



Early intervention in youth mental health: progress and future directions

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ABSTRACT

Early intervention is a fundamental principle in health care and the past two decades have seen it belatedly introduced into the field of mental health. This began in psychotic disorders, arguably the least promising place to start. The steady accumulation of scientific evidence for early intervention has eventually overwhelmed the sceptics, transformed thinking in psychotic disorders and created an international wave of service reform. This paradigm shift has paved the way to a more substantial one: early intervention across the full diagnostic spectrum. 75% of mental illnesses emerge before the age of 25 years, and young people bear the major burden for those disorders that threaten the many decades of productive adult life. The paradox is that young people aged between 12 and 25 years have had by far the worst levels of access to mental health care across the whole lifespan. Health services are poorly designed, grossly under-resourced and typically unfriendly to, and untrusted by, young people. Furthermore, until recently there has been a quite striking lack of interest in this transitional age group from clinicians and researchers alike, who had unthinkingly accepted the paediatric–adult split of mainstream medicine without questioning its utility and validity for our field and our young patients. Over the past decade, however, a major shift in momentum has occurred to take early intervention in youth mental health more seriously. Here we discuss the recent advances and evidence supporting an innovative integrated model of youth mental health care and look to the future.

Early intervention programmes are an integral component of basic health-care to enable early detection and treatment of potentially serious health conditions. Although long neglected in mental health, the last 20 years have seen significant gains in developing and implementing early intervention services for young people experiencing mental ill health. Traditionally, mental healthcare has been essentially reactive and palliative, largely adult-focused and despite the overdue dawn of deinstitutionalisation and the implementation of community mental healthcare, underinvestment in mental health has led to increased presentations in acute settings.^{1,2} Within this context, youth-specific, community-based early intervention services have been overlooked and young people forced into cultures designed for older adults or younger children. It is now accepted that traditional service designs and allocation of resources do not align at all with the onset of the major mental disorders of adulthood, which peaks during the transition from childhood to adulthood and especially in young adults,³ making this a critical period for early intervention to alter the trajectory of mental illness. This clinical review briefly describes the progress made in redesigning early intervention services for youth mental health and the supporting evidence (we searched the available scientific literature until May 2018).

THE CASE FOR EARLY INTERVENTION AND SERVICE REFORM

It is well established that adult-type mental disorders typically emerge early in life and frequently demonstrate a course characterised by chronicity and multiple episodes of relapse.^{4,5} There is evidence that this can be modified through early intervention.⁶ Despite the pre-adult onset of most mental disorders, young people are less likely than any other age group to access mental health services for a number of reasons such as stigma, reduced mental health literacy, poor access to appropriate services and inadequate health system structures.⁷ Poor service utilisation during this developmental period is alarming given that effective early management is a key for not only preventing the progression of mental disorders, but also for reducing the mortality and long-term morbidity so often associated with these disorders, including premature death, social isolation, poor functioning and reduced educational and vocational productivity.^{5,8,9} Timing of intervention is critical to prevent these adverse outcomes and the entrenchment of symptoms. Young people typically

demonstrate a need for care prior to reaching the threshold for a traditional major psychiatric diagnosis¹⁰ where distress, functional impairment and warning signs or ‘microphenotypes’ of mental illness are present, making early intervention at this time point crucial to preventing or reducing the severity of a full-threshold disorder (‘macrophenotypes’).¹¹

Access to mental health services has conventionally followed a paediatric–adult split where child services are typically cut-off at 18 years of age, despite a need for care often continuing beyond this point. Of course, only a minority of young people under 18 can access these limited specialised services. However, with improved knowledge about the timing of mental illness onset, it is evident that the transition between child and adult services during late adolescence creates service discontinuity exactly at a time when developmentally appropriate and expert mental healthcare is most needed.¹² Adult mental health services simply are unable to cater for the needs of youth with emerging mental illness; they are developmentally inappropriate for young people and predominantly focus on older patients with severe and persistent psychotic disorders, thus neglecting a significant proportion of young adults with less severe non-psychotic disorders who also deserve access to services.¹³ Young people with emerging mental illness typically lack sufficient symptom specificity and severity to meet adult-type diagnostic criteria,¹⁴ further limiting their eligibility for adult mental health services. Additionally, their scale of need requires a high-capacity primary care response that provides the right expertise and culture for young people.

Together, the above system weaknesses formed a barrier to youth mental healthcare, resulting in missed opportunities for timely intervention. This has led to a call for the establishment of youth-specific, stigma-free early intervention services that are developmentally appropriate, improve service access, enhance patient outcomes and span the most vulnerable years for mental illness onset, thus eliminating the need for a transition to adult services during the precise period when mental illness peaks.

