


Addressing physical health in mental illness: the urgent need to translate evidence-based interventions into routine clinical practice

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People affected by severe mental health disorders have a greatly reduced life expectancy compared to their non-affected peers. Cardiovascular disease is the main contributor to this early mortality, caused by higher rates of smoking, physical inactivity, unhealthy diet, sleep disturbance, excessive alcohol use or substance abuse and medication side effects. Therefore, we need to take a preventative approach and translate effective interventions for physical health into routine clinical practice. These interventions should be delivered across all stages of mental health disorders and could also have the added benefit of leading to improvements in mental health. Furthermore, we need to advocate to ensure that people affected by severe mental health disorders receive the appropriate medical assessments and treatments when indicated. This themed issue highlights that physical health is now an urgent priority for funding and development in mental health services. The widespread implementation of evidence-based interventions into routine clinical practice is an essential need for consideration by clinicians and policymakers.

Received 01 November 2020; Revised 25 January 2021; Accepted 29 January 2021

Key words: Physical health, Mortality, Cardiovascular disease, Mental health disorders.

Introduction

Over the last decade, there has been a paradigm shift in mental health services addressing the physical health of people affected by severe mental disorders. This response is appropriate as there is a wealth of research, amounting to nearly a 100 systematic review or meta-analyses, demonstrating that individuals affected by severe and enduring mental health disorders have more physical health comorbidities and a significantly reduced life expectancy compared to their peers (Firth *et al.* 2019). Early studies revealed that it was those with a diagnosis of schizophrenia who died approximately 20 years younger (Hjorthøj *et al.* 2017). However, we now know that this earlier mortality is associated with all of the severe and enduring mental health disorders, including depression and personality disorders (Walker *et al.* 2015). Tragically, this mortality gap is widening and has been described as 'at best a failure to act on evidence and at worse a form of lethal discrimination' (Thornicroft, 2013). Of late, there has been a shift in practice with mental health services beginning to assume some responsibility for addressing or advocating for the physical health of service users. However,

while there is now sufficient knowledge that we need to address this issue, the most effective approach is not yet known. This themed issue on physical health aims to emphasise this critical issue and describe potential interventions to address the physical health of individuals affected by mental health disorders.

Translation of evidence-based interventions into routine clinical practice

This themed issue is timely, as, in the current circumstances of the COVID-19 pandemic, a significant proportion of the work of mental health services is being conducted via telehealth (Torous & Wykes, 2020). While telehealth has its advantages, there may be some drawbacks in addressing physical health, as individuals are attending the clinic in person less frequently. Therefore, there is a risk that the progress made by mental health services in addressing physical health over the last decade could inadvertently be reversed. Furthermore, people are less active due to restrictions of the pandemic and practices that previously occurred at clinics, such as metabolic monitoring, are now more challenging. There are many facets to this challenge; the first is that we need to identify interventions that are effective for either preventing or reversing the poorer physical health associated with severe mental health disorders. At this point, there is sufficient evidence

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supporting specific interventions that are detailed in resources such as the recent Lancet Commission: 'A blueprint for protecting physical health in people with mental illness' (Firth *et al.* 2019) and also the 'Maudsley Practice guidelines for Physical Health Conditions in Psychiatry' (Taylor and Pillinger, 2020). The review on interventions to improve the physical health of people with a first episode of psychosis (FEP) by Fouhy *et al.* (2020) in this themed issue also highlights the limited, but effective interventions for this population (Fouhy *et al.* 2020).

Therefore, this issue does not just focus on determining what works, but rather how we could translate these evidence-based interventions into routine clinical practice – which is likely to be the greatest challenge in addressing physical health in mental health disorders. For example, at Orygen, a youth mental health service in Melbourne, we established an exercise physiology service that provided treatment to young people with a FEP, those with an at-risk mental state, severe personality disorders or depression (Pearce *et al.* 2020). The exercise physiologists provided individual and group programme sessions; however, we found that not all of the young people in need of the service were referred and there was suboptimal attendance and engagement for those who were referred (Pearce *et al.* 2020). Hence, an urgent focus is needed to translate what we know works from controlled, well-funded research settings into routine practice. Matthews *et al.* (2018) argue that this translation could be achieved by integrating specialised exercise practitioners into mental health multidisciplinary teams and providing training on physical activity and sedentary behaviour interventions to mental health clinicians (Matthews *et al.* 2018).

