of serious mental illness. Around 3,000 people are diagnosed with schizophrenia each year, and many go on to spend significant time in hospitals over many years.[85] Early intervention has the great potential to reduce both the proportion of people who are hospitalised and the frequency with which this occurs.

Return on investment for CBT as an early intervention

A standard CBT adolescent intervention consists of 10 group sessions, for a total cost per participant of around $500. The literature highlights strong short term success rates from such interventions, with CBT doubling the chance of remission from mental illness compared to a waiting list or attention controls, with numbers needed to treat of 3.0, which means remission for one in every three people treated.[86] Based on an analysis of the costs of adolescent mental illness,[87] the direct healthcare savings from reduced mental illness can cover the cost of the intervention before longer term savings are even considered. While the literature suggests that intervening at the first sign of depression can mitigate recurrent episodes,[88] the long-term benefits of early CBT interventions are more difficult to estimate as the evidence base over the life course is weak. However, if one per cent of the long-term costs associated with mental illness were reduced via intervention, the long-term return on investment would be $9.10 for every dollar invested.

Table 18: Return on investment per person or CBT as an early intervention

	Short-term	Long-term
Cost	$488	$488
Health savings	$555	$555
Employment savings	-	$3,896
Total savings	$555	$4,451
ROI	1.1	9.1

Return on investment for early intervention for psychosis

The analysis for early intervention costs and benefits for psychosis were based on an assertive community care model described in a UK study.[89] Non-inpatient costs were inflated and converted to Australian 2016 dollars and totalled $150 per patient for community outreach. The evaluation also noted that the intervention group had initial inpatient admissions of an average of 8.3 days more than the control group. These were valued at $1,029 per day based on psychiatric bed day costs from the AIHW.[90] In total, the costs of the intervention summed to $8,691. The benefits of the intervention were estimated in a similar fashion: non-inpatient savings were inflated and converted to Australian 2016 dollars and totalled $1,576. Inpatient admissions were reduced by 19.4 days in the intervention. Combined these totalled $21,539 in savings for an ROI of 2.5. An Australian study highlighted longer term cost savings of almost $9,000 per annum[91] which results in longer term benefits of $74,437 and an ROI of 8.6. The same study also highlighted that those who received the early intervention were twice as likely to be employed as the control group, suggesting the ROI could be even higher.

Potential savings

A $25 million investment in early CBT interventions that reached 50,000 children would cover its cost in the short-term and deliver long-term benefits of $230 million. Similarly, $25 million would purchase early intervention for those diagnosed with schizophrenia each year, saving $60 million in the short-term and $210 million over the longer term.

> The long-term return on investment for early interventions for people known to be at risk of mental illness is immense

Table 19: Return on investment per person for early intervention for psychosis

	Short-term	Long-term
Cost	$8,691	$8,691
Health savings	$21,539	$74,437
Employment savings	-	
ROI	2.5	8.6

Is this intervention aligned with existing policy directions?

Promotion, prevention and early intervention is a clear priority for Commonwealth, state and territory governments at present. The Fifth National Mental Health and Suicide Prevention Plan lists effective promotion, prevention and early intervention as one of the key elements underpinning the National Consensus Statement for improving the physical health of people with a mental illness. Strategic mental health plans in Victoria, New South Wales, Queensland, Western Australia and Tasmania also list promotion, prevention and early intervention as a desired outcome.

What are the opportunities or challenges of implementation?

The PHNs have a clear **opportunity to better coordinate preventative and early intervention activity and integrated care through joint commissioning arrangements** with Local Hospital Networks. There are a number of emerging technologies that PHNs may be able to explore in targeting their prevention activity, such as predictive analytics.

Despite this, **funding has historically been challenging** in the prevention and early intervention space, both in mental health and in the broader health and social services systems. Commonwealth and state/territory governments will need to work together to identify opportunities to achieve savings by minimising system duplication, better tracking of funding, mapping funding to outcomes, and improving data collection.

Where does data, research and evaluation need to be improved?

Data, research and evaluation can be improved by:

- considering predictive analytics to identify at-risk populations for better targeted interventions
- researching universal interventions to build resilience
- improving system analysis by better tracking of funding, mapping funding to outcomes, and improving data collection.

Recommendation 3.3: Use e-health as an enabler to deliver early intervention services

Why this recommendation?

