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What is This?
At the heart of an early psychosis centre: the core components of the 2014 Early Psychosis Prevention and Intervention Centre model for Australian communities

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Abstract
Objective: To describe the core components of the Early Psychosis Prevention and Intervention Centre service model as the template agreed with the Australian Federal Government for national upscaling. The Early Psychosis Prevention and Intervention Centre model of early intervention has two main goals: to reduce the period of time between the onset of psychosis and the commencement of treatment and to bring about symptomatic recovery and restore the normal developmental trajectory as early as possible.

Conclusions: The Early Psychosis Prevention and Intervention Centre comprises three elements of service provision for young people experiencing a first episode of psychosis: (i) early detection; (ii) acute care during and immediately following a crisis; (iii) recovery-focused continuing care, featuring multimodal interventions to enable the young person to maintain or regain their social, academic and/or career trajectory during the critical first 2–5 years following the onset of a psychotic illness. It does this via a combination of 16 core components, which provide a flexible, comprehensive, integrated service that is able to respond quickly, appropriately and consistently to the individual needs of the young person and their family. Innovative service reforms, such as Early Psychosis Prevention and Intervention Centre, that recognise the value of early intervention are crucial to reducing the impact of serious mental illness on young people and their families and, ultimately, on our society.

Keywords: psychosis, early intervention, service delivery, youth mental health

Over the last decade, analysis of the topography of the age of onset of the major mental disorders has revealed that 75% of all incident cases appear before the age of 25 years, while mental health issues contribute almost 50% of the burden of disease worldwide among young people between 10 and 25 years of age.
age. Furthermore, young people have the poorest access to mental health care of all age groups; for example, in Australia up to 75% of all young people experiencing a mental health issue do not seek professional help. These statistics have driven a growing awareness of the importance of youth mental health as a social and public health issue, which has led to calls for a strong focus on youth mental health worldwide.

In Australia, the combination of a dedicated advocacy programme and public demand has resulted in a series of ground-breaking health service reforms to facilitate early identification and effective intervention for mental health issues in young people. This led initially to the establishment of headspace, the National Youth Mental Health Foundation in 2006, then in 2010 and 2011, the Federal Government set aside funding to finance a national roll-out of up to 16 specialist early psychosis centres. These were to be modelled on the Early Psychosis Prevention and Intervention Centre (EPPIC) template and in 2013 it was announced that in fact a total of nine early psychosis centres are to be delivered through the headspace platform to provide specialist early psychosis services for young people Australia-wide.

EPPIC was established in Melbourne in 1992 as the world’s first clinical service with the specific aim of providing early detection and developmentally appropriate, effective, evidence-based care for young people experiencing a first episode of psychosis. EPPIC evolved following the recognition of the specific needs of these young people in a series of seminal research studies in Melbourne in the late 1980s. Since then, there has been an explosion of clinical and research interest in early psychosis and the last two decades have seen the development of evidence-based early interventions with demonstrated efficacy and the establishment of hundreds of specialist early intervention services worldwide. The structure of early psychosis services under the Australian Federal Government national measure has been designed on the basis of the recommendations from an extensive consultation process involving a panel of national and international experts in early psychosis, related service providers, as well as those with lived experience of psychosis and their families. This consultative process was designed to critically assess the available evidence, the structures of different service models and to determine the essential components of an ideal early psychosis service and to make recommendations to support the establishment of such services.

The EPPIC model of early intervention has two main goals: to reduce the period of time between the onset of psychosis and the commencement of treatment and to bring about symptomatic recovery and restore the normal developmental trajectory as early as possible. For young people experiencing a first episode of psychosis, EPPIC provides three key functions: (i) early detection; (ii) acute care during and immediately following a crisis; (iii) recovery-focused continuing care, featuring multimodal interventions to enable a young person to maintain or regain their social, academic and career trajectory during the critical first 2–5 years following the onset of a psychotic illness. Given that 2013 marks the 21st anniversary of EPPIC’s establishment, as well as the beginning of the national roll-out, it seems timely to describe the core components of an EPPIC-style early intervention service.

The EPPIC model

To ensure each of its core functions, the following are key principles of an EPPIC service:

- Easy access to responsive, expert care, ensured by better community awareness of mental health issues, simple referral pathways, close links with local providers and the ‘youth-friendliness’ of the service and its structure.
- A biopsychosocial and collaborative approach to clinical interventions, which are evidence-based and take into account the developmental stage of the young person. These interventions are aimed at not only the amelioration of distressing symptoms, but also at maintaining or regaining the normal educational, vocational and social developmental trajectory of each young person.
- A specialist, comprehensive and integrated service approach that provides a pervasive optimistic, youth- and family-friendly culture. In contrast to traditional models of care, tenure is secure for the ‘critical period’ of the first 2–5 years post diagnosis.
- A high level of partnerships with local service providers to ensure effective and timely pathways into and out of the service, as well as supporting service delivery during the episode of care. The service needs to create and sustain the mindset and skills to deliver culturally sensitive care.

