WESTERN SYDNEY
UNIVERSITY

WHITE PAPER

DEPRESSION, CO-MORBIDITY AND INTEGRATED CARE

2020

MISSION STATEMENT

To inform understanding, needs and services to support individuals with depression and comorbid mental and physical conditions with a person-centred and collaborative approach to care.

'No decision about me without me'

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ACKNOWLEDGEMENTS

The contributors acknowledge and thank Ms Lisa Abraham, Dr Carolyn Joyce and Mrs Sonya O'Shanna for their assistance in the preparation and writing of this white paper. We also thank all external stakeholders involved in events related to the development of this paper and for supporting our research.

SUGGESTED CITATION:

Meade, T., Dickens, G. L., Hay, P., Sarris, J., Schmied, V., Smith, C., ... Perich, T. (2020). Depression, Co-Morbidity and Integrated Care. Western Sydney University.

DOI: https://doi.org/10.26183/zatq-m518

November 2020

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EXECUTIVE SUMMARY

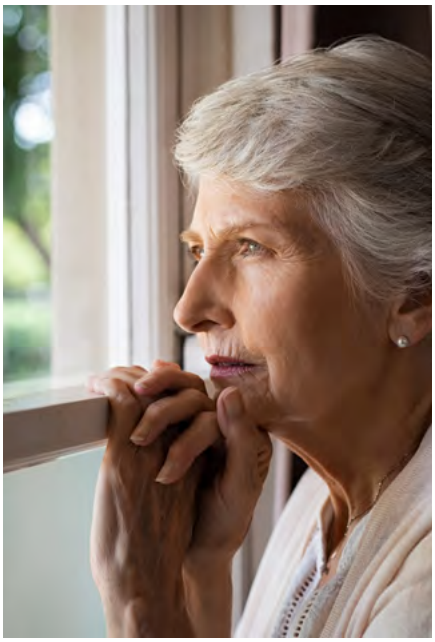
An increasing number of people live with both depression and another mental or physical illness. As awareness of the complex interplay between depression and other illnesses grows, so does the need for health providers and consumers to work together to develop improved approaches to care.

The purpose of this white paper is to describe a new integrated, collaborative and transdiagnostic approach[1] to the care provided to people living with both depression and a co-occurring mental and/or physical illness. This includes the promotion of improved consumer partnerships to increase consumer self-efficacy and to recommend actions to educate and support healthcare providers.

This white paper outlines and addresses existing gaps in service for health consumers and identifies opportunities to build integrated models of care through collaboration between university and public and private health providers, informed by the lived experience of consumers. We highlight how Western Sydney University's multi-disciplinary research can support and enable health services, communities and policy makers to address the diverse and complex needs of people living with both depression and another mental and/or physical illness in Western Sydney and beyond.

1. Transdiagnostic approaches seek to identify and treat common problems or symptoms across a range of conditions, in order for healthcare providers to more readily predict how changes in treatment regimes for one condition may affect another.

INTRODUCTION



Depression is the most common mental health issue in the community. The global yearly prevalence of depression is 4.4% or 322 million people (WHO, 2017). Depression is more common among females (5.1%) than males (3.6%) with rates peaking in older adulthood (7.5%) for females aged 55-74 years and above 5.5% for males. The rates of depression have increased by 18.4% between 2005 and 2015.

At least one third of those with a lived experience of depression are in the moderate to severe range indicating significant and noticeable disruptions to social and work life. In 2015, depressive disorders accounted for over 50 million Years Lived with Disability (YLD) and were ranked as the single largest non-fatal health loss accounting for 7.5% of the overall YLD (WHO, 2017). Depression is commonly comorbid with other mental disorders, particularly anxiety, and/or with chronic physical health conditions. As such, depression may be part of an accumulative load that presents further challenges and added complexity to the diagnosis and treatment of each of the comorbid conditions involved. In clinical practice, treatments commonly target individual conditions, as there is paucity of data on treatment options for people living with both depression and another physical or mental illness (Tiller, 2013). As an example, research shows that people with a mental illness and a comorbid chronic physical illness experience similar benefits from psychological treatments. However, those psychological treatments appear to have little effect on medication adherence, lifestyle behaviours and subsequent medical outcomes, and it is unclear why that is the case (Snoek, 2018).

