



YOUTH MENTAL HEALTH

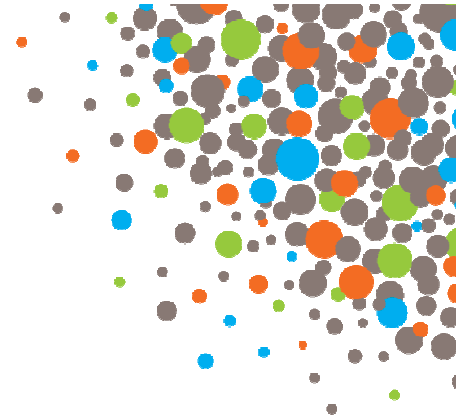
OUR BEST BUY IN HEALTH CARE

Strengthening Nations through Investment in the
Next Generation's Mental Health, Well-being and
Productivity

Patrick McGorry MD PhD

Patrick McGorry MD PhD

Total Career Financial Disclosures



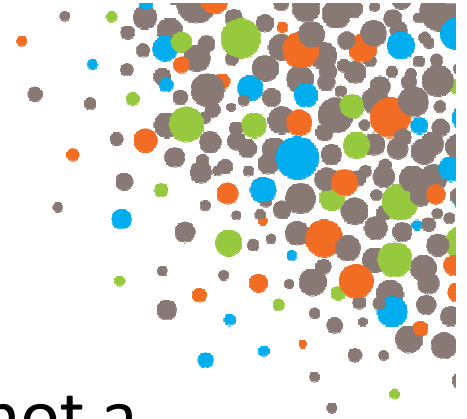
Government and Philanthropic

- Australian Government via the National Health and Medical Research Council:
- The Colonial Foundation
- Beyondblue: National Depression Initiative
- NARSAD
- The Stanley Foundation
- Rotary Health
- Miller Foundation

Pharmaceutical

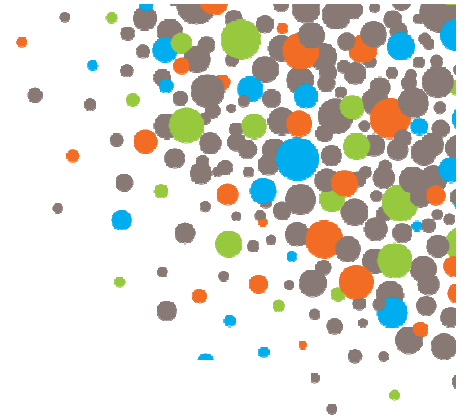
- Astra Zeneca (IIT Current Research Grants and Past Honoraria)
- Janssen Cilag Past IIT Current Research Grant and Honoraria)
- Eli Lilly (Past IIT Past Research Grants and Honoraria)
- Pfizer (Past Honoraria)
- BMS (Past Honoraria)
- Roche (Past Honoraria)
- Lundbeck Foundation (Past Honoraria)

IN THIS TALK



- Youth Mental Health: An Investment, not a Cost, not a Burden
- Boundaries and Need for Care: Diagnosis with Utility
- The Promise of Early Intervention: Novel Therapeutics and Personalised Care
- A New Architecture and Culture of Care: Youth Mental Health

The Awakening Giant





OECD Health Policy Studies

Making Mental Health Count

THE SOCIAL AND ECONOMIC COSTS
OF NEGLECTING MENTAL HEALTH CARE



Emily Hewlett

Valerie Moran

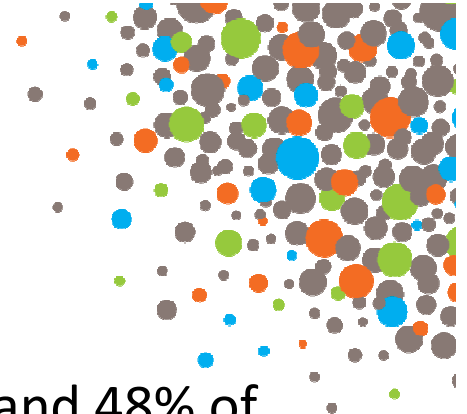
Despite the enormous epidemiological, social and economic burden of mental ill-health, mental health care is still not a priority in most health systems. The current weak state of mental health care is unacceptable. More must be done to make mental health count and improve the lives of those suffering from mental ill-health: policy makers must give mental health the importance it demands in terms of resources and policy prioritisation.



