

Inaugural Forum 2007

9th–10th November 2007, Sydney

Highlights from the meeting



Chairman's introduction

Mental illnesses typically have their onset in adolescence, and may have antecedents in childhood. Optimal care therefore involves a lifespan approach to the delivery of mental health services. Unfortunately, continuity of care is most often lacking within the current Australian system.

This forum, sponsored by Janssen-Cilag, provided a rare and important opportunity for dialogue between paediatricians, psychologists, and child, adolescent, and adult psychiatrists, to define transitional needs and to promote developmentally sensitive treatment plans. We were very fortunate to hear from key experts in the biological foundations of mental illness, current service providers, and the developers of future service models. Delegates were also invited to provide their own insights throughout the meeting and during an interactive case studies session.

We hope you enjoy reading the highlights from this productive and thought-provoking meeting.

Professor Philip Hazell
Meeting Chairman

(Director, Rivendell Child, Adolescent and Family Mental Health Services, Thomas Walker Hospital; Director, Infant, Child and Adolescent Mental Health Services, Sydney South West Area Health Service; and Conjoint Professor of Child and Adolescent Psychiatry, Central Clinical School, University of Sydney, NSW.)

Biological and social underpinnings of mental illness

Models for disruptive behaviour disorders

Attention deficit/hyperactivity disorder (ADHD), conduct disorder (CD), and oppositional defiant disorder (ODD) are among the most studied medical conditions of childhood.¹ In his presentation, Dr Daniel Hermens (Brain Dynamics Centre, Westmead Hospital, NSW) described how neurobiological markers for these disorders are helping clarify the mechanisms of transitions between ADHD, ODD, and CD.

Do Disruptive Behaviour Disorders Evolve with Age?

Early childhood → Adolescence → Young adulthood

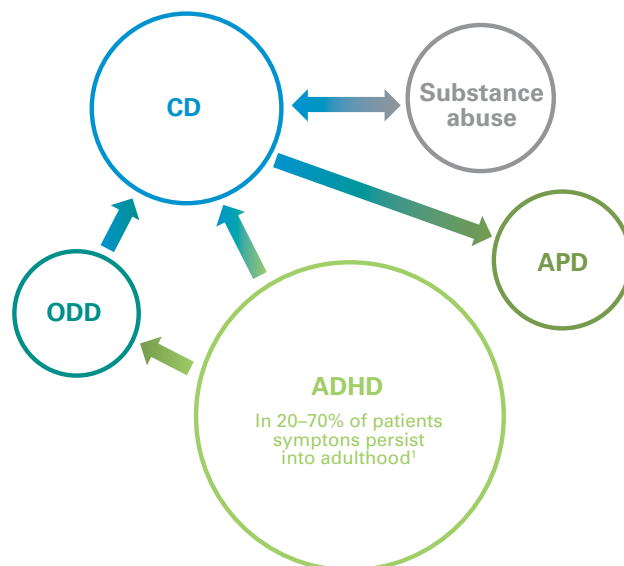


Figure 1: Trajectories of disruptive behaviour disorders. (Hermens D. Presented at: Continuities and discontinuities of youth mental health. 9–10 November 2007, Sydney, Australia).

He reported that researchers at the Brain Dynamics Centre have shown that event-related potential (ERP) responses to target and background stimuli are dampened for ADHD individuals, indicating that ADHD patients find it difficult to distinguish between relevant and irrelevant information. There is also evidence that ADHD patients differ from non-ADHD individuals in their levels of cortical and autonomic arousal when at rest, and that patterns vary depending on the age and gender of the individual.^{2,3}

“This led us to propose an ‘arousal dysregulation model’ of ADHD, with three distinct subgroups,” he said. He described the three subgroups as follows:

1. Hypo-aroused – reduced brainstem activity leads to reduced CNS arousal, which is linked to inattention.
2. Hyper-aroused – increased brainstem activity leads to increased CNS arousal, with concomitant increased autonomic nervous system (ANS) activity, which is linked to hyperactivity and/or impulsivity.
3. Irregular-arousal – irregular arousal of the ANS leads to a fluctuating CNS arousal profile, which is linked to inattention and impulsivity.

Markers for other disruptive behaviour disorders are less well-studied, however, Dr Hermens stated that markers of decreased ANS activity appear to be consistent in child-onset CD and the adult version (antisocial personality disorder – APD). “This highlights some degree of continuity,” he said “however, the adolescent-onset CD group show a different pattern, which suggests a discontinuity.”