The EPPIC model consists of 16 core components, briefly described below. These components can be loosely grouped according to their function within the service, with certain operating across the whole model, while others are more closely aligned to one of the three key functions. This allows for a flexible, yet comprehensive, service that is able to respond quickly and appropriately to the individual needs of the young person and their family.

Early detection

Component 1: community education and awareness

The development of community education programmes to improve mental health awareness in the general public, schools, youth workers, health care professionals and police results in an increase in early detection rates, smoother referral pathways and earlier treatment.
Evidence from a recent systematic review suggests that intensive public awareness campaigns that target both the general public and health care professionals may help reduce the duration of untreated psychosis, a major malleable risk factor contributing to poor outcome in psychotic illnesses. Within the EPPIC model, there are designated community education roles, with additional education and awareness activities provided by EPPIC clinical teams.

Component 2: easy access to service
Early psychosis services should be accessible, with one clear contact point, usually a single toll-free telephone number. Referrals are accepted from any source, ensuring a ‘no wrong door’ policy for entry into the service. Young people who meet the entry criteria undergo an assessment within 48 hours of being referred, while those who do not are actively assisted with finding the most appropriate service to meet their needs. The physical location, design and décor of a service is extremely important, as the service needs to be easily accessible via public transport and engaging. The service ensures that the staff and infrastructure are provided to allow a strong focus on home-based care, which promotes engagement of young people.

Component 3: home-based assessment and care
Home-based assessment and care provided by a multi-disciplinary team that is flexible in terms of location and operational hours is important for the engagement and treatment of young people with psychotic disorders. The EPPIC model has a youth- and family-friendly multidisciplinary mobile Early Psychosis Assessment and Treatment Team that includes nurses, doctors, social workers, occupational therapists and clinical psychologists and is able to provide self-contained triage, assessment, crisis intervention and home-based acute treatment 24 hours per day, 7 days per week, without the need to revert to generic adult crisis teams.

Acute phase care
Acute phase care is delivered either in the community supported by the Early Psychosis Assessment and Treatment Team or in a dedicated youth-friendly inpatient setting, supported by the Early Psychosis Assessment and Treatment Team where necessary, with clear access to a sub-acute setting during the transition to continuing care for those young people who require this option.

Component 4: access to streamed youth-friendly inpatient care
Access to a youth and family friendly inpatient setting that provides specialist early psychosis care is beneficial for young people with first-episode psychosis who require acute care as it minimises hospital admission trauma and improves the engagement of young people within the service. In the EPPIC model, a youth-friendly inpatient setting provides care until the young person is ready for discharge and ongoing treatment, with inpatient stays being limited to the shortest possible time (<10 days). This early discharge is only possible due to the ongoing support provided by the Early Psychosis Assessment and Treatment team and continuing care teams.

Component 5: access to youth-friendly sub-acute beds
Some young people experiencing a first episode of psychosis may require an additional level of support as an alternative to or following acute care that delivers intensive clinical support in a residential setting. This allows the young person a short-term transition phase in a community-based unit, whether this be a purpose-built facility, such as the Youth Prevention and Recovery Care services in Victoria, or other sub-acute settings or in houses in the general community. Considerations such as location, accessibility by public transport, an appropriate physical environment and the provision of developmentally appropriate activities in a least restrictive setting are important to ensure the youth-friendliness of these settings, as well as the expertise and workplace culture of the staff, who should have a strong background in youth mental health.

Continuing care
Component 6: case management
The treatment and management of young people with first-episode psychosis requires a stable and trusted relationship through which delivery and coordination of care can occur. This can only be delivered using a clinical care management model. The continuing care team provides team-based care management and individually focused psychological and psychosocial interventions. Young people are assigned an individual case manager – a clinical psychologist, social worker, occupational therapist or mental health nurse – and a psychiatrist or psychiatric registrar under the supervision of a consultant psychiatrist. The case manager works collaboratively with the young person and their family or significant others to provide an individually tailored therapeutic approach, centred on the personal relationship, which matches the needs of the young person and their stage of illness. Furthermore, case managers ensure that the young person and their family are provided with psycho-education and linked to other useful support services, including housing, educational, vocational, financial and legal assistance. Under the EPPIC model, case managers have capped, low case loads of 15–20 clients to allow them to build strong therapeutic relationships as well as deliver specialist and mobile interventions. Continuing care case management should be for a minimum of 2 years, with
the potential of an additional 3 years of continuing care for the significant subset of young people who have not experienced a complete recovery by 2 years.\textsuperscript{19,20}