1. THE CHALLENGE

Almost four million Australians aged between 16 and 85 experience a mental illness each year of which depression and anxiety are the most common diagnoses. Many individuals with mental health problems do not seek or access treatment for some years and, when they do, treatment options and accessibility vary significantly. Within the constraints of the available health services, treatment options may not be sufficiently individualised or culturally and socially inclusive. These challenges are further confounded for a large number of individuals who present with comorbid mental and physical health problems that require different, multifaceted models of care and service provision integration and collaboration. As most research and clinical practice is focused on a single-presentation diagnosis, treatment and recovery model, it is unknown how those models of care are applied to individuals living with both depression and another physical or mental illness. It is likely that the large, diverse and at-risk population living with both depression and a comorbid condition has unmet needs. In this White Paper, researchers at Western Sydney University from a range of disciplines seek to inform research, practice and policy to address this gap by outlining a new transformative approach to the care of people living with both depression and other physical or mental illnesses. The White Paper authors are well-placed to lead this initiative due to their strong track record of research in these areas, their dedicated commitment to the community and services offered in the region, and their demonstrated capacity to engage in research that has local and international value and translational capacity.

The goals of this White Paper are aligned with the Million Minds Mission and seek to explore and inform treatments for depression according to network structures (biological, psychological and societal; section 3.2), in order to identify a range of optimal treatment options and combinations of those options for people living with depression and a comorbid illness.

MILLION MINDS MISSION

The Government has allocated $125 million for over 10 years to support of mental health research and clinical trials to develop new approaches to diagnosis, treatment and recovery. The Mission is aligned with the Fifth Mental Health and Suicide Prevention Plan and the *Australian Medical Research and Innovation Strategy 2016–2021* and *Priorities 2016–2018*. It will support innovative, systems-based research to address those national health priorities through new treatment and product options for mental health conditions such as: depression, bipolar disorder, eating disorders, anxiety, suicide preven tion and particularly Aboriginal and Torres Strait Islander mental health and it calls on collaborative consultation with researchers, clinicians, consumers and co-funders.

http://health.gov.au/internet/budget/publishing.nsf/Content/budget2018-factsheet71.htm

2. DEPRESSION

2.1. DEPRESSION TYPES

Symptoms of depression include sadness, loss of interest or pleasure, feelings of guilt, helplessness and low self-worth, changes in sleep, appetite, concentration and energy levels. Depression can be long lasting and disruptive to daily functioning and overall quality of life. Severe depression can lead to suicidal ideation and suicide attempts. There are two main categories of depression: *Major Depressive Disorder/Depressive Episode (MDD)*, which may be mild, moderate or severe; and *Dysthymia* (i.e. *Persistent Depressive Disorder*), which while mild in severity may be chronic and persistent in its course (APA, 2013). Depressive disorder can also occur with or without a history of *Manic Episodes* (elevated mood and increased energy) with further categorisation of Bipolar Affective Disorder I and II (BDI, BDII). Bipolar Disorders often have a chronic course, present with multiple functional disruptions and require a comprehensive program of care (pharmacological, psychological, and potentially hospitalisation) and recovery (social support, self care) models in response to changes over time and other comorbidities. Sub-threshold depressive symptoms that do not meet the diagnostic criteria of MDD, Dysthymia or BDI/BDII, can still be distressing and functionally disruptive, and may increase in severity over time if not treated. Therefore, early identification and appropriate treatment options are critical to prevention and management of those mood disorders.

By drawing on the expertise of WSU researchers across a range of disciplines, this White Paper aims to aid and inform improved identification and assessment of depressive symptoms in people living with comorbid physical or mental illnesses. **We intend to achieve this through identifying and addressing existing gaps in service, and by seeking opportunities to build integrated models of care through collaboration between university and public and private health providers, informed by the lived experience of consumers.**

2.2. DEPRESSION & SUICIDE

Over 50% of people who die from suicide had major depression. In Australia, suicide is a leading cause of death for those aged 15 to 44 years with 65,000 attempts and 2,500 completed suicides every year. Of these, 75% were males and the prevalence rates for Aboriginal and Torres Strait Islander was double that of non-indigenous Australians (ABS, 2017). LGBTI+ (lesbian, gay, bisexual, trans, and/or intersex) have high rates of major depression and the highest rates of suicidality of any other population in Australia, a situation attributed to discrimination and exclusion amongst other factors (Rosenstreich, 2013). Treatment for depression and suicide risk and access to support currently may not meet the needs of specific groups due to lack of accessibility and/or culturally and socially appropriate options. Also, access and needs may be time specific and require awareness and responsiveness such as the postnatal year when suicide is one of the leading causes of maternal deaths in the perinatal period from pregnancy to the first three months post-birth (Thornton, Schmied, Dennis, Barnett & Dahlen, 2013).

