

## Research Centre for Youth Mental Health

75% of all mental disorders start before the age of 25 years.

In any one year, 1 in 4 young people develop a diagnosable mental disorder.

Less than 20% of our young people with a mental disorder get any sort of primary mental healthcare: Only 3% access specialist community mental healthcare.

40% of adolescent-onset mental disorders are at high risk of progressing to lifelong disability.

### EXECUTIVE SUMMARY

The Research Centre for Youth Mental Health (called 'Research Centre' herein) will be an Academic Health Science Centre, a partnership between one or more universities and healthcare providers focusing on research, clinical services, education and training.

The Research Centre will:

- Engage young people between the ages of 12 and 25 years in exemplary holistic clinical assessment.
- Ensure longitudinal follow-up and monitoring of treatment outcomes.
- Build a fully integrated research program to map trajectories of more persistent and disabling mental disorders.
- Provide the opportunity to develop world best practice.
- Design and disseminate tools to implement world best practice in standard service delivery settings, State-wide.

The Research Centre will construct an ideal environment to develop world best practice assessment and interventions, and attract leading clinicians to design the tools necessary to implement these interventions in routine service settings. The repeated assessments that are part of the longitudinal research study design will serve to monitor treatment outcomes for five years and beyond, as well as describe the developmental processes related to the differing trajectories. This world leading discovery research will attract national and international competitive research funding.

As well as collaborating with other Queensland based research groups focusing on early neuro-development, the Research Centre will contribute strongly to the emerging national framework for youth mental health services that includes *headspace* programs around the nation and youth mental health centres in Melbourne (ORYGEN Research Centre; Director: Prof Patrick McGorry) and Sydney (Brain and Mind Research Institute; Director: Prof Ian Hickie).

The Research Centre will develop an unique organisational capacity to coordinate diverse research and clinical competencies that will position Queensland in a research leadership role internationally.

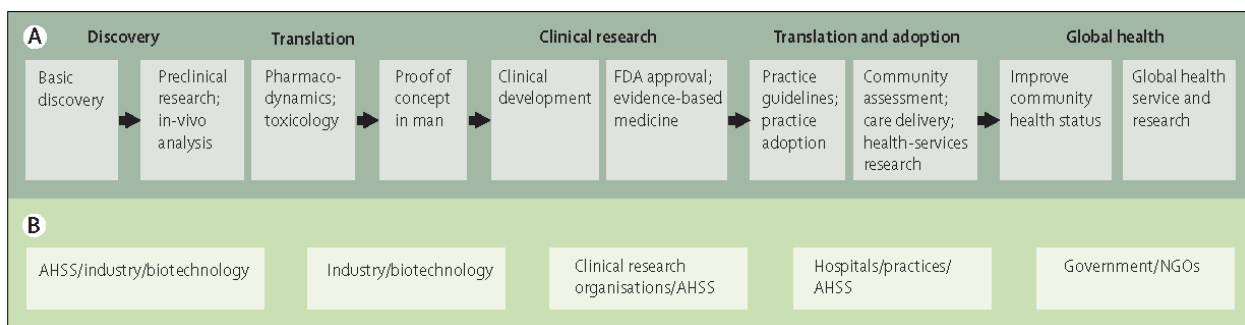
## OPERATIONAL MODEL

The proposed Research Centre will be an Academic Health Science Centre (AHSC); a partnership between one or more universities and healthcare providers focusing on research, clinical services, education and training (Dzau et al, 2010). AHSCs are intended to ensure that medical research breakthroughs lead to direct clinical benefits, which in the case of the Research Centre will target young people at risk of serious mental illness such as schizophrenia and bipolar disorder.

The 16 highest ranked hospitals in the US in 2005 were all AHSCs. The introduction of the AHSC model into British Hospitals is credited with rapidly turning around the morale, culture and quality of health services in the UK (Penington, 2009).

The Research Centre will act as a systems integrator and have a matrix organisation. Horizontal integration (see **Figure 1**) of academic and research departments (panel B) will overcome blocks in the translation (T) of discovery research (panel A) into candidate clinical applications (T1: 'bench top to bedside') and of clinical application into broad adoption in routine practice (T2: bedside to population).