Component 7: medical interventions
Pharmacological interventions, such as antipsychotic medication, are used to manage and reduce psychotic symptoms and should be regarded as a first-line intervention for first-episode psychosis. The use of medication as recommended by evidence-based clinical guidelines has been shown to optimise treatment adherence and speed recovery in young people with first-episode psychosis.\textsuperscript{20} It is important to note that the medical care of young people in the early stages of mental illnesses differs from medical care in older patients with established illness in terms of both style and content. Low-dose atypical antipsychotic medication is efficacious for most people with first-episode psychosis and atypical antipsychotics are associated with superior tolerability compared to the typical antipsychotics.\textsuperscript{21} A number of pharmacotherapy-related issues arise for young people with first-episode psychosis and ultimately impact the way in which medication is delivered. A ‘start low, go slow’ prescribing approach is recommended for young people with first-episode psychosis,\textsuperscript{20} as this population group responds well and more rapidly than those with more established illness. Physical health issues, notably weight gain and metabolic changes, are a well-established side effect of most antipsychotic medications;\textsuperscript{22} the EPPIC model provides physical health monitoring and preventive interventions as a routine part of their service.\textsuperscript{23}

Component 8: psychological interventions
Psychological interventions, including individual psychotherapy and cognitive behavioural therapy (CBT), enhance symptomatic and functional recovery in first-episode psychosis. A range of psychological interventions can be provided to a young person based on, and adapted to, their individual needs. This can include stress management, suicide prevention, relapse prevention and substance use reduction strategies. Several psychological intervention programmes have been specifically developed for first-episode psychosis: cognitively oriented psychotherapy for early psychosis,\textsuperscript{24} active cognitive therapy for early psychosis,\textsuperscript{25} an intervention described by Jolley and colleagues in 2003\textsuperscript{26} and the Graduated Recovery Intervention Program.\textsuperscript{27} An uncontrolled trial reported the efficacy of CBT for ongoing positive psychotic symptoms in treatment resistant first-episode patients.\textsuperscript{28} Furthermore, in 2010, a systematic review of CBT in early psychosis services concluded that CBT had longer-term benefits in the reduction of symptom severity.\textsuperscript{29} Psychological intervention is a fundamental component of the EPPIC model and is delivered by the case managers, as part of their case management role, and a senior clinical psychologist overseeing these interventions.

Component 9: A functional recovery programme
Recovery programmes that include social, vocational and educational programmes for young people with first-episode psychosis prevent loss of function, enhance recovery and improve vocational and education outcomes. Young people with first-episode psychosis face a range of challenges in attaining employment or education goals.\textsuperscript{30} The Individual Placement and Support (IPS) model enables a large proportion of young people with first-episode psychosis to return to employment and to fulfill their educational goals.\textsuperscript{31} In a randomised controlled study, significantly better outcomes in terms of levels of employment, hours worked per week, number of jobs acquired and employment longevity were observed with IPS compared with treatment as usual group or treatment alone.\textsuperscript{32} In the EPPIC model, case managers may provide individualised social recovery interventions as well as facilitating access to group work, educational and vocational services. Specialist vocational and educational recovery workers are integrated within the service and work with all young people who wish to do so.

Component 10: group programmes
Group programmes can enhance symptomatic and functional recovery and provide an alternative medium for therapeutic approaches that may better suit some young people. They reduce social isolation and provide a safe and supportive peer group environment for young people to work on personal issues such as lack of confidence, low self-esteem, anxiety or symptom management.\textsuperscript{33} Groups are usually small, with a maximum of eight people involved, and focus on topics ranging from health-related issues, such as stress management, coping with anxiety and reducing drug use, to study, school and work issues, as well as social and leisure activities such as music, art and outdoor adventure.