“On the basis of neurobiological models, there appear to be distinct mechanisms between ADHD and CD, with ODD somewhere in between. A focus on sub-groups (e.g. child- versus adolescent-onset CD trajectories) will help disentangle neurobiological continuities and discontinuities which are particularly relevant given the range of potential outcomes in adulthood,” he concluded.

Pathways to offending

Dr Claire Gaskin (Consultant Adolescent Forensic Psychiatrist and Clinical Director Adolescent Mental Health, Justice Health, NSW) spoke about mental illness and young offenders. She told the audience that surveys reveal high rates of mental illness in this population (Figure 2).⁴ Factors such as a past history of trauma and victimisation, drug and alcohol use, and the presence of a learning disability, are also associated with offending.

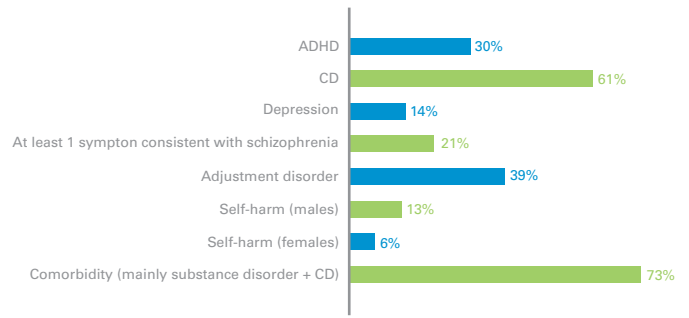


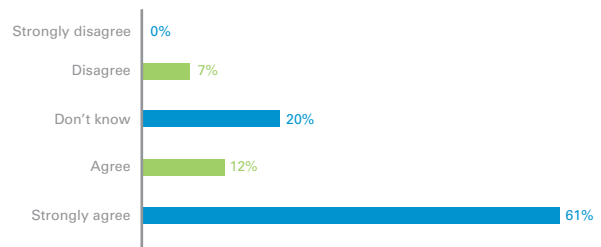
Figure 2: Symptoms of mental illness observed in juvenile offenders. (NSW Young Person in Custody Survey, 2003)⁴

“A small number of kids with several of these risk factors go on to become persistent offenders... Factors that have been shown to predict persistence of aggression include the presence of a conduct disorder at an early age, hyperactivity, impulsivity, inattention spectrum, and male gender,” she said.

Dr Gaskin noted that young people with a CD experience a variety of adverse outcomes including life-long physical and psychiatric morbidity, such as increased risk of schizophrenia, and higher rates of unemployment, death/suicide, and serious accidents.^{5,6} Research also shows that the likelihood of committing a crime significantly increases over an individual’s lifetime if they are diagnosed with CD and later develop schizophrenia.⁵ “Even if schizophrenia is treated and you take substance abuse out of the equation, the number of CD symptoms at age 14 or 15 predicts more offending into adulthood,” said Dr Gaskin. “One proposed reason for the links between conduct disorder, schizophrenia and aggression is that there is a separate genetic loading for each and that heritability is increased by assortative mating. This is then coupled with poor parenting practices, leading to young people lacking the coping skills and support they need to seek early intervention for prodromal symptoms. ”

Audience opinion

Targeted intervention in children and young adolescents can delay the onset and reduce the severity of serious mental illness in adulthood...



Young people with a conduct disorder experience a variety of adverse outcomes, including life-long physical and psychiatric morbidity.

Genetic links to adult disorders

Professor David Hay (School of Psychology, Curtin University, WA) discussed the genetic links between child and adult psychopathologies. He began by emphasising that researchers can no longer hope to find a single gene for any behavioural disorder in children or adults, and this paradigm shift must be communicated to family members of the mentally ill, and to health professionals.

Professor Hay told the audience that much research has focused on defining genetically distinct types of ADHD, and exploring whether the presence of certain comorbidities may be used to divide children with ADHD into genetic subgroups. "For example, some of our research shows that there are molecular genetic markers differentiating children with combined type ADHD with reading problems from those without reading problems," he said.⁷ However, he also stressed that it is important to clarify the causal relationship between ADHD and comorbidities: "For example, are the relationships between anxiety, depression and ADHD genetic, or are anxiety and depression a consequence of the way ADHD impacts on the child?"