SERVICE REFORM: YOUTH-FOCUSED, INTEGRATED MODELS FOR EARLY INTERVENTION

Over the last decade, reform of youth mental services has gained momentum worldwide.^{15–17} The building blocks for specialised early intervention in psychiatry began in the 1980s with a focus on psychotic

disorders.¹⁸ The early success of this paradigm paved the way for a wave of international reform. In 2006, following a campaign driven by leaders in mental health, the early intervention model was expanded to other diagnoses (eg, mood, personality, eating and substance use disorders) through the creation of headspace in Australia. Headspace is a government-funded initiative that provides youth-friendly, stigma-free early intervention services in a 'one-stop shop' location to 12–25 year olds with emerging mental health and substance use disorders.^{10,19} In this context, mental healthcare is multidisciplinary, integrated, delivered in one setting and is centred around the needs of young people and their families.¹⁷ Services provided span four core areas: mental health, physical health, vocational and educational support, and drug and alcohol interventions. Youth participation and engagement are a central pillar of the model and contribute to creating a non-stigmatising environment by ensuring that services are provided within a setting that is accessible, non-judgemental and youth-friendly.

The success of headspace has seen it grow from 10 centres to over 110 in 2018 that are accessed by 1 000 000 young people each year, with an additional 30 000 accessing its online service platform, eheadspace. Independent evaluation of the headspace model by the Australian Federal Government has revealed positive results. In the most recent evaluation, headspace was found to be accessible by a range of young people with high levels of psychological distress that included vulnerable groups such as those who are marginalised and at risk.²⁰ Notably, headspace was effective in significantly reducing suicide ideation and self-harm, and in decreasing the number of absent school or work days.²⁰ However, headspace is only one building block of a fully fledged system of care for young people with mental and substance use disorders. Forty per cent of headspace patients are too complex or severely ill to benefit from what is essentially an entry level or tier 1 model of enhanced primary care. The more specialised and intensive components now need to be funded, assembled and integrated vertically and horizontally with headspace and other relevant parts of the health and social system.

The youth mental health reform achieved in Australia has flowed to other parts of the globe, with the UK, Ireland, Canada, USA, Europe and Asia adopting similar, culturally appropriate models.^{17, 21} In brief, reform in Ireland led to the development of Headstrong and the Jigsaw model that operates in 10 communities. Jigsaw (which has replaced Headstrong as the brand for youth mental health in Ireland) has proven to be an accessible and effective community-based mental health service for young people aged 12–25 years.²² In the UK, the creation of Youthspace, a youth-based mental health service in Birmingham, has led to the commissioning of an integrated care pathway for individuals aged 0–25 years.²³ Further international developments include headspace in Denmark, Israel and very soon in California, the Adolescent/young adult Connections to Community-driven Early Strengths-based and Stigma-free services (ACCESS) in Canada,²⁴ the rapid scaling up of 'The Foundry' model in British Columbia and the launch of @ease in the Netherlands. 'Transition Psychiatry' is developing in Europe as an embryonic field. An International Association of Youth Mental Health has held four successful conferences in Australia, the UK, Canada and Ireland. The International Early Psychosis Association has transformed into IEPA: Early Intervention in Mental Health and is now transdiagnostic. The journal 'Early Intervention in Psychiatry' has been expanding steadily since it was established in 2007 and inspires and channels the scientific momentum for evidence-based reform. Although refinement and expansion of early intervention services are ongoing, the transformations already taken place have begun to fill a critical gap in providing accessible, stigma-free, multidisciplinary, developmentally appropriate and effective mental healthcare to young people. However, there is a great deal more that can be done to fully realise the potential of early intervention for young people with mental ill health.

EARLY INTERVENTION: THE EVIDENCE

Early intervention, particularly for subthreshold psychosis, and the reform of youth mental health services have not occurred without controversy. This has come from two main sources: first there have been concerns that the boundaries of mental healthcare might be extended too widely and more harm than good could result, and second, given the treatment gap even for more severe and later stages of illness, the priority should be with the latter.¹⁸ The second critique is actually an argument for better resourcing of early diagnosis which will reduce the pressure on stretched late stage services. Interestingly one does not see this false dichotomy between early diagnosis and palliative care in cancer and other major non-communicable diseases.

The first issue is largely built on concerns about overtreatment. However, the reality in most settings is undertreatment and delayed treatment. It is true that in some populations premature use of medication occurs, however, this is due to the failure to respect and fund psychosocial interventions. Concern has also been expressed regarding the accuracy of detection for cases at-risk for psychosis and the potential for false positives. A minority (36%) of at-risk cases transition to psychosis after 3 years.²⁵ Yet while it is not yet possible to definitely predict who will develop psychosis, it is possible to enhance prediction in enriched samples.²⁶ The risks associated with false positives can be minimised through staged care with medication being withheld from first-line treatment and are overshadowed by the potential benefits, which include providing needed mental healthcare to help-seeking young people who are in distress and typically functionally impaired.