**Figure 1: Research Centre horizontal integration of academic research (from Dzau et al 2010)**

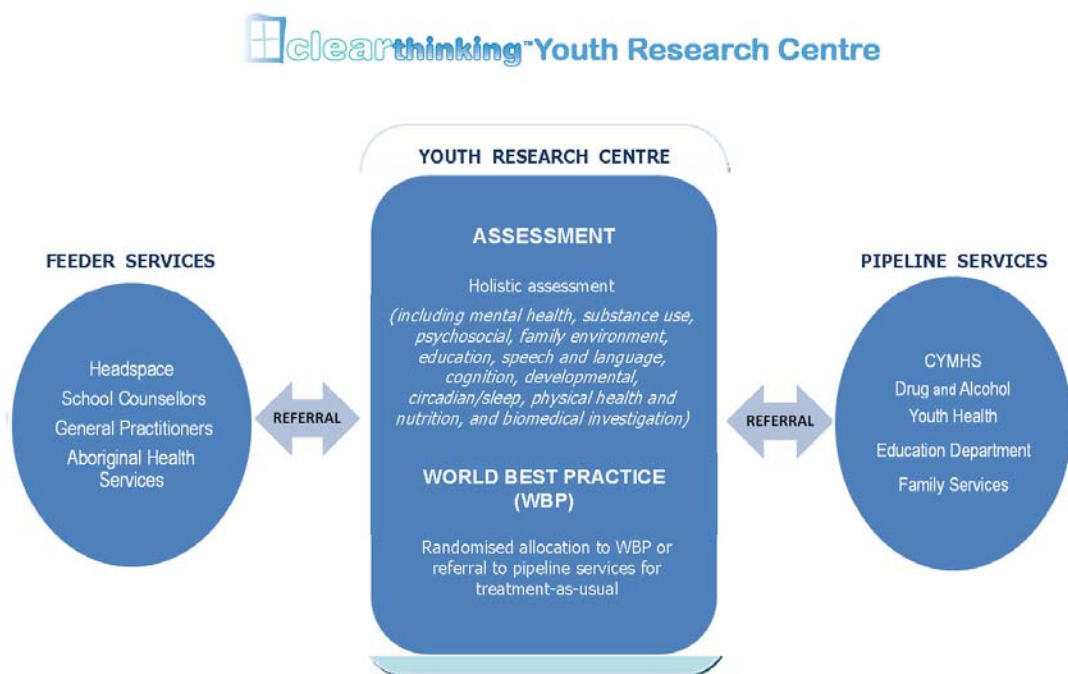


Vertical integration (see **Figure 2** on Page 3) of services from primary community care to tertiary (specialist) care will build clear pathways to mental healthcare for young people.

This integration will be supported by a shared clinical information system, use of technical resources in common, collaborations to develop world best practice, and a well-developed mobile outreach capacity. That is, the Research Centre will 'graft' onto existing primary care environments such as schools, general practice, and youth welfare and justice services whilst at the same time 'bind' to tertiary providers such as drug and alcohol, learning and language disorder, and specialist mental health services.

Many of the elements for the Research Centre already exist separately in our universities, hospitals and research institutes in Brisbane, each having a piece of the jigsaw that can be put together to create a world leading research centre in the grossly neglected field of youth mental health. That is, feasibility is only limited by commitment to act.

**Figure 2: Research Centre vertical integration of services**



Serving the assessment needs of 12-24 year old young people with persistent emotional and behavioural problems that do not improve with first line intervention. Longitudinal research follow-up will involve annual face-to-face re-assessment and phone reviews between the face-to-face reviews.

### ***Clinical Services***

The Research Centre will see young people between the ages of 12 and 25 years. Every young person and their family who accesses the Research Centre will receive an exemplary and comprehensive clinical assessment; something that most young people with a mental health problem do not receive within current service arrangements, despite the best efforts by their family to access such assistance. Furthermore, access to the Research Centre assessment will be based on persistence rather than severity of the presenting problem, and all young people referred by a primary care provider will be accepted so that intervention can occur at the earliest possible time.

The Research Centre access team, a mobile outreach team consisting of clinician care coordinators, will have liaison roles with primary care practitioners (eg, school counsellors and GPs) to help identify and engage eligible young people with persistent emotional and behavioural problems that have not improved with first line treatment. The Centre will invest heavily in processes to engage young people in care.

Based on comprehensive assessment, young people will be randomly allocated to either an intervention being trialled within the Research Centre as world best practice or referred to the most appropriate specialist service for treatment-as-usual. In doing so the Research Centre will be able to progressively develop better treatments whilst ensuring all young people receive exemplary assessment and a minimum of referral to the most appropriate standard service.

After forward referral, young people will continue to be intensively followed up by the Research Centre access team in order to monitor progress and check whether the young person is receiving effective treatment and recovering fully. This energetic long-term engagement will provide the basis for retaining young people in the longitudinal research program.

