Queensland Mind and Neuroscience Institute
An initiative of the University of the Sunshine Coast and its partners

Ameliorating and supporting those suffering from disorders of the brain and mind
Overview

A clinical, research and teaching facility focusing on mental health and neurological diseases will be established on the Sunshine Coast.

The Queensland Mind and Neuroscience Institute will be based on the campus of the University of the Sunshine Coast (USC). This facility will link with the more than $2 billion investment in health and hospital care already underway in the region—Australia’s largest health precinct development.

The Institute will be a new purpose-built facility designed to provide a major innovative research environment for studying mental illness and neurological disorders as well as the genetic, epigenetic and related developmental paths to these conditions. In so doing it will identify the best approaches for ameliorating and supporting those suffering from these diseases. A particular focus for the Institute will be the role that stress and trauma plays in the development of all mental illnesses.

When completed this facility will improve services to psychiatric and neurological patients through specialist community and outpatient services, and provide:

1. **An outstanding research environment** for investigation in areas of psychiatric illness (for example post-traumatic stress disorders (PTSD), depression and anxiety), as well as neurological illnesses (for example multiple sclerosis, stroke and Parkinson’s disease);

2. **Leadership in treatment and clinical research** in the areas of stress-related psychiatric disorders, degenerative neurological disorders, dementias, depression and cognitive decline;

3. **Advanced standards of care** across a broad spectrum of psychiatric illnesses and conditions including PTSD, suicidal behaviour, early psychosis, mood disorders and anxiety, as well as substance abuse; and

4. **Education and training** for specialised medical, nursing, psychology and allied health workforces.

The Foundation Board of the Institute is chaired by Air Chief Marshal Angus Houston AC, AFC (Ret’d). In 2014 Australia will finish a 13 year deployment to Afghanistan. By then, nearly 30,000 personnel will have served in this deployment. An estimated 20% will experience PTSD health conditions as a result of their service over their lifetime and 10% at any one time.

Higher rates of stress-related disorders are found in populations exposed to significant natural disasters such as severe cyclones, flood and firestorms to which Australia is increasingly prone. Childhood experience of traumatic stress events, including sexual and physical abuse, are recognised as a key factor in the development of a range of mental illnesses in adolescents and adults.

The Queensland Mind and Neuroscience Institute will develop partnerships with Commonwealth, State and Local Governments, the public and private health sectors, the community and the business sectors. The Institute will have strong links with the Brain and Mind Research Institute (BMRI), The University of Sydney (Directors, Professor Ian Hickie AM and Professor Max Bennett AO) and Orygen Youth Health Research Centre, University of Melbourne (Director, Professor Pat McGorry AO).
Key elements

The key elements of the Queensland Mind and Neuroscience Institute are:

1. **A purpose-built 5,500 square meter clinical practice, clinical research and teaching facility addressing diseases of the brain and mind.** The Institute will bring together in the one entity basic and clinical research related to diseases of the brain and mind as well as quality clinical practice and workforce development.

2. **The research activity will be focused on areas of concern relevant to the Sunshine Coast and wider community, such as:**
   - a) A core program on the role of stress (traumatic and chronic)—through clinical psychiatry, psychology and neurology in the development of mental illness.
   - b) A program in clinical psychiatry and psychology—linking early clinical detection of persons with schizophrenia, bipolar disorder, severe depression, suicidal behavior and PTSD with novel clinical staging models, functional MRI studies and genetics. In addition, programs will be developed for the prevention of brain and mind disorders and behavioural disorders due to substance abuse.
   - c) A program in clinical neurology and dementia—for example evaluating the effectiveness of an integrated anti-depressant and vascular health program to reduce the rate of cognitive decline.

3. **The development of new clinical services, such as:**
   - a) Clinical services for dementia and other degenerative neurological disorders.
   - b) An Early Psychosis Prevention and Intervention Centre (EPPIC) program in partnership with Commonwealth and State Governments.
   - c) The EPPIC program which has links to the network of headspace services already operating or to be established in the Sunshine Coast, Wide Bay and Moreton Bay regions.
   - d) Clinical services focusing on the development of novel interventions and therapies for traumatic stress related disorders associated with traumatic events.

*Figure 1: Key Elements of the Queensland Mind and Neuroscience Institute.*
Complementary elements at USC

1. **USC Learning and Teaching Programs** at undergraduate and postgraduate levels offered in every mental health discipline.

2. The development of the Sunshine Coast Public University Hospital and the associated investments in the **Skills, Academic and Research Centre (SARC)** on the Kawana site, in the context of the growing population, provides exceptional opportunities to establish a regionally based mind and brain research and clinical service centre.

3. **USC Clinical Trials Centre**, a ‘world-class’ industry-focused clinical trials centre currently in planning for the SARC in the Sunshine Coast Public University Hospital.

4. **Young and Well Cooperative Research Centre (CRC)**, whereby USC is a specialist partner in the use of serious gaming technologies for the health and wellbeing of young people.

5. **Engage Research Lab** which is developing a range of educational solutions based on serious computer gaming to social problems including child protection and reducing binge drinking.

6. **USC Psychology Clinic** which already operates on the Campus and will be linked with the Queensland Mind and Neuroscience Institute.

7. **AEIOU Autism Centre** which provides care for children with autism spectrum disorders and clinical practice opportunities.

Figure 2: Key complementary relationships at USC.

**Figure 3:** Key clinical service dimensions.

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<thead>
<tr>
<th>Early Psychosis (EPPIC)</th>
<th>Stress Related Disorders Program</th>
<th>Clinical Psychiatry and Psychology</th>
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</thead>
<tbody>
<tr>
<td>• Specialist treatment service</td>
<td>• Inpatient service</td>
<td>• Clinical services for a range of disorders including neurological disorders</td>
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<tr>
<td>• Joint funding from Commonwealth and State Government</td>
<td>• Outpatients and home care</td>
<td>• Outreach programs</td>
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<tr>
<td>• Up to 1,000 clients per annum</td>
<td>• Re-current funding from Medicare, Department of Veterans’ Affairs and others</td>
<td>• Private partners for Imaging Services</td>
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<tr>
<td>• Referral pathways from headspace networks</td>
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<td>• Re-current funding from Medicare</td>
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**Key psychological and neurological conditions**
- Depression, Anxiety, Post-traumatic Stress Disorders, Schizophrenia, Bipolar Disorder and Substance Abuse Disorders, Dementia, Multiple Sclerosis, Parkinson’s, Autism Spectrum Disorder, and Stroke

Further information

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