Concerns of extending the boundaries of mental healthcare can be largely dealt with by applying the same principles for early diagnosis as exists in physical medicine and are best operationalised through a transdiagnostic staging model.¹⁴ Overtreatment can be guarded against in this way and the youth mental health reforms can greatly reduce the risks of stigma and labelling. While interventions can be applied across traditional mental disorder diagnoses during the early stages of mental illness, some treatments during middle and later stages may be limited to specific populations (eg, clozapine for schizophrenia and transcranial magnetic stimulation for depression).

The current evidence base is highly encouraging and supports the widespread implementation of early intervention for psychosis.⁶ There is great scope for even further gains if stages currently regarded as subthreshold are included, if the duration of psychosis is seriously reduced, if model fidelity is strengthened and if tenure is extended.²⁷ Early intervention research has been more prolific for psychosis in comparison with other psychiatric conditions such as mood disorders.²⁸ Early intervention for non-psychotic disorders is gaining momentum but requires further investigation. For bipolar disorder, while some have advised a cautious approach to early intervention,²⁹ there is support and a strong rationale for its implementation,³⁰ particularly given that treatment is most effective during the early stages of illness and recurrence is associated with structural brain changes.³¹ Similarly, for depression, an early intervention approach is the optimal model for care,²⁸ with some evidence that its full expression can be prevented.³²

With the move towards transdiagnostic psychiatry, integrated youth mental health services have the potential to facilitate transdiagnostic early intervention since most patients accessing care are still in the earlier stages of the disorder. These services are showing promising results, with better access to services, high acceptability to patients and families, and some enhancement of symptomatic and functional outcomes.²¹ By capturing the various pathways to a range of disorders, transdiagnostic services increase capacity to capture a wider range of lower risk cases. This greater degree of sensitivity in identifying cases (and limiting the possibility of missing any) would enhance enrichment for more severe mental disorders.

SUMMARY AND FUTURE DIRECTIONS

The mental health field has made substantial progress in developing sound early intervention conceptual frameworks,^{14 18} scaling up of early psychosis services, and more recently, specialised youth-specific services. Evidence to date supports an early intervention paradigm for mental health to prevent or delay the onset of disorders. Where systematically implemented, early intervention proves to be highly accessible and acceptable to young people and results in outcomes that are positive and cost-effective. The progress made thus far provides a beachhead for further progress. While early intervention for psychosis is increasingly established,^{6 18} the challenge now is to strengthen fidelity, extend tenure and capture a broader range of potentially severe disorders and outcomes. High-quality studies are especially needed examining early intervention for non-psychotic disorders. In addition to determining the most effective intensity and duration of interventions to reduce symptomatology, a broader range of interventions that successfully enhance functional outcomes are required. It is also crucial that the gains achieved through early intervention are not sacrificed by 'loosening the grip' too soon and consigning patients with an initial recovery but a longer term vulnerability to a revolving door of weak and intermittent healthcare. Stage-specific treatments are the antidote to this with proportionate resources across all stages of illness, just as occurs in cancer and other branches of healthcare.