A specific aim of this White Paper is to engage with vulnerable populations through WSU's existing and new community and services partnerships to identify optimal reach-out methods, informed by consumers' input and cultural literacy.

Suicide and accidental injury (motor traffic accidents, and homicides) are the two leading causes of death for women within one year of their child's birth, contributing to 62% of all causes during this period. In a recent analysis of linked population datasets from births, hospital admissions, and death registrations, WSU researchers found that 37 were early deaths (maternal mortality rate (MMR) of 6.7/100 000) and 92 occurred late (MMR of 16.6/100 000). Sixty-seven percent of deceased women had a mental health diagnosis and/or a mental health issue related to substance abuse noted. A notable peak in deaths appeared to occur from 9 to 12 months following a child's birth with the odds ratio of a woman dying of nonmedical causes within 9–12 months of birth being 3.8 (95% CI 1.55–9.01) when compared to dying within the first 3 months following birth. These findings underscore the importance of longer-term support for women at risk of maternal death due to suicide and trauma in the first year following birth.

Thornton, C., Schmied, V., Dennis, C. L., Barnett, B., & Dahlen, H. G. (2013). Maternal deaths in NSW (2000-2006) from nonmedical causes (Suicide and Trauma) in the first year following birth. *BioMed Research International*, 2013.

2.3. DEPRESSION & COMORBIDITY

Depression and anxiety are referred to as common mental disorders due to their global diagnosed prevalence rates of 4.4% and 3.6% respectively (WHO, 2017). The prevalence of sub-diagnostic but distressing and functionally disruptive symptoms of depression and anxiety are however considerably higher. Depression and anxiety also commonly co-occur with Australian estimates suggesting that, of primary care patients with mental health concerns, 25% present with both conditions (Tiller, 2013). Further, about 85% of patients with depression have some symptoms of anxiety and 90% of patients with anxiety have symptoms of depression. The co-occurrence of depression and anxiety is associated with more severe symptoms, greater substance abuse and suicide risk, more health service utilisation but poorer treatment outcomes (Tiller, 2013). Unfortunately, 40% of people diagnosed with depression or anxiety do not seek treatment. Of those who do, fewer than 50% are offered optimal treatment (Tiller, 2013).

The risk of depression in individuals with chronic physical conditions is three times higher than in healthy communities (Kang et al 2015). For example, those with chronic conditions have high rates of depression: cardiovascular disease (15-50%), stroke (5-44%), diabetes (8-52%), cancer (20-50%), arthritis (13-80%) (Clarke & Currie, 2009). Bi-directionally, those with depression have high prevalence of arthritis (34%), hypotension (31%), COPD (17%) and higher when comorbid with anxiety (39%, 35%, 21% respectively) (Bhattacharya et al, 2014). These comorbidities are understood to be due to genetic epigenetic and environmental factors (interaction between genes and the environment), and genes and biomarkers related to inflammation (for example cytokine-mediated inflammatory response), and serotonin pathway aberrations (Kang et al 2015). Further, the increased risk of depression, and subsequent health services use and cost, is exponentially related to the number, rather than the type, of comorbidities (Bhattarai et al 2013).

Despite of the elevated risk of depression in people with a physical illness, treatments continue to be dominated by a single-pathology approach. **This White Paper calls for the development and introduction of new collaborative, integrated, person-centred approaches to treatment, including the provision of education programs for consumers and healthcare workers to assist in the identification of depressive symptoms and improve awareness and access to treatment pathways.** Examples of how WSU is already addressing these issues include the delivery of specialised group intervention programs for individuals with Bipolar Disorder at the Kingswood Campus (WSU Psychology Clinic; Tania Perich), transdisciplinary clinics at NICM (Westmead) (Carolyn Ee) which aim to increase consumer reach and support of current services that may not be meeting the demand. Further effort is needed to develop effective and efficient intervention programs to target areas of mental health that may not currently be readily available.

BIPOLAR DISORDER AND ANXIETY

Whilst mood disturbances in Bipolar Disorder are a known feature of the illness, often little attention is given to other co-occurring conditions that may feature in relapse. Alcohol and drug use, anxiety and personality disorders are all common conditions in Bipolar Disorder, yet few research studies explore whether standard treatments may assist in the management of these. At WSU, we are currently exploring whether adjunctive psychological treatment for anxiety itself may produce benefits for those living with Bipolar Disorder in managing mood and anxiety symptoms. The pilot is one of the first to be conducted for Bipolar Disorder in the Western Sydney region.