COMMITTED TO
IMPROVING THE STATE
OF THE WORLD

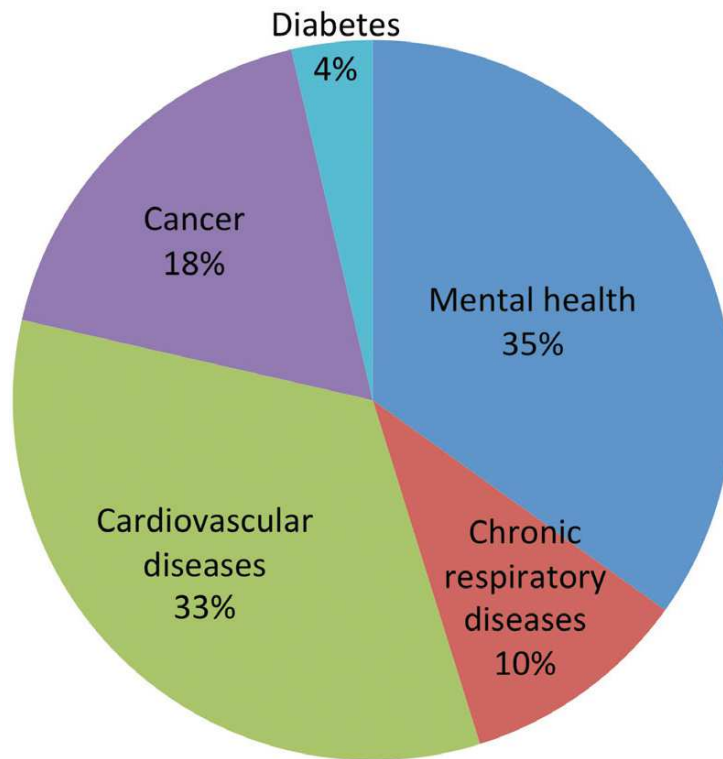
The Global Economic Burden of Non-communicable Diseases

WEF 2011



- Over next 20 years NCD's will cost US\$30 trillion and 48% of global GDP
- MI will add a further US\$16.1 trillion
- Only ¼ of the deaths from currently defined main 4 NCD's eg cancer, cardiovascular disease, diabetes and chronic respiratory disease etc occur <60
- Need to widen it to the big 5!