- e-Health interventions have the potential to deliver a short term return on investment of $1.60 for every $1 spent, as an emerging evidence base indicates that CBT-based e-health interventions can be as effective as face to face therapy for specific groups.
- A roll-out of e-health CBT interventions to one million Australians, both in and out of the workforce, would deliver short term savings of $442 million.

Who is this intervention targeted towards?

This intervention is targeted towards individuals experiencing, or at risk for, mild to moderate depressive and anxiety disorders who are receptive to receiving mental health services online.

e-Mental health programs can be highly effective, particularly for mild to moderate mental illnesses. They should now be considered part of the mainstream service delivery portfolio, not an add-on

What does the intervention involve, and how strong is the evidence base?

e-mental health interventions deliver components of psychological therapies through teleconference / telephone, videoconference and/or internet-based apps with no one-to-one relationship with a clinician. As outlined in Table 21 there is a strong evidence base for e-mental health interventions.

e-Mental health interventions assist to remove barriers and weaknesses experienced in traditional and face to face interventions, including:

- cost, with e-mental health interventions considered to be low cost per person
- fidelity of the intervention process
- privacy due to the reduction of stigma or reluctance associated with face to face settings
- access, with e-mental health interventions able to be self-paced and accessed anywhere.

Research shows that less than 50 per cent of people requiring mental health treatment actually receive it, which emphasises the importance of promoting different modes of treatment delivery.[92]

In Australia, there are numerous recognised online therapy programs; however there is also an identified need for more oversight and coordination to ensure ease of access and continued high quality of content. Online programs include:

- *myCompass (Black Dog Institute) - mild-to-moderate distress, anxiety and depression*
- *MoodGYM (Australian National University) - mild-to-moderate distress, anxiety and depression*
- *This Way Up (CRUfAD) - panic disorder, anxiety, depression and obsessive compulsive disorder*
- *MindSpot (Macquarie University) - obsessive compulsive disorder, post-traumatic stress disorder, mild-to-moderate stress, anxiety and depression*
- *Anxiety Online (Swinburne University) - programs for a variety of anxiety disorders*
- *OnTrack (Queensland University of Technology) - for depression and alcohol use*
- *MoodSwings (Melbourne University and Deakin University) - bipolar disorder programs.*

Table 20: Evidence base for e-mental health interventions

Intervention	Description	Quality of the evidence base	Outcomes
Embedding widespread use of CBT-based online programs and general e-mental health programs as standard practice	e-mental health programs involve: • online, web- or mobile-based interventions aimed at recognising, improving or preventing distress by direct or interactive communication. • interventions can include: CBT, psychodynamic therapies, behaviour therapy or behaviour modification, systemic therapies, humanistic therapies, or integrative therapies.	● **High:** Systematic reviews have identified that there is a high-quality evidence base for particular e-mental health interventions applied to depression and anxiety	● **Effective:** This intervention has been shown to have the following positive outcomes: • Cost effectiveness • Increased QALYs • Positive impact on symptoms of major depression, panic disorder, social phobia or generalized anxiety disorder

What is the economic impact of intervening in this area?

Context

About a quarter of Australia's workforce experiences mild levels of mental illness that cost $7.6 billion per annum in lost productivity. Embedding widespread use of CBT-based online programs can provide a cost-effective mechanism to reach this broad cohort of people.

Return on investment for e-health interventions

The costs of e-health interventions vary, with a systematic review finding that in some cases these interventions are cheaper than standard care. On average across the studies reviewed, the cost per participant was $561,[93] although we note that in one recent Australian study the average cost per participant was $334.[94] Nonetheless, even with a relatively high assumed average cost, e-health interventions provide a large return on investment. A meta-analysis of such interventions found fixed effect size of 0.27 on depression and 0.96 on anxiety, suggesting that e-health interventions can significantly improve mental health.[95] A systematic reviewer found broad equivalence with face to face CBT,[96] and an Australian analysis found the average QALY gain from an eCBT intervention was 90% of face to face CBT for specific conditions.[97] Given these results in the literature, it is assumed that e-health interventions can deliver 60 per cent of the expected employment savings of $1,769 from Recommendation 1.1. This delivers a short-term return of $1.60 for every dollar invested.

Potential savings

The high return on investment suggests the intervention could be more broadly rolled out rather than focused on only those in the workforce (which make up about half of the population), and still deliver significant net employment-related benefits. Widespread roll-out of e-health CBT interventions to 1 million people, both in and out of the workforce, would cost $561 million but deliver short-term savings of $442 million.