Regarding continuities and discontinuities in ADHD, Professor Hay remarked that whether or not a child grows out of ADHD appears to be 'genetically programmed'; although recovery will often be hampered by the presence of comorbid conditions. He ended by highlighting the following areas of ongoing research:

- Child ADHD subtypes versus parent temperament and how these may combine in behavioural intervention.
- The determination of endophenotypes (biological markers) for ADHD.
- Psychopharmacogenetics of ADHD and the understanding at the molecular level as to why people respond differently to the same medication.
- The impact of ADHD on other family members, including siblings.

He concluded with a caution about the growing enthusiasm for g x e (particular molecular genetic variants combined with particular environmental stressors). "Often the genetic variants are rare and so (fortunately) are those who experience the extreme environmental events. The two may co-occur so rarely that they are unlikely to account for much of the causes of psychopathology in the general population"

Bipolar disorder from childhood to adulthood

Professor Gin Malhi (Executive and Clinical Director, CADE Clinic, Royal North Shore Hospital and Head, Department of Psychiatry, Northern Clinical School, University of Sydney, NSW) spoke on the progression of bipolar disorders through the lifespan.

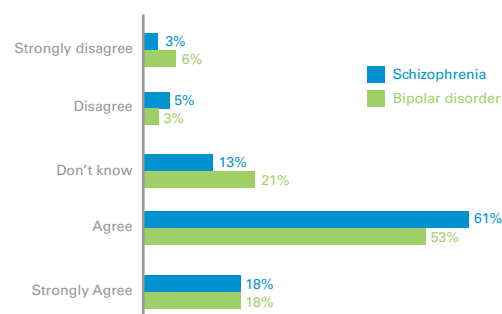
Studies have shown that almost all children and adolescents with an index episode of bipolar disorder will experience a recurrence of their condition during adulthood.⁹ "The question is whether it is changing in terms of aetiology or manifestation, and why is it more difficult to detect in the adolescent period," said Professor Malhi. He noted that for the majority of patients, bipolar disorder symptoms will have emerged by the time they are 15–19 years old, long before they are formally diagnosed with the disorder.⁹ "It's the pruning that is occurring in the 10–20 year-old age group that's critical for emotional, social, and cognitive development... so that's the period we need to be focussing on," he added.

Professor Malhi told the audience that results from brain imaging studies in adults suggest that bipolar disorder is a problem of emotional regulation and a lack of development of frontal cortex mechanisms.¹⁰ For example, in facial recognition studies, bipolar patients were found to be more responsive to fear whereas healthy subjects were more responsive to disgust.¹⁰ Preliminary data from theory of mind (ToM) experiments in patients with bipolar disorder have also suggested that this group does not engage the prefrontal cortex to the same extent as healthy controls when inferring ToM.¹¹

"Bipolar disorder clearly has its roots in early childhood and adolescence. The biggest challenge is separating it from the huge changes that take place in the brain at this time... until we can do that reliably, taking the lessons we have from bipolar disorder in adults into bipolar disorder in adolescents is extremely difficult," he concluded.

Audience opinion

It will be possible in due course to identify markers for schizophrenia and bipolar disorder in pre-pubertal children...



A positive functional outcome is what the larger community desires for young people with mental health disorders.

Improving services for youth

Professor Patrick McGorry (Professor of Youth Mental Health, University of Melbourne; Director, ORYGEN Youth Health and ORYGEN Research Centre, VIC) and Professor Ian Hickie (Professor of Psychiatry and Executive Director, Brain and Mind Research Institute, The University of Sydney, NSW) are members of the executive committee for the National Youth Mental Health Foundation ('headspace'). They spoke about the importance of developing a new style of mental health service provision for young people.

The importance of early treatment and collaborative care

Professors McGorry and Hickie both emphasised the importance of early intervention in psychotic disorders. Studies show clear evidence of improved outcomes including reduced progression to a first episode of psychosis, reduced suicide rates, and higher rates of vocational recovery, with earlier treatment of psychotic symptoms.¹²⁻¹⁴

Unfortunately, Australian surveys show that young people do not tend to visit their GP to seek help for mental health problems, and that once they do present for help they are likely to go undiagnosed and untreated.¹⁵ "About 64% of kids with an obvious mental health problem received no intervention through their primary care service in the late 1990's, and a few years later that rate was about 50%," reported Professor Hickie.¹⁵

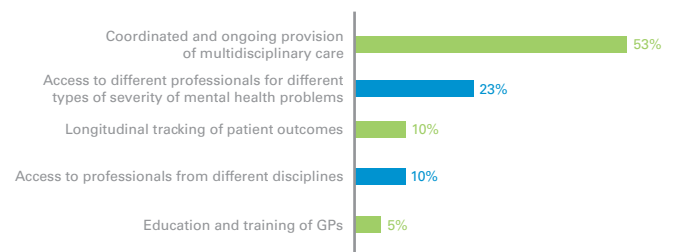
Referrals of young people by GPs to other mental health services are also low. "This isn't about GPs hanging on to the patients," stressed Professor Hickie. "We need systems in which specialists are actively engaged with GPs... at the moment it's a highly disconnected system."