Perich et al. *Group Cognitive Behaviour Therapy for Anxiety in Bipolar Disorder – Pilot study.*

MULTIPLE COMORBIDITIES

There are high rates of depression and anxiety in a range of physical conditions, including Rheumatoid arthritis (RA). A recent systematic review found that individuals with RA perform significantly below healthy controls across cognitive domains such as verbal function, attention and memory. It is unclear why that is the case but possibly due to: chronic inflammation, medication and premature immunosenescence. When compared to other chronic physical conditions the cognitive function difference was inconsistent which suggests that it is not specific to RA. Nonetheless, it illustrates the bi-directional effects and accumulative burden associated with those comorbid presentations.

Meade et al (2018). *Cognitive impairment in rheumatoid arthritis: a systematic review.* AC&R, 70:39.

2.4. DEPRESSION & AT-RISK POPULATIONS

The authors of this White Paper have examined a broad range of issues relating to the experience and treatment of depression and other comorbid conditions. A selection of recent research articles is presented in Appendix, Table 1.

Some people are at greater risk of depression and comorbid conditions than others. These include older adults with declining physical health and often multiple physical conditions. For example, a recent Australian study found multimorbidity in older adults to be strongly associated with clinically significant depressive symptoms (26% for more than two comorbid conditions compared to 15% for those with no or only one physical conditions) and pain to be a particularly strong predictor (Sharpe et al, 2017). For people living with Parkinson's Disease (PD) and Alzheimer's Disease (AD), there is evidence of the impact of depression on hippocampal structure and function (PD; Gyorfi et al., 2018; Herzallah et al., 2010) and as a risk factor for the development of AD and dementia symptoms (i.e. cognitive decline, executive dysfunction) (Jaroudi et al., 2017). Importantly, the treatment of depression in AD (as well as individuals with mild cognitive impairment and subjective cognitive impairment) can ameliorate cognitive decline and significantly improve quality of life for both the person living with depression/ AD and those who care for them (Gustavson et al., 2016).

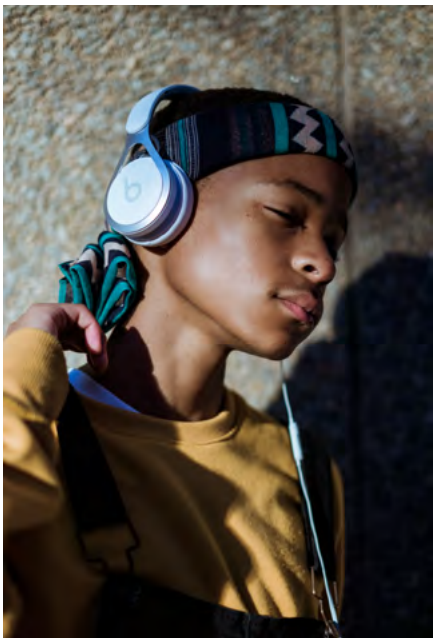
Similarly, older people have been shown to experience significant improvements in quality of life following treatment of depression symptoms such as disordered sleep (Perach et al., 2019). Indeed, improving quality of life has marked benefits in older persons, with reduction in morbidity, aged care residential placement and mortality (Browning & Thomas, 2013).

Other at-risk populations are women in pregnancy and following birth when depression occurs for 1 in 7 and anxiety for 1 in 5. Perinatal depression is associated with situational factors such intimate partner violence, childhood abuse and traumatic birth (Thomson & Schmeid, 2017).

MATERNAL MENTAL HEALTH

Poor maternal mental health is a significant public health problem. Up to 13% of women will experience major depression during pregnancy, increasing to up to around 22% in the first twelve months postpartum (Wisner et al., 2013). The prevalence of self-reported anxiety symptoms fluctuates across pregnancy from approximately 18% in first trimester to 25% in the third trimester (Dennis, Falah-Hassani, & Shiri, 2017). The prevalence of anxiety disorders in the year following birth is estimated to be 20% (Fairbrother, Young, Janssen, Antony, & Tucker, 2015) with high rates of comorbid depression and anxiety at this time. Maternal mental health may be exacerbated by substance misuse and domestic violence (Thomson & Schmied, 2017).