Lost Economic Output by Disease Type, 2011-2030



 HARVARD
School of Public Health

 WORLD
ECONOMIC
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IMPROVING THE STATE
OF THE WORLD

**The Global Economic Burden of
Non-communicable Diseases**

**The
Economist**

Events

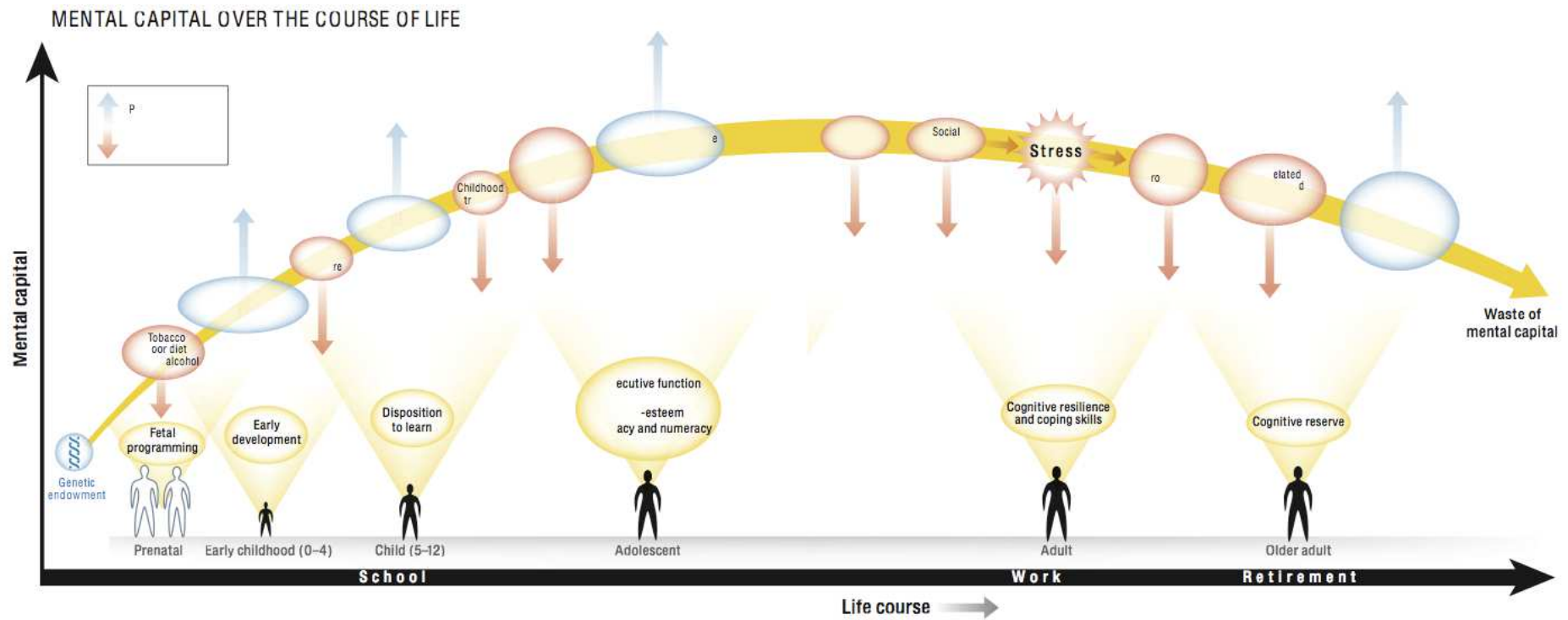
THE GLOBAL CRISIS OF DEPRESSION

The Low of the 21st Century?

Tuesday, November 25th 2014 - Kings Place, London