Professor Hickie said that government funding of Medicare payments for psychological services is a step in the right direction – although, there is a risk that these services will not be accessed by those in greatest need, unless there is some fundamental change to engage young people. He added that this reform does not necessarily support a collaborative approach to care: "Collaborative care is a structured and multifaceted approach to treatment based on chronic disease management principles, and involving a range of professionals on an ongoing basis. It's not just a cross-referral system," explained Professor Hickie.¹⁶

Ultimately, a positive functional outcome (in terms of return to school or work) is what the larger community desires for young people with mental health disorders. This is what the 'headspace' initiative hopes to achieve. "That fundamentally requires a lot of professionals in education, social welfare, and employment, and it requires continuity across the developmental period," concluded Professor Hickie.

Audience opinion

What is the most important aspect of collaborative care models for treating anxiety and depression?



More about 'headspace'

Professor McGorry said that there is a growing recognition of 'youth' as a distinct developmental phase beginning at puberty and extending into the mid-20s. "There is no clinical reason for drawing a dividing line between 'children' and 'adults' at age 18 years," he said. "In fact, we know that individuals who are under care have high rates of homelessness and offending if services are withdrawn when they turn 18."

He said that current youth-oriented agencies have suffered from a lack of funding, and a lack of integration. Government funding through 'headspace' is providing the opportunity to try to address some of the unmet needs in youth mental health. "The idea has been to create a level of care between primary care and specialist mental health care that is multi-disciplinary and youth-oriented," explained Professor McGorry.

Aims of headspace are to:

- Encourage early help seeking by young people with mental health and substance use issues through local and national community awareness activities.
- Assist a range of service providers who work with young people to build their skills through education and training resources and initiatives.
- Build the capacity of local communities to identify and provide early and effective responses to young people with mental health and drug and alcohol issues through a national Youth Services Development Fund.



Figure 3: The 'headspace' website homepage. www.headspace.org.au

"Eventually about 30 communities of youth services in about 30 different locations in metropolitan and regional areas in Australia will be funded," stated Professor McGorry. More information is available at the 'headspace' website (Figure 3).

'HYPE': A model mental health service?

Dr Andrew Chanen (Senior Lecturer, ORYGEN Research Centre, Department of Psychiatry, University of Melbourne and Consultant Psychiatrist and Associate Medical Director, ORYGEN Youth Health, VIC) directs the HYPE Clinic, an early intervention program for borderline personality disorder (BPD), at ORYGEN.

Dr Chanen told the forum that the diagnosis of BPD should no longer be regarded as controversial in teenagers and that this is a key phase of the disorder in which to intervene. Referrals to HYPE are usually precipitated by a mental state disorder such as major depression. Patients with ≥ 3 DSM-IV BPD criteria are accepted for treatment," and this reflects the mixed indicated prevention and early intervention mandate of the clinic," he said. "There are no specific exclusion criteria for other forms of psychopathology, based upon the fact that comorbidity is the norm in this patient group."

HYPE patients are identified with the aid of a simple screening assessment, followed by a full clinical interview. "We have an integrated treatment model that's team-based. It has at its core a psychotherapeutic intervention; but it also involves assertive case management and general psychiatric care," explained Dr Chanen. "We have a single practitioner who provides both case management and psychotherapy and all patients are managed jointly with a psychiatrist or senior trainee."

Patients receive up to 24 sessions of Cognitive Analytic Therapy (CAT). Family involvement, psychoeducation, and pharmacotherapy (as indicated) are other components of the treatment model. "There is also a strong emphasis on supervision and treatment fidelity," said Dr Chanen. He also stressed that HYPE operates on a system of 'informed refusal'. "We make every effort to let people know what we offer and what the expected outcomes might be, before we accept their refusal of care."

Dr Chanen presented evidence from the HYPE randomised controlled trial supporting the effectiveness of the HYPE intervention.¹⁷

The diagnosis of borderline personality disorder should no longer be regarded as controversial in teenagers.



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