3. MODELS OF CARE



Current models of care are based on single-disease frameworks, which focus on the assessment and treatment of individual illnesses by discrete healthcare providers. Experts have called for the introduction of complementary, interdisciplinary and collaborative approaches to the care of individuals experiencing comorbid mental and physical illness (eg. Snoek, 2018). The aim of this section is to outline the existing models of engagement, treatment and recovery, identify the limitations of each and describe how these challenges may be met.

3.1. MODELS OF ENGAGEMENT

In general, engagement with mental health service tends to be low in proportion to the number of people who experience symptoms of depression, with some studies indicating that up to 80% of people with mental illness do not seek professional help (Kessler et al., 2005). This is particularly so in young people and older adults. Therefore, a priority area of research is the development of effective interventions to promote help-seeking behaviour and engagement with mental health services (APS, 2015). As an example of promoting engagement, researchers at Western Sydney University are developing programs that tap into the natural appeal of both music and technology to increase mental literacy, mood management skills and health seeking in people with symptoms of depression (Sandra Garrido). Other White Paper activities will be on consultation with health professionals, community groups and consumers through workshops, seminars and focus groups to determine barriers and opportunities to local engagement.

MUSIC AS A GATEWAY TO IMPROVED MENTAL HEALTH LITERACY

Previous research has demonstrated that although adolescents with symptoms of depression rarely seek professional help, engagement with media such as the internet and music tends to increase during episodes of depression. In fact, the Australian Psychological Society reports that 80% of people used music as coping strategy during periods of psychological distress (APS 2015). However, the relationship between music use and depression is complex, with numerous studies showing that people with depression tend to listen to music that perpetuates cycles of negative thinking or unhealthy coping strategies (Garrido & Schubert, 2015; McFerran & Saarikallio, 2014; Wilheim, Gillis, Schubert & Whittle 2013).

3.2. MODELS OF TREATMENT

Treatment for depression may depend on several factors, regardless of the symptoms being experienced. Age, gender and other demographic features can play a large part in the type of treatment received. Cultural beliefs about depression may also be important, with attributions about the causes and consequences of depression being associated with likelihood of treatment seeking and hence receiving care. Availability of service and cost also influence the types of care.

For example, in Australia, under the Medicare's Better Outcomes in Mental Health Care program, individuals can annually receive up to 10 sessions of psychological treatment. GP's services, as the primary point of contact and referral pathways, are not session restricted. They are critical in the early detection of depression symptoms and pathways into treatment options, which include pharmacotherapy, other medical therapies (rTMS, bright light therapy, ECT) and psychological interventions (CBT, Mindfulness-Based CT, Schema therapy, Behavioural Activation) and management

of progress. In addition to those treatments that target symptoms specifically, additional interventions target interpersonal/relational issues, vocational training needs and anxiety and stress management.

However, there are several gaps in current service provision for depression. The 10 psychological intervention sessions are insufficient for many individuals, as the majority of research into the effectiveness of psychological interventions recommends longer treatment durations (Linde et al., 2015). This is particularly the case for chronic mental health conditions such as Bipolar Disorders and comorbid presentations with a complex and severe course. Psychiatric services, outside of inpatient settings, are limited in terms of access with long waiting periods and often prohibitive costs. Furthermore, varied, not readily coordinated key services and the prioritisation of comorbid physical conditions means that individuals experiencing depression may not receive optimal, targeted or comprehensive treatment.

The White Paper authors seek to develop new ways of identifying the most effective and efficient treatment regimes for people experiencing comorbid physical or mental illness and depression. For example, the clinics and services that will be offered through Western Sydney Integrative Health (WSIH) at NICM will provide a pathway to investigate current and new treatments including acupuncture and Chinese herbal medicine, yoga therapy, mediation, music therapy, psychology and exercise physiology, alongside mainstream health care.

Individuals presenting with depression, either with or without comorbid disorders, can often experience quite diverse symptom profiles despite a common diagnosis of depression. Cluster analysis of symptom profiles can reveal commonalities and differences between patients that have utility beyond primary diagnosis categories for both prognosis and treatment (Hermans et al., 2011; Crouse et al., 2018). Moreover, symptoms can also be dynamically *and* causally-related. The network approach to mental health seeks to identify the relationship between them and to use this to inform treatment (Borsboom, 2017).