To ensure effective transfer of care, both when young people are referred to the Research Centre and when they are referred from the Research Centre to tertiary services, protocols supporting transfer of care procedures will be developed in collaboration with other service providers within frameworks specified by inter-service memoranda of agreements.

Accordingly, the Research Centre will function as a bridge between primary and tertiary services ensuring seamless continuity of care.

### ***Research Program***

The Research Centre research program will be integrated into the clinical platform to map trajectories of the mental health problems throughout adolescence and young adulthood, and to support clinical trials of novel interventions. The recruitment procedures will enrich the cohort for more persistent and disabling disorders, whether they ultimately be diagnosed as psychotic or non-psychotic in nature. For methodological reasons, the Research Centre will accept referrals from a specific catchment population (defined by geographical area), to ensure that an epidemiologically representative sample of young people are recruited.

Assessments will cover psychosocial and clinical issues as well as cognitive testing and biomedical investigations. Over time, the research program will design better clinical assessment tools and help identify the best time and mode of pre-emptive intervention.

The Research Centre will promote an ideal environment to develop world best practice interventions, and attract leading research clinicians to design and implement these interventions. The repeated assessments that are part of the longitudinal research study design will serve to monitor treatment outcomes for five years and beyond, as well as describe the developmental processes related to the differing trajectories. This world leading discovery research will attract national and international competitive research funding.

An important strategy to ensuring the assessment of the entire neuro developmental life span is to create a collaborative research program which links the Research Centre to local research groups that focus on pregnancy and birth (eg. the Perinatal Research Centre; Dir: Prof P. Coditz), children with pervasive developmental disorders in the 2-5 years age range (eg. autism) and primary school aged children exhibiting attention deficit and other behavioural syndromes. Through this strategy, the Research Centre will develop a brain research capability unique to Queensland.

The Research Centre will contribute strongly to the emerging national framework for youth mental health services that includes *headspace* programs around the nation and youth mental health centres in Melbourne (ORYGEN Research Centre; Director: Prof Patrick McGorry) and Sydney (Brain and Mind Research Institute; Director: Prof Ian Hickie).

### ***Regional Service Development Role***

The Research Centre will develop procedures for monitoring and improving clinical practice State-wide. First, a continuous service audit and feedback (Jamtvedt et al, 2006) function will alert regional service directors to examples of good and bad practice in their organisation. Second, practice facilitation (one-to-one skills-building) (Nagykadlt et al, 2005, 2006) will be offered by visiting or permanently sited Research Centre staff within regional services across Queensland. Third, monitoring of detection rates and outcomes of young people aged 12-24 years in regional services will be carried out centrally using the Consumer Integrated Mental Health Application (CIMHA) information management system. Fourthly, for complex presentations a State-wide consultation-liaison service will disseminate clinical expertise across Queensland. These activities will expand local service capacity to facilitate better access and quality intervention for all young people in Queensland wherever and whenever they need it.

Perhaps the most important contribution to regional services will be the collaborative development of the tools to implement world best practice around some of the most difficult clinical problems confronting these services, such as intractable high risk suicidality, delinquent and aggressive behaviour disorders, and problems related to drug and alcohol abuse.