Physical health interventions across the continuum of mental health disorders

A staging model has been proposed in psychiatry in which the early stages are characterised by mild mental health symptoms to the more severe, relapsing disorders in the later stages (McGorry *et al.* 2006). It is proposed that treatments would differ at each point along this continuum, with interventions with lower risk-benefit ratios being provided in the early stages and more complex medical therapies in the later stages (Hickie *et al.* 2013). Physical health interventions for people with mental health disorders map neatly onto this proposed staging model, as physical health interventions could have different roles across this continuum. In the early stages, a focus on modifiable risk factors could derive multiple benefits. First, interventions focusing early on smoking, physical inactivity, unhealthy diet, sleep disturbance, and excessive alcohol use or substance abuse could lead to a positive contribution to the long-term physical health of the

individual. These interventions could also have a preventative effect, as all of the above-mentioned lifestyle factors can contribute to the onset of mental health disorders (Firth *et al.* 2020). Therefore, it is possible that if we intervene early with lifestyle interventions, then progression to a further stage on the continuum could be prevented. In the later parts of the staging model, while preventative measures are still necessary, more assertive and targeted approaches are required. An example of this is in the management of treatment-resistant schizophrenia, for which clozapine is the most effective treatment (Leucht *et al.* 2013) but can have severe adverse effects on physical health (Tek *et al.* 2016). It is likely that lifestyle interventions alone would not be sufficient to counteract these adverse effects, and therefore, early use of interventions such as metformin are indicated (Siskind *et al.* 2016). Targeting these lifestyle factors in those who are prescribed clozapine could derive multiple benefits, for example, employing strategies to reduce the prevalence of smoking (Siskind *et al.* 2020), could result in achieving a therapeutic response with lower doses (Wagner *et al.* 2020), which in turn could lead to less metabolic side effects. Additionally, addressing obstructive sleep apnea, which is highly prevalent in this population, as demonstrated in this issue (Myles *et al.* 2020), could potentially lead to better mental health and physical outcomes.

Effective reform will require attention to all stages of this continuum, with services such as the physical health monitoring service for people prescribed long-acting injectable medication described in this issue (Gill *et al.* 2016; Lydon *et al.* 2020). However, it needs to be ensured that there are effective interventions in place for people identified in the screening process. To achieve this holistic care, a suite of physical health interventions would need to be available, including dietetics, physical activity programmes to reduce sedentary behaviour, tobacco smoking cessation and substance use interventions. Addressing just one factor in isolation is unlikely to have a substantial impact. For example, while there would be significant health benefits by increasing physical activity and improving diet, it would be unlikely to achieve a substantial change in life expectancy if the individual continued to smoke tobacco (Tam *et al.* 2016). Hence, this calls for multiple, additional, resource-intensive interventions in mental health services that are already under-resourced. This leads to the next dilemma, who will provide these services?

Advocacy and the interface between psychiatry and other medical specialities

With the charge to address the physical health of people affected by mental health disorders, there has been less

debate about who should deliver these services. Physical health is a broad term, and in addition to cardiovascular, respiratory and endocrine disorders, individuals with severe and enduring mental health disorders also have poorer sexual and reproductive health (Adan Sanchez *et al.* 2019) and dental health (Kisely, 2016). There is a limit to what is feasible and appropriate to be addressed by the mental health services based on resources, funding and expertise. Mental health services already take a collaborative approach to the care of people affected by mental health disorders by involving the affected individual, their caregivers, general practitioners and other health professionals. The same process should be taken in addressing physical health. A minimum standard could be determined by governing bodies and incorporated into the training of mental healthcare professionals. For anything beyond this, mental health services could negotiate with other health providers, such as general practitioners. The move towards establishing primary care centres in Ireland (Mental Health Reform, 2013), in which mental health and primary care are co-located, would make this a seamless process for the service user and their caregivers. The review by Fogarty *et al.* (2020) examines this issue and details the physical health issues of people affected by mental health disorders presenting to primary care (Fogarty *et al.* 2020).