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REFERENCES

1. **Australian Institute of Health and Welfare.** Mental health services in Australia 2016-2017. <http://www.aihw.gov.au/mhsa> (accessed 25 Sep 2018).
2. **Hiscock H, Neely RJ, Lei S, et al.** Paediatric mental and physical health presentations to emergency departments, Victoria, 2008-15. *Med J Aust* 2018;**208**:343-8.
3. **Kessler RC, Berglund P, Demler O, et al.** Lifetime prevalence and age-of-onset distributions of dsm-iv disorders in the national comorbidity survey replication. *Arch Gen Psychiatry* 2005;**62**:593-602.
4. **Burcusa SL, Iacono WG.** Risk for recurrence in depression. *Clin Psychol Rev* 2007;**27**:959-85.
5. **Gibb SJ, Fergusson DM, Horwood LJ.** Burden of psychiatric disorder in young adulthood and life outcomes at age 30. *Br J Psychiatry* 2010;**197**:122-7.
6. **Correll CU, Galling B, Pawar A, et al.** Comparison of Early Intervention Services vs Treatment as Usual for Early-Phase Psychosis: A Systematic Review, Meta-analysis, and Meta-regression. *JAMA Psychiatry* 2018;**75**:555-65.
7. **Rickwood DJ, Deane FP, Wilson CJ.** When and how do young people seek professional help for mental health problems? *Med J Aust* 2007;**187**:S35-9.
8. **Morgan VA, Waterreus A, Carr V, et al.** Responding to challenges for people with psychotic illness: Updated evidence from the Survey of High Impact Psychosis. *Aust N Z J Psychiatry* 2017;**51**:124-40.
9. **Walker ER, McGee RE, Druss BG.** Mortality in mental disorders and global disease burden implications: a systematic review and meta-analysis. *JAMA Psychiatry* 2015;**72**:334-41.
10. **Rickwood DJ, Telford NR, Parker AG, et al.** headspace - Australia's innovation in youth mental health: who are the clients and why are they presenting? *Med J Aust* 2014;**200**:108-11.
11. **McGorry P, van Os J.** Redeeming diagnosis in psychiatry: timing versus specificity. *Lancet* 2013;**381**:343-5.
12. **Singh SP, Paul M, Ford T, et al.** Process, outcome and experience of transition from child to adult mental healthcare: multiperspective study. *Br J Psychiatry* 2010;**197**:305-12.
13. **McGorry PD.** The specialist youth mental health model: strengthening the weakest link in the public mental health system. *Med J Aust* 2007;**187**:S53-6.
14. **McGorry PD, Hickie IB, Yung AR, et al.** Clinical staging of psychiatric disorders: a heuristic framework for choosing earlier, safer and more effective interventions. *Aust N Z J Psychiatry* 2006;**40**:616-22.
15. **Malla A, Iyer S, McGorry P, et al.** From early intervention in psychosis to youth mental health reform: a review of the evolution and transformation of mental health services for young people. *Soc Psychiatry Psychiatr Epidemiol* 2016;**51**:319-26.
16. **McGorry P, Bates T, Birchwood M.** Designing youth mental health services for the 21st century: examples from Australia, Ireland and the UK. *Br J Psychiatry Suppl* 2013;**54**:S30-5.
17. **McGorry PD, Goldstone SD, Parker AG, et al.** Cultures for mental health care of young people: an Australian blueprint for reform. *Lancet Psychiatry* 2014;**1**:559-68.
18. **McGorry PD.** Early intervention in psychosis: obvious, effective, overdue. *J Nerv Ment Dis* 2015;**203**:310-8.
19. **McGorry PD, Tanti C, Stokes R, et al.** headspace: Australia's National Youth Mental Health Foundation--where young minds come first. *Med J Aust* 2007;**187**:S68-70.
20. **Hilferty F, Cassells R, Muir K, et al.** *Is headspace making a difference to young people's lives? Final report of the independent evaluation of the headspace program.* Sydney: Social Policy Research Centre, University of New South Wales, 2015.
21. **Hetrick SE, Bailey AP, Smith KE, et al.** Integrated (one-stop shop) youth health care: best available evidence and future directions. *Med J Aust* 2017;**207**:S5-S18.
22. **O'Keefe L, O'Reilly A, O'Brien G, et al.** Description and outcome evaluation of Jigsaw: an emergent Irish mental health early intervention programme for young people. *Ir J Psychol Med* 2015;**32**:71-7.
23. **Vyas NS, Birchwood M, Singh SP.** Youth services: meeting the mental health needs of adolescents. *Ir J Psychol Med* 2015;**32**:13-19.
24. **Iyer SN, Boksa P, Lal S, et al.** Transforming youth mental health: a Canadian perspective. *Ir J Psychol Med* 2015;**32**:51-60.
25. **Fusar-Poli P, Bonoldi I, Yung AR, et al.** Predicting psychosis: meta-analysis of transition outcomes in individuals at high clinical risk. *Arch Gen Psychiatry* 2012;**69**:220-9.
26. **Yung AR, Phillips LJ, Yuen HP, et al.** Psychosis prediction: 12-month follow up of a high-risk ("prodromal") group. *Schizophr Res* 2003;**60**:21-32.
27. **McGorry PD, Ratheesh A, O'Donoghue B.** Early Intervention-An Implementation Challenge for 21st Century Mental Health Care. *JAMA Psychiatry* 2018;**75**:545-6.
28. **Davey CG, McGorry PD.** Early intervention for depression: A blind spot in mental health care. *Lancet Psychiatry*.
29. **Malhi GS, Morris G, Hamilton A, et al.** Is "early intervention" in bipolar disorder what it claims to be? *Bipolar Disord* 2017;**19**:627-36.
30. **McGorry PD, Ratheesh A, Berk M, et al.** Is "early intervention" in bipolar disorder what it claims to be? Malhi et al. *Bipolar Disord* 2018;**20**:181-3.
31. **Berk M, Hallam K, Malhi GS, et al.** Evidence and implications for early intervention in bipolar disorder. *J Ment Health* 2010;**19**:113-26.
32. **Merry SN, Hetrick SE, Cox GR, et al.** Psychological and educational interventions for preventing depression in children and adolescents. *Cochrane Database Syst Rev* 2011;**12**:CD003380.