Component 11: family programmes and family peer support
Family interventions are provided for all family members, close friends or anyone as a significant other of a young person. Family work reduces the levels of distress in family members by providing information and strategies that support the young person’s and the family’s recovery.\textsuperscript{34} Family work is offered by case managers with the support of a specific family worker, who may also take on more complex family presentations. Family peer support workers, who have had the lived experience of a young person treated within the EPPIC model, play a key role in this programme by providing proactive face-to-face and phone support to new families and significant others when their family member enters the service.
Component 12: youth participation and peer support

The incorporation of a youth participation programme contributes to ensuring that EPPIC remains relevant to the special developmental needs of young people by facilitating peer support and accountability to them. All clients are eligible to join the youth participation team, which meets regularly to discuss improvements to the service, provide input into staff selection by contributing to interview panels and participate in community development and advocacy activities. Peer support workers who are past EPPIC service users visit current young people in inpatient care, as well as providing support to other clients on an outpatient basis. These workers receive training, mentoring and supervision and are reimbursed for their time.

Component 13: mobile outreach

For those young people who have difficulty engaging with mental health services or those who have more complex needs (forensic issues, homelessness, severe personality disorder, prominent negative symptoms) an increased level of assertive and intensive mobile outreach is required to minimise the risk of incomplete recovery as well as the young person’s risk to self and others. Mobile outreach is provided as part of case management either as a separate sub-team or as part of the usual case management load (requiring monitoring of caseload intensity and acuity) with support from the Early Psychosis Assessment and Treatment team. Interventions are based on clinical needs and may involve, for example, crisis intervention, an increased level of individual therapy, family support and consultation/liaison services.

Component 14: partnerships

EPPIC has established partnerships with other organisations that can enhance the care of young people with mental health difficulties, including primary health care providers, drug and alcohol services and community youth services. This not only enhances the quality and breadth of the service, but also improves the referral and transition points for young people using the service. Partnerships are also developed with academia, clinical schools and professional colleges to foster ongoing research and learning environment within the clinical service.

Component 15: workforce development

The creation of a highly skilled and clinically expert workforce has been the key to a successful EPPIC service and ensures fidelity to the EPPIC model. Training, attendance at professional development activities such as conferences and workshops, clinical placements, entry level programmes as well as clinical supervision are all essential aspects of this component.

Component 16: ultra-high risk young people

Early detection and intervention during the ultra-high risk stage may prevent or delay the onset of a first episode of psychosis. Treatment for these ultra-high risk young people is aimed at minimising symptoms and distress and maintaining a normal functional trajectory to prevent further deterioration in functioning, as well as to prevent a first episode of psychosis for the young person, and has been shown to lead to a 54% reduction in the risk of transition to psychosis at 12 months. If a transition to full-threshold psychosis does occur, the young person can be treated within the service, which minimises the trauma and potential for iatrogenic harm associated with admission in crisis.

Discussion

Long-term follow-up studies from Australia, Canada, Norway and Denmark have shown significantly better clinical and functional outcomes for young people treated within a specialised early psychosis service compared to those who were treated in standard mental health services. Furthermore, these services are more cost-effective than traditional services. While the available evidence shows that outcomes are clearly better after 2 years of care in a specialised service, it is also becoming clear that if steps are not taken to safeguard these gains then some are lost subsequently due to disengagement from or failure to provide secure tenure of care in traditional adult systems. The study from Canada has shown that a tenure of care of up to 5 years can at least maintain, if not improve, these outcomes over the longer term. Further trials are nearing completion to examine this issue further. The need for continuity and extended tenure in the same early psychosis environment has been addressed with specifically resourced capacity in the new EPPIC model for a longer tenure of care for those who need it.

Most importantly, these services are highly valued by clients and their families. Specialised early intervention services offer more than the sum of their individual components. Each of these is important, but it is the culture of hope and optimism, combined with intensive evidence-based biopsychosocial care featuring collaboration with the young person and their family, plus the nature of the environment in which it is provided, that is crucial. The EPPIC model offers community-based, multidisciplinary, integrated, evidence-informed care that is sensitive to the unique developmental and psychosocial needs of young people, in an environment that is accessible, welcoming and, above all, hopeful, with a strong focus on recovery and achieving one’s full potential.

Australia currently leads the world in the development of innovative service responses in youth mental health. The development of the EPPIC model and the capacity for the complementary enhanced primary care headspace model to build towards a fully integrated national youth mental health service model...
health service stream represents a transformational reform in the provision of mental health care not only in Australia, but potentially worldwide. There is intense interest in this Australian innovation in Europe and North America, where youth mental health is increasingly seen as a major priority. In January of this year (2014) the US Congress announced budget legislation including approximately an initial investment of US$25 million to support the growth of early psychosis treatment programmes, modelled on Australia’s EPPIC and the Canadian and UK early psychosis services. If we are to respond to what is now recognised as the most important health issue facing young people worldwide today, this type of transformational change is long overdue.

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Disclosure
The authors declare that there is no conflict of interest. The authors alone are responsible for the content and writing of the paper.

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