According to the **network theory** (Borsboom, 2017) mental illness arises from direct interaction between symptoms, which are causally connected via biological, psychological and societal mechanisms and lead to an alternative, disordered state. It suggests that, if the diagnosis is based on a symptoms network, the treatment should change or manipulate those networks by: symptom interventions (i.e., anti-depressants for low mood); external triggers intervention (i.e., inter-personal conflict resolution); and network intervention (i.e., modify symptom-symptom connection with, for example, cognitive-behavioural therapy to address the impact of low mood on daily functioning). Borsboom (2017) suggests that by organising treatments according to those network structures, there would be a range of optimal treatment options and combinations of those options. A systematic review of transdiagnostic (using the same underlying principles) treatment for depression and anxiety shows good outcomes for both conditions (Newby et al 2015). As a framework, transdiagnostic treatments could be particularly useful in treatment of comorbid mental conditions with an application of evidence-based approach to a cluster of symptoms that may overlap. However, there are many evidence-based approaches to treatment of depression from medical (antidepressants) to psychological (cognitive-behavioural therapy) to integrative approaches (e.g. nutraceutical or lifestyle medicine).

A goal of this White Paper is to promote the awareness and utilisation of transdiagnostic treatments for people living with depression and comorbid mental or physical illness such that healthcare providers can more readily identify overlapping symptoms and predict how changes in treatment regimes for one condition may affect the other.

3.3. MODELS OF RECOVERY

The question of 'recovery' in often chronic mental health disorders, including major depressive disorder, can be a vexed and complex discussion. The majority of the existing literature draws on the medical model (Adame & Knudson, 2007), which dualistically separates mental illness from its recovery. The medical model marks out two pathways - the person either continues on to develop a chronic illness (e.g. chronic or treatment-resistant depression, or dysthymia) or they return to a pre-illness state or recovery. If the person continues onto a chronic course, they are frequently positioned as a 'chronic' patient and an "unrecovered identity" is constructed, which is perceived to be intrinsically negative (Harper & Speed, 2012, p. 18). Therefore, confining people's lived experience of complex and comorbid mental health issues to the medical model risks obscuring of alternative ways of conceptualising and storying their experiences (Lock, Epston, & Maisel, 2004).

The recovery model has been differentiated from the notions of 'cure or remission' (Webb, 2011, p. 732) with the aim of recovery for some being to assist people to 'be who they are – not making them into what we believe they should be' (Browne, 2006, p. 153). Therefore the aim of treatment from a recovery-oriented perspective is for people, including those with complex health needs, to be able to live fulfilling lives in the face of the presence of symptoms (Webb, 2011).

For example in anorexia nervosa (AN) research, there has been a proposal that treatment interventions for those who continue onto a longer term course, or severe and enduring AN (SE-AN), consider shifting their focus from treatment as usual that focuses on behavioural symptom reduction to an increased focus on the person's quality of life (Hay, Touyz, & Sud, 2012) with positive outcomes associated with these interventions (Touyz et al., 2013). Additionally, Conti (2018) has argued that a medical model of recovery for AN with the expectation that a person returns to some sort of pre-morbid state may obscure and thereby fail to resonate with the unique experiences of a person. Alternative conceptualizations include the understanding of living with complex health needs as an identity journey and provide coherence and meaning to these ongoing lived experiences and a richer understanding of the person in terms of both their struggles and capacities and strengths.

For example, one of the studies currently underway at Western Sydney University is exploring both the clinical symptoms of bipolar disorder as well as participants' perceptions and experience of recovery (Perich & Meade). This may involve improving interpersonal relationships, restoring sense of self, work and other functionality and overall quality of life that may not be fully addressed by current interventions. This White Paper proposes to promote increased awareness and use of the model of recovery developed by the Australian Health Council Ministers Advisory Council (Figure 1), specifically for people living with both depression and a comorbid illness. This will involve close collaboration with consumers and community groups in relation to the development of strategies to enhance self-efficacy and life satisfaction.