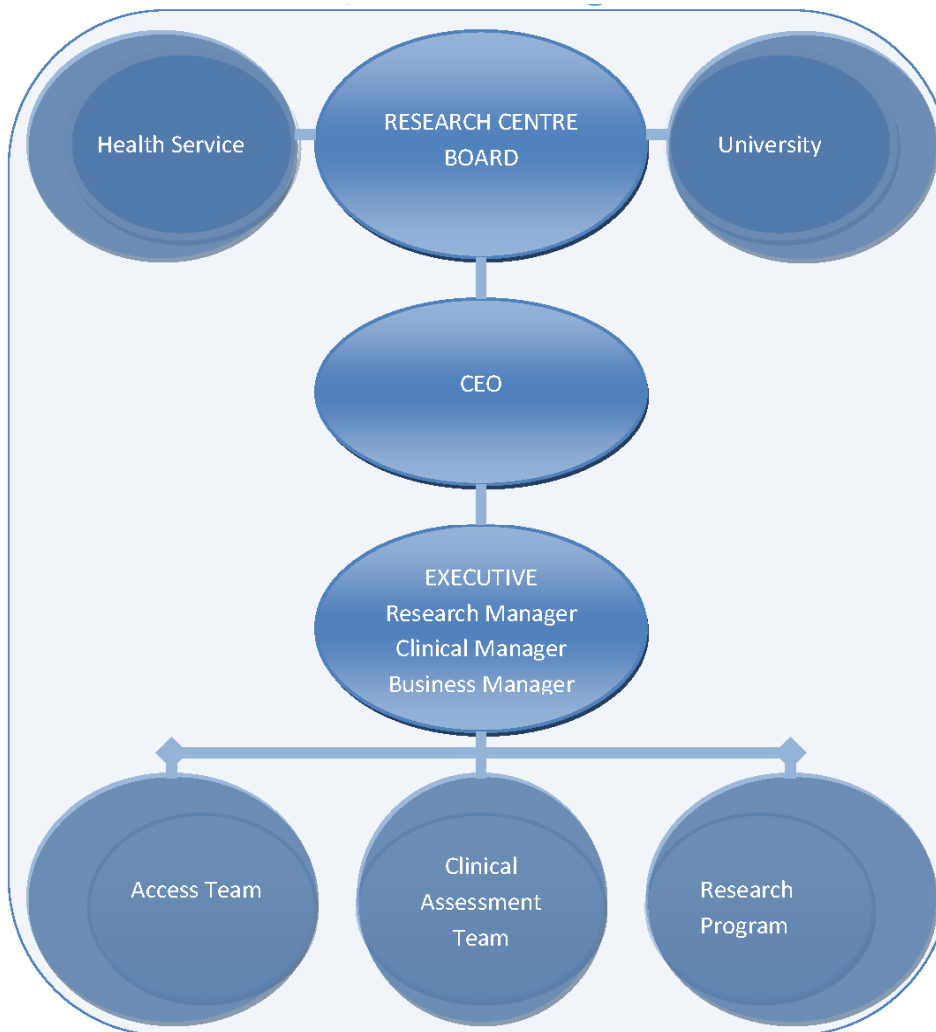
Clinical improvement activities will be carried out in cooperation with the Queensland Centre for Mental Health Learning, Centre for Rural and Remote Mental Health, and other relevant government and non-government organisations.

## GOVERNANCE

The preferred governance model for the Research Centre is a fully-integrated organisation with a single management board able to provide a blend of academic leadership and health service management (see **Figure 3**). Board membership will include expert stakeholders (clinical research academics), strategic partners (such as Divisions of General Practice, the *headspace* program, the Queensland Education Department, and the Child and Youth Mental Health Service [CYMHS pronounced 'kims'] and philanthropic foundations), youth and family advocates, other community leaders (eg, a well known corporate, marketing or sporting organisation in the youth sector), and a nominee of the Queensland Health Mental Health Director.

The Board will be supported by an Executive consisting of the Research Centre Chief Executive Officer (CEO), the Business Manager, the Research Manager and the Clinical Manager. All staff will have conjoint university-health service appointments.

**Figure 3: Research Centre organisational chart**



## **IMPLEMENTATION MODEL AND REQUIREMENTS**

Detailed implementation requirements will be determined by an agreed implementation strategy, to be developed in partnership with key stakeholders. If a two stage strategy was adopted, the requirements listed below represent support for the fully implemented Research Centre model.

In this model, referrals will be accepted primarily from two sources. One source will be a defined area catchment population, Metro North or comparably sized district area health service (see Research Program section above). The second source will be from specific out-of-area *headspace* and GP Super Clinics. Further to these two sources, a limited number of difficult to treat, complex cases referred by tertiary services will be assessed as requested. A first stage model would initially only accept referrals from the second source.

### ***Location and Housing***

The Research Centre should be co-located with outstanding biomedical research infrastructure, and acute health services in case they are urgently needed. The Research Centre will require a building with multiple small offices and family or group meeting rooms. Furthermore, the premises must provide adequate parking, good access to public transport, and facilities for out-of-hours service.

Every effort will be made to make the physical and social environment of the facility inviting and culturally 'youth safe' which means the physical structure should not be too much like a standard hospital building, the staff should be youth friendly, and the atmosphere should convey to young people that this is 'their place'.

It is envisioned that there should be several larger rooms for young people to use interactive media; an occupational therapy room including a functional kitchen; an exercise, dancing and music room; a lounge for relaxed socialising with a pool table and an outside area to shoot basket ball or kick football. Video-conferencing facilities will be required; a small amphitheatre-style seminar room is highly desirable.