Only 10% of Depressed people in the OECD have access to even minimal evidence based care for depression

DEVELOPMENTAL PERSPECTIVE: THE MENTAL WEALTH OF NATIONS



Beddington et al 2008 Nature

Adolescent mental health 3



The new life stage of emerging adulthood at ages 18–29 years: implications for mental health

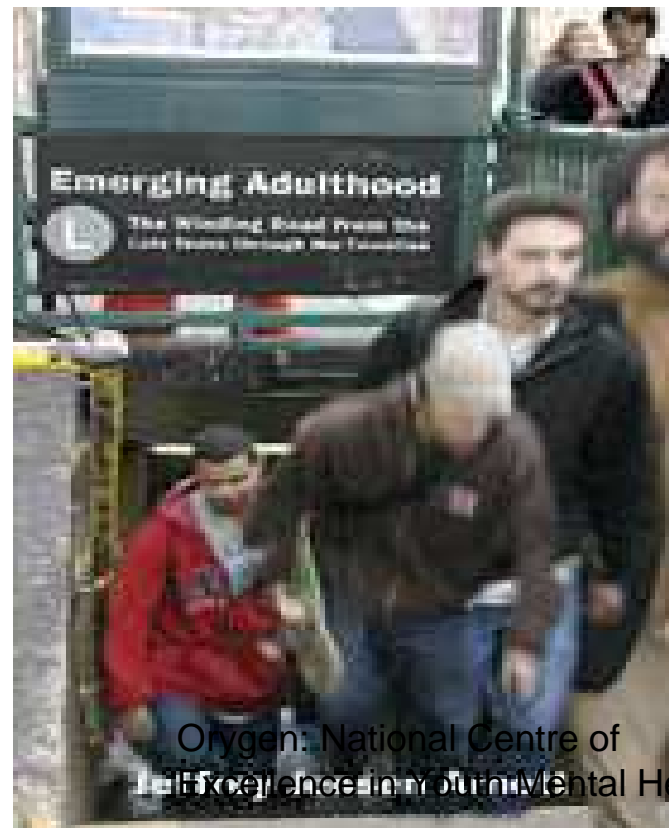
Jeffrey J Arnett, Rita Žukauskienė, Kazumi Sugimura