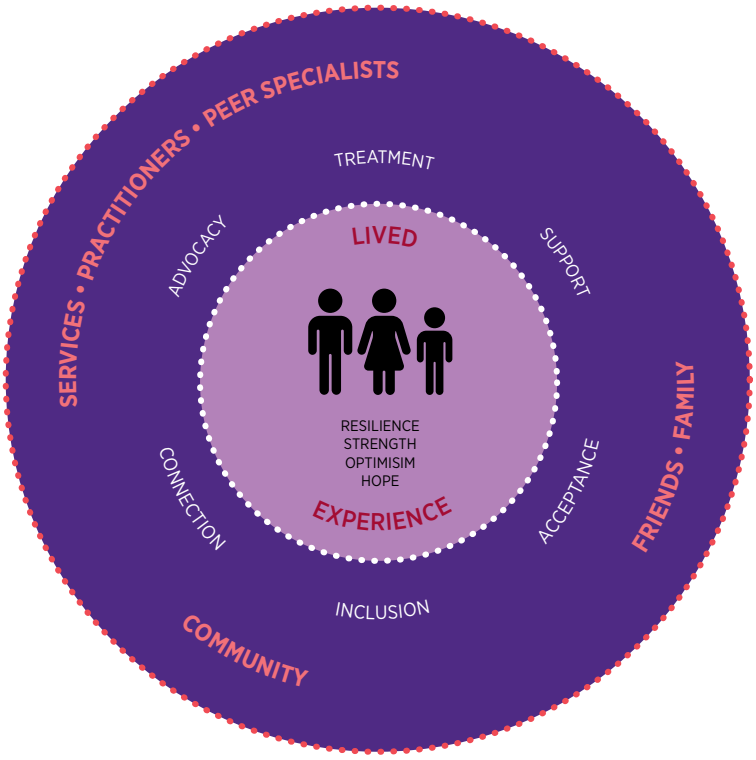


FIGURE 1: Recovery Model

A national framework for recovery-oriented mental health services (2013), Australian Health Ministers Advisory Council, Department of Health

Definition of recovery: 'being able to create and live a meaningful and contributing life in a community of choice with or without the presence of mental health issues'

4. INTEGRATIVE MODEL OF CARE

Collaborative care is characterised by the integration of mental health and medical professionals with a focus of treatment of the whole person. Key features of successful collaborative care include: a person-centred approach where patient goals are included in structured patient management plans; scheduled patient follow-ups; and enhanced communication between the multi-disciplinary team (Tully & Baumeister, 2015). Collaborative care models have been shown to be more effective than conventional care models for depression and other mental health conditions (Unutzer et al, 2002; Gilbody, 2006; Simon 2009; Reilly 2013; Woltmann, et al 2012), as well as in treating individuals with comorbid mental and medical disorders (Katon et al, 2011).

Person-centred care is increasingly recognised as important and included in policies and practice; however, the outcomes appear mixed (i.e. Dwamena et al, 2012); which could be due to unclear conceptualisation. Several different models have been proposed ranging in dimensions, with the following three domains encompassing 15 interrelated dimensions identified in a systematic review (Scholl et al, 2014): principles (clinician's characteristics; clinician-patient relationship, patient as a unique person, biopsychosocial perspective); enablers (clinician-patient communication, integration of medical and non-medical care, teamwork and teambuilding, access to care, coordination and continuity of care); and activities (patient information, patient [and family and friends] involvement in care, patient empowerment, physical support, emotional support). These are focused on clinical encounters and predominantly medical settings. To what degree these dimensions are embedded in practice is unknown.

Given that depression is found in complex, comorbid presentations, how person-centred care could be offered is an important direction for this White Paper's group of researchers. One of the new initiatives offered by the Western Sydney University is the new Western Sydney Integrative Healthcare Centre. Clinical care and research that will be provided by this Centre will offer an opportunity to observe how an integrative model of care may be person-centred and how a multi-disciplinary team can facilitate evidence-based translational care for individuals with depression and other comorbid conditions. This approach is consistent with NSW Health's Strategic Framework for Integrating Care, defined as a system that "*places people at the centre of care, providing comprehensive wrap around support for individuals with complex needs and enabling individuals to access care when and where they need it*." (NSW Ministry of Health, 2018).

WESTERN SYDNEY INTEGRATIVE HEALTH

NICM Health Research Institute is the premier complementary therapies research body in Australia. In 2021 NICM will open the first academic integrative healthcare centre in Australia. The Western Sydney Integrative Healthcare Centre (Western Sydney Integrative Health/WSIH) is a vehicle to translate the existing ERA-5 (top) rated research at NICM Health Research Institute into policy and practice, and significantly increase the research impact of NICM and WSU. WSIH is an innovative multidisciplinary academic center of excellence and best practice in integrative medicine, incorporating co-design with the community and key clinical stakeholders. This will be a sustainable platform for Integrative Medicine (IM) research, clinical trials, clinical training and clinical services education.

5. THE STAKEHOLDERS

5.1. INDUSTRY PARTNERS

Western Sydney University has strong research links with number of local stakeholders such as health service providers and community groups. It is committed to engaging collaboratively in research and practice that improves the services and lives of Western Sydney region populations and beyond. The members of this White Paper bring transdisciplinary expertise to research and clinical practice undertakings. As part of this White Paper we conducted a Health Forum in April 2019 with invited stakeholders to identify **knowledge, practice and resources** needs in treatment of depression and complex comorbidities across Western Sydney; and inform **future research directions** that would address local and global gaps in this area. Some of the external partners we work with are listed in Appendix, Table 2.

5.2. COMMUNITIES

A person-centred approach to treatment requires collaboration with and representation of the individuals and communities that are affected by depression and comorbid conditions to ensure their voices lead the development and provision of appropriate and accessible treatments and services. We are committed to collaborative research with both our industry partners and our communities. The Health Forum specifically sought community and consumer involvement and input into research priorities, directions and activities. An example of ongoing community collaboration will be the involvement of the Western Sydney Integrative Health (WSIH) Community Reference Group. This group has already been established and provides advice to the WSIH Centre and NICM in relation to proposed policies and procedures. Some of the community representatives and organisations we collaborate with are listed in Appendix, Table 3.

5.3. CONSULTATION

As part of informing the direction of research to be undertaken by the authors of this White Paper, we conducted a Health Forum in April 2019 at the NICM Health Research Institute with health services providers, community and consumer representatives. As part of this process we explored two key questions:

1. **What are the current gaps in the services and support provided to those who live with depression and comorbid physical or mental condition?**
2. **What needs should be addressed as part of an integrated model of care?**
3. **And how might these needs be addressed through multidisciplinary and innovative new ways of therapeutic interventions?**

Some of the key findings included the current *lack* of:

- access to mental health services including psychological and complementary therapies, particularly in the public health system;
- focus on preventative measures for depression for people living with other chronic illnesses although it is well-known there is a high level of comorbidity;
- focus on symptom reduction in mental health as opposed to diagnosis;
- mental health awareness/literacy by some medical practitioners;
- awareness of problematic language such as 'management' in relation to mental health conditions;
- efficient and simple referral processes which often lead to delays in treatment.

Several suggestions were made to better support the needs of people living with depression and a comorbid condition, including *increasing*:

- mental health literacy for both consumers and service providers;
- financial resources to enable access to mental health services and complementary medicine;
- use of screening tools to identify problematic symptoms at key points in time.

and *removing*:

- perceived barriers between different health professionals to enable simpler referral processes and improved communication.

6. THE OUTCOME

Our ambition is to inform optimal, integrated, transdiagnostic and person-centred treatment options for depression and comorbid conditions. We draw on broader research literature, community and consumer input and our own research and clinical skills and experiences to focus on delivery of treatments that are accessible, effective and appropriate. We aim to support health service providers through training, information and development of referral pathways and support communities through information, forums and inclusion in development of treatments and service options. This ambition will be realised through concentrated, collaborative short, medium and long-term goals and outputs. Some of these are listed below.

Short-term (1-3 years) goals, output and impact may include:

GOAL	OUTPUT	IMPACT
Identify local needs, current services and treatment approaches	Forum with stakeholders: *Managing Depression: Challenges and Opportunities*	Engaged, shared research direction = *research*
Identify optimal treatment options for depression with comorbid conditions	Systematic reviews, evaluation studies	Evidence-based treatment options = *knowledge*
Symposium to disseminate systematic review findings	Engagement and collaboration with consumers, community groups and clinicians	Inform clinical application = *practice*

Medium-term (3-5 years) goals, output and impact may include:

GOAL	OUTPUT	IMPACT
Support health service providers	Develop guidelines for treatment of depression with comorbid conditions	Inform clinical application = *practice*
Support individuals and communities	Develop accessible information on self-care, treatment and service options for depression with comorbid conditions	Facilitate health literacy and uptake of self-care and treatment options = *better health outcomes*
Identify key research priorities	Develop research plan	Engaged shared research direction = *research*

Long-terms (5-10 years) goals, output and impact may include:

GOAL	OUTPUT	IMPACT
Inform policies and large scale practice	Identify systems and policies that are critical to optimal treatment options for depression with comorbid conditions	Inform policies and health services = *systemic change*

At Western Sydney University we have capacity to lead research in partnership with health consumers that can inform health services for those who present with complex depression and comorbid conditions, chronic course and ongoing challenges; clinical populations which are diverse, range in numbers and are commonly unrepresented in large treatment trials. In focusing on these populations and their specific needs we will address development and delivery of effective treatment options that are accessible and provided by well-informed and supported health providers. That should lead to improved treatment experience, better health outcomes and more efficient use of health services.

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