### ***Funding***

In addition to rent and capital items, funding for staff to carry out clinical duties, research work and administration will be required. It is estimated that for each young person it will take the equivalent of 5 days of clinical staff time to complete the first assessment, and 5 days to complete follow-up assessments. That is, on average one clinician will support an assessment load of about 20 young people per annum, in addition to their other duties.

Based on current service utilisation statistics for young people, within the Metro North catchment area there are about 320 incident cases per year who are currently not receiving any professional assessment or treatment. Considering an average salary package of \$100,000 (including on-costs) per clinical staff member, it will cost \$1.6 million per annum (i.e., salaries for 16 clinical staff) to offer core assessment services to the inner northern Brisbane suburbs that will adequately address this unmet need.

Critical to the success of the Research Centre will be the access team, a component of the engagement and retention strategy, which will also consist of clinical staff. Other clinical duties relate to supporting the State-wide clinical practice network. A minimum of \$400,000 per annum will be required for administrative/management support (including salary support for the Clinical and Research Directors), and the cost of maintenance and consumables.

Although some of the costs of clinical assessment will be covered by Medicare billing, most of the access team's activities will not. Therefore, it is assumed that the total direct government support required is \$2 million per annum or \$10 million over 5 years.

The funding for clinical services is considered the responsibility of the State Government. Rent will be provided by the hosting health service.

The research program will require core infrastructure funding in the order of \$2 million per annum, anticipated to be equally contributed by universities and philanthropic partners. This core funding will be at least tripled by competitive research funding. If the Research Centre model is to be extended to cover Metro South, this will double the direct government funding needed to a total of \$20 million over a five year period.

The possibility of establishing an endowed Professorial Chair in Youth Mental Health would ensure outstanding leadership capacity to drive the Research Centre towards early recognition as the world leader.

Resource/Staff	Funding per year	Funding over 5 years	Number of extra young people receiving treatment per year	Number of extra young people receiving treatment over 5 years
<b>1</b> Clinical Staff Member (with admin/management support)	\$125,0000	\$625,000	<b>20</b>	<b>100</b>
<b>16</b> Clinical Staff (Metro North)	\$2 million	\$10 million	<b>320</b>	<b>1600</b>
<b>32</b> Clinical Staff (Metro North and South)	\$4 million	\$20 million	<b>640</b>	<b>3200</b>
Research Program	\$2 million	\$10 million	<b>N/A</b>	<b>N/A</b>

## SUMMARY

Why is a research centre that focuses on the assessment of young people at risk of serious mental illness the best approach to securing the future of our young people and also offering best value for money?

Without innovation or prevention, the World Health Bank predicts that by 2020 mental health will become the most costly health sector and the global burden of disease attributable to neuropsychiatric disease will increase by 50% (Murray & Lopez, 1996). There is simply no sustainable alternative to service innovation and discovery of more effective preventive intervention. These require research and development – local research capacity that is not being funded now.

The clinical activities of the Research Centre will not duplicate or compete with existing services but build clear pathways to them. In collaboration with existing services, the Research Centre will develop world best practice around difficult clinical problems and develop the tools needed for implementation in routine service settings. It will act as an interface service that efficiently matches young peoples' needs with the most appropriate tertiary services. This re-directs the high-cost work of specialist services away from unproductive assessment of inappropriate referrals to delivering intervention to people that the services can most effectively assist. This rationalisation is important because CYMHS could then consolidate their focus on the major preventive opportunities in the childhood years and Adult services could better focus on adult-onset disorders that have very different service needs to those of young people.

At the same time, the Research Centre will deliver a unique research program that will attract world-leading scientists and clinicians to work together to discover and disseminate long-term innovation in services and treatment for young people throughout Queensland. The Research Centre will prioritise research because there are currently major technical barriers and gaps in knowledge that must be overcome to achieve prevention in youth mental health.

A world leading research program in youth mental health will, in time, discover the means to prevent serious mental illness. The research culture will immediately provide a learning environment that will deliver excellence in healthcare.

Without innovation, it would not be feasible due to the cost to build enough service capacity to offer the 97% of young people with a mental disorder who currently do not access specialist mental healthcare (Sawyer MG et al, 2000) primary health services. It has estimated that to meet this unmet need the overall mental health service budget would have to increase 10-fold, and this extra cost burden would give no hope of discovering preventive treatments. That is, the incremental costs of the Research Centre are trivial when compared to the costs of just expanding the capacity of current service models to fully address the unmet needs of our young people.

There is simply no more cost-effective alternative to the Research Centre proposal that can drive major service reform and offer much more effective and pre-emptive treatments in the future.

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