Since 1960 demographic trends towards longer time in education and late age to enter into marriage and of parenthood have led to the rise of a new life stage at ages 18–29 years, now widely known as emerging adulthood in developmental psychology. In this review we present some of the demographics of emerging adulthood in high-income countries with respect to the prevalence of tertiary education and the timing of parenthood. We examine the characteristics of emerging adulthood in several regions (with a focus on mental health implications) including distinctive features of emerging adulthood in the USA, unemployment in Europe, and a shift towards greater individualism in Japan.

Lancet Psychiatry 2014;
1: 569–76

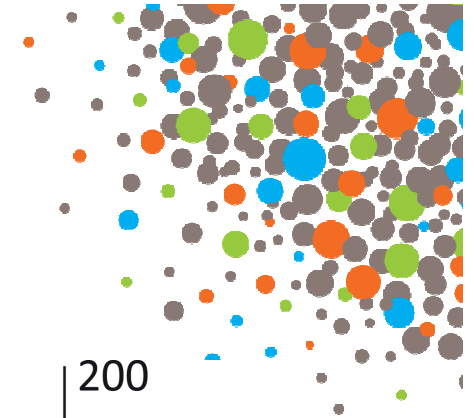
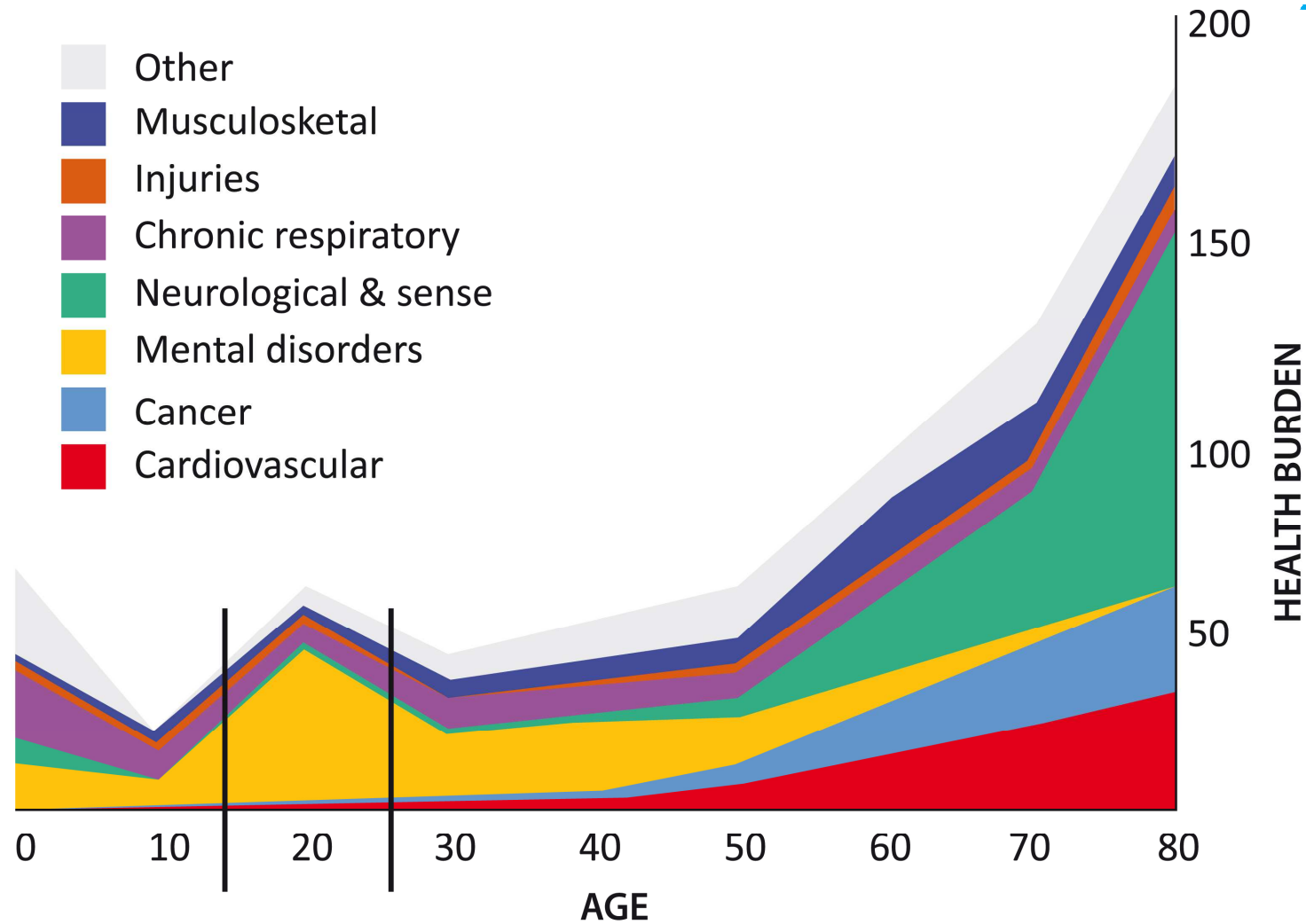
This is the third in a Series of
three papers about adolescent
mental health

Clark University, Worcester,
MA, USA (JA Arnett PhD);



Orygen: National Centre of
Excellence in Youth Mental Health

Incident Burden of Disease Across Lifespan



The prognosis of common mental disorders in adolescents: a 14-year prospective cohort study



George C Patton, Carolyn Coffey, Helena Romaniuk, Andrew Mackinnon, John B Carlin, Louisa Degenhardt, Craig A Olsson, Paul Moran

Summary

Background Most adults with common mental disorders report their first symptoms before 24 years of age. Although adolescent anxiety and depression are frequent, little clarity exists about which syndromes persist into adulthood or resolve before then. In this report, we aim to describe the patterns and predictors of persistence into adulthood.

Methods We recruited a stratified, random sample of 1943 adolescents from 44 secondary schools across the state of Victoria, Australia. Between August, 1992, and January, 2008, we assessed common mental disorder at five points in adolescence and three in young adulthood, commencing at a mean age of 15.5 years and ending at a mean age of 29.1 years. Adolescent disorders were defined on the Revised Clinical Interview Schedule (CIS-R) at five adolescent measurement points, with a primary cutoff score of 12 or higher representing a level at which a family doctor would be concerned. Secondary analyses addressed more severe disorders at a cutoff of 18 or higher.

Findings 236 of 821 (29%; 95% CI 25–32) male participants and 498 of 929 (54%; 51–57) female participants reported high symptoms on the CIS-R (≥ 12) at least once during adolescence. Almost 60% (434/734) went on to report a further episode as a young adult. However, for adolescents with one episode of less than 6 months duration, just over half had no further common mental health disorder as a young adult. Longer duration of mental health disorders in adolescence was the strongest predictor of clear-cut young adult disorder (odds ratio [OR] for persistent young adult disorder vs none 3.16, 95% CI 1.86–5.37). Girls (2.12, 1.29–3.48) and adolescents with a background of parental separation or divorce (1.62, 1.03–2.53) also had a greater likelihood of having ongoing disorder into young adulthood than did those without such a background. Rates of adolescent onset disorder dropped sharply by the late 20s (0.57, 0.45–0.73), suggesting a further resolution for many patients whose symptoms had persisted into the early 20s.

Interpretation Episodes of adolescent mental disorder often precede mental disorders in young adults. However, many such disorders, especially when brief in duration, are limited to the teenage years, with further symptom remission common in the late 20s. The resolution of many adolescent disorders gives reason for optimism that interventions that shorten the duration of episodes could prevent much morbidity later in life.

Funding Australia's National Health and Medical Research Council.

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Royal Children's Hospital,

Parkville, VIC, Australia;

National Drug and Alcohol

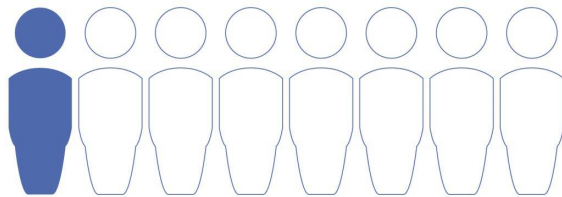
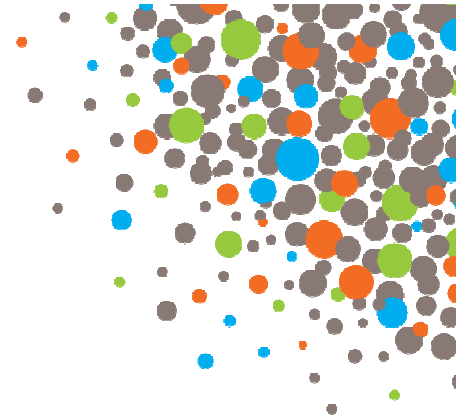
Research Centre, University of

New South Wales, NSW,

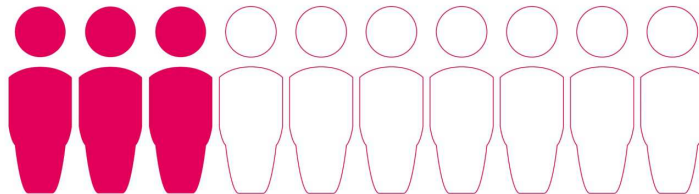
Australia (Prof L Degenhardt);

School of Psychology, Deakin

Young people don't seek or get professional help!!



Only 13% of young men and 31% of young women access professional mental health care



Young men aged 16-24 have the lowest professional help-seeking of any age group

Burden of psychiatric disorder in young adulthood and life outcomes at age 30

Sheree J. Gibb, David M. Fergusson and L. John Horwood

Background

Psychiatric disorders are common during young adulthood and comorbidity is frequent. Individual psychiatric disorders have been shown to be associated with negative economic and educational outcomes, but few studies have addressed the relationship between the total extent of psychiatric disorder and life outcomes.

Aims

To examine whether the extent of common psychiatric disorder between ages 18 and 25 is associated with negative economic and educational outcomes at age 30, before and after controlling for confounding factors.

Method

Participants were 987 individuals from the Christchurch Health and Development Study, a longitudinal study of a birth cohort of individuals born in Christchurch, New Zealand, in 1977 and followed to age 30. Linear and logistic regression models were used to examine the associations between psychiatric disorder from age 18 to 25 and workforce participation, income and living standards, and educational

achievement at age 30, before and after adjustment for confounding factors.

Results

There were significant associations between the extent of psychiatric disorder reported between ages 18 and 25 and all of the outcome measures (all $P < 0.05$). After adjustment for confounding factors, the associations between psychiatric disorder and workforce participation, income and living standards remained significant (all $P < 0.05$), but the associations between psychiatric disorder and educational achievement were not significant (all $P > 0.10$).

Conclusions

After due allowance had been made for a range of confounding factors, psychiatric disorder between ages 18 and 25 was associated with reduced workforce participation, lower income and lower economic living standards at age 30.

Declaration of interest

None.



Review article

Adolescent and Young Adult Health in the United States in the Past Decade: Little Improvement and Young Adults Remain Worse Off Than Adolescents

M. Jane Park, M.P.H.^{a,*}, Jazmyn T. Scott, M.P.H.^a, Sally H. Adams, Ph.D.^a,
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Article history: Received February 13, 2014; Accepted April 4, 2014

Keywords: Young adults; Adolescents; Health status

ABSTRACT

Adolescence and young adulthood are unique developmental periods that present opportunities and challenges for improving health. Health at this age can affect health throughout the lifespan. This review has two aims: (1) to examine trends in key indicators in outcomes, behaviors, and health care over the past decade for U.S. adolescents and young adults; and (2) to compare U.S. adolescents and young adults on these indicators. The review also assesses sociodemographic differences in trends and current indicators. Guided by our aims, previous reviews, and national priorities, the present review identified 21 sources of nationally representative data to examine trends in 53 areas and comparisons of adolescents and young adults in 42 areas. Most health and health care indicators have changed little over the past decade. Encouraging exceptions were found for adolescents and young adults in unintentional injury, assault, and tobacco use, and, for adolescents, in sexual/reproductive health. Trends in violence and chronic disease and related behaviors were mixed. Review of current indicators demonstrates that young adulthood continues to entail greater risk and worse outcomes than adolescence. Young adults fared worse on about two-thirds of the indicators examined. Differences among sociodemographic subgroups persisted for both trends and current indicators.

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IMPLICATIONS AND CONTRIBUTION

Our review of trends and current status in adolescent and young adult health and health care identifies areas of improvement and where status has not improved. Informed by our findings, policymakers and professionals (e.g., clinicians and program managers) can effectively develop and prioritize their policies and programs and services.



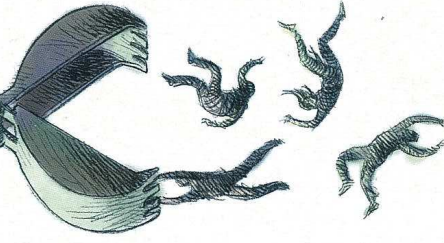
**The
Economist**

APRIL 27TH–MAY 3RD 2013

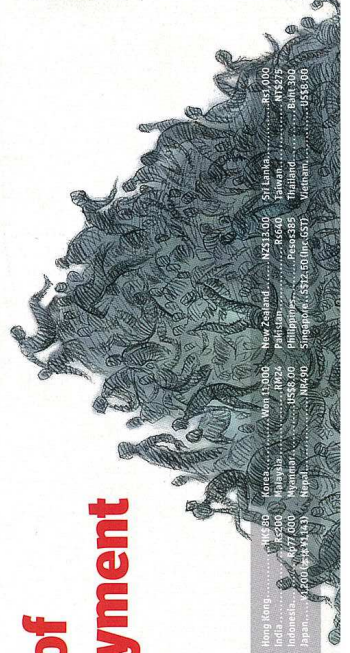
Economist.com

Time to scrap affirmative action
The Viking of low-cost airlines
Iran's fake messiahs
Can economists understand people?
Criminal bumblebees

Generation jobless



**The global rise of
youth unemployment**



17

71486 02674 7

Argentina	ARS110 (inc GST)	Hong Kong	HK\$150	Iran	IR\$1,000	Philippines	PHP800	Singapore	S\$12.00 (inc GST)	Vietnam	US\$8.00
Brazil	US\$1.00	India	IN\$1,000	Japan	¥1,000	South Korea	₩1,000