Table 21: Return on investment per person for CBT-based online programs

	Short-term
Cost	$561
Employment savings	$885
ROI	1.60

Is this intervention aligned with existing policy directions?

Using e-mental health as an enabler to deliver timely intervention services is strongly aligned to existing policy directions, including:

- the National Mental Health Commission (2017) as part of their submission to the Australian Digital Health Agency regarding e-mental health suggests that future actions need to include: cultural change; improved regional and remote equity and access; co-design of tools; information sharing capability building; training for professionals; and incentivising uptake.[98]
- the Fifth National Mental Health and Suicide Prevention Plan (2017) recommends that opportunities to use digital mental health and electronic health records in coordinating care should continue to be pursued; and that governments should develop a National Digital Mental Health Framework in collaboration with the National Digital Health Agency.[99]

What are the opportunities or challenges of implementation?

There is an **opportunity for Australian mental health treatment and support to genuinely embed e-mental health** as a recognised service delivery mode, optimising cost effectiveness, reach and access. Key opportunities include:

- developing coordinated advice regarding evidence based e-mental health programs and reinforcing quality through national oversight. The new digital gateway, Head To Health, is a positive step towards this.
- embedding e-mental health as ubiquitous support for the community which in turn promotes the delivery of consistent interventions across Australia, promoting quality and safety outcomes.
- building infrastructure and systems that support full digitisation of mental health care, providing patients with real time access to their care information and plans and the ability to self-monitor and report experience and outcomes measures. This would provide providers with the ability to leverage these measure for continuous improvement opportunities.

In implementing more widespread use of e-mental health, key challenges are likely to include:

- **overcoming historical practice and cultural barriers** (e.g. correcting health professionals' belief that face to face care provision is the only option).
- **ensuring health professionals are up-skilled** in the use of technology systems that support the delivery of e-mental health.
- **addressing existing limitations surrounding digital information sharing**. As an example, different health services often use different electronic systems with no single source of electronic health information. This limits the ability to fully digitise mental healthcare in a way that promotes timely access to information across multi-disciplinary providers.

Where does data, research and evaluation need to be improved?

Data, research and evaluation can be improved by:

- recording and collecting referrals and completion of e-mental health programs, potentially through AIHW Mental Health Services indicators
- researching universal interventions to build resilience
- integrating data collected through e-health services into broader e-health data systems and medical records to ensure continuity of care.

The overall impact of investing in mental health priorities

The overall impact of investing in mental health priorities

Direct economic benefits of investing in mental health reform

This report has highlighted a range of interventions that provide excellent return on investment. Combined, these intervention generate **$8.2 billion** in short-term savings from an investment of under $4.4 billion. These are substantial, immediate returns on investment. Many potential savings were excluded where the evidence base was not yet mature. Similarly, wider health-related quality of life measures such as QALYs or DALYs were not included in the modelling, as the focus was on the return on investment when considered from the perspective of the employer (for workplace interventions) or the government (for health system interventions).

Longer term, there are further savings that combined total **$12.7 billion**, as interventions that reduce homelessness and suicide and improve mental health have life-long impacts.

Wider flow-on benefits of investing in mental health reform

Reducing absenteeism and presenteeism through mental health reform directly improves the size and productivity of Australia's labour force. This has economic flow-on impacts to the wider economy. KPMG's Computable General Equilibrium model (KPMG-CGE) of the national economy was used to investigate these impacts (a detailed explanation of KPMG-CGE is provided in Appendix B).

Overall, the modelling showed that the mental health reforms proposed here would generate a further $2.1 billion in wider GDP gains for the Australian economy. This comes from flow-on effects of more productive businesses to lower prices, higher wages and increased consumption, investment and exports. It also results in an increase in taxation revenue to the government. The overall impact from these reforms would be an increase of a total $2 billion in indirect taxes such as GST and direct income taxes.

Table 22: Savings from investing in mental health priorities ($ million)

Intervention	Investment costs	Short-term savings	Short and long-term savings
Workplace reforms	$2,656	$4,533	$4,533
Gaining and maintaining employment	$52	$90	$120
Homelessness intensive outreach	$518	$1,573	$4,803
Suicide prevention	$545	$73	$973
Mental health reforms in the physical health setting	$620	$1,873	$1,873
Early interventions to improve mental health	$50	$90	$442
e-Health CBT	$561	$442	$442

These three targeted areas of recommendation have the potential to produce savings of between $8 billion and $12.7 billion for a total investment cost of $4.4 billion, while improving the lives of many Australians.

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