Advocacy is another required role for the mental health services to undertake in addressing the physical health of people affected by mental health disorders. People with severe mental health disorders are less likely to receive the indicated investigations and interventions and this is referred to as 'diagnostic overshadowing', in which there is a misattribution of physical symptoms to mental illness. It can occur most often in Emergency Departments, particularly those that are crowded and busy or when the patient presents with challenging behaviour (Shefer *et al.* 2014). However, it also occurs in medical and surgical specialties, for example, in Western Australia people with severe mental health disorders and ischemic heart disease were less likely to undergo life-saving revascularisation procedures compared to those without mental health disorders (Lawrence *et al.* 2013). It is not surprising then that the mortality attributable to ischaemic heart disease had reduced in the general population in Western Australia, but this was not the case for people with severe mental health disorders (Lawrence *et al.* 2013). Diagnostic overshadowing is less common in Emergency Departments that have liaison psychiatry services (Shefer *et al.* 2014), indicating that advocacy from mental health professionals is effective in addressing this practice. However, this stigma and discrimination against people with mental health disorders need

to be addressed at a systemic level. Considering the high prevalence of mental health disorders in the general population and their high rates of physical health comorbidities, knowledge of mental health disorders should be a component of all medical and surgical specialties training. For some of these specialties, the only exposure to psychiatry will have been a relatively brief placement in medical training.

Mandating physical health monitoring

There are some intriguing puzzles relating to physical health. The early mortality outcomes are superior for individuals treated with clozapine compared to individuals treated with other antipsychotic medication (Tiihonen *et al.* 2009). This is hard to fathom, considering that clozapine is associated with the greatest risk for weight gain (Leucht *et al.* 2013), diabetes in younger people (Lund *et al.* 2001), myocarditis (Bellissima *et al.* 2018) and blood dyscrasia (Latif *et al.* 2011). Yet, the finding of superior morbidity and mortality has been replicated many times (Cho *et al.* 2019; Wimberley *et al.* 2017). One of the leading theories is that physical health monitoring is mandatory for the ongoing prescribing of the medication, thereby ensuring that individuals taking clozapine attend the mental health service monthly, thereby facilitating regular contact with their treating team. Pharmacists cannot dispense the prescribed clozapine until a neutrophil count is known, and this mechanism ensures 100% compliance. This procedure is accepted as being part of the process of prescribing clozapine. However, it needs to be asked why this process is only applied to a rare side effect (albeit potentially fatal) but not to the more common side effects, specifically metabolic side effects that strongly contribute to the early mortality in this population. Therefore, a drastic but potentially effective intervention could be to mandate regular anthropometric measurements, fasting glucose and lipids as a requirement for the ongoing prescription of all antipsychotic medication. This would ensure compliance with physical health screening and assist in the provision of interventions when indicated.

Ambitious and achievable targets

We need ambitious but achievable targets to bring about change. For example, the Healthy Active Lives (HeAL) declaration sets out a 5-year target for young people experiencing a FEP (International Physical Health in Youth (IPHYS) Working Group, 2013). It stipulates that young people with an FEP should have the same life expectancy as their non-affected peers, in that clinically significant weight gain should occur in less than 25% and that less than 30% smoke tobacco. It also

sets out the target that more than half of people with an FEP engage in levels of physical activity appropriate for their age. These targets are ambitious and should be commended; however, they also need to be supported by resources and training. To adequately manage the physical health of people with severe mental health disorders, clinicians will need to adapt their regular practice, which will require education and training. Many governing bodies have developed training modules on addressing physical health that have been incorporated into the training requirements for psychiatrists in some jurisdictions, such as Australia with the Royal Australian and New Zealand College of Psychiatrist (Lambert *et al.* 2017). The recent report on the 'Physical Health of People with severe mental illness' by the Mental Health Commission highlighted that specialist training in mental health should not be at the cost of treating the 'whole' patient (Finnerty, 2019).

Conclusion

Despite early mortality in severe mental health disorders being established for decades, the gap in life expectancy between those with and without severe and enduring mental health disorders continues to widen (Lawrence *et al.* 2013). The vast majority of this early mortality is attributable to preventable causes such as cardiovascular disease. Therefore, we need to take a preventative approach and translate effective interventions for physical health into routine clinical practice. Furthermore, we need to advocate to ensure that people affected by mental health disorders receive the appropriate medical assessments and treatments when indicated. Concurrently, we need to develop more effective, safe and acceptable interventions that can be delivered across the continuum of mental health disorders. This themed issue highlights that physical health is now an urgent priority for funding and development in mental health services and the widespread implementation of evidence-based interventions in routine clinical practice is an essential need for consideration by clinicians and policymakers.

Financial support

This article received no specific grant from any funding agency, commercial or not-for-profit sectors (or declare financial support if appropriate). Associate Professor Brian O'Donoghue is supported by the National Health and Medical Research Council (NHMRC) research fellowship.

Conflict of interest

The author has no conflict of interest to disclose.

Ethical standards

The author asserts that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committee on human experimentation with the Helsinki Declaration of 1975, as revised in 2008. The author asserts that ethical approval was not required for the publication of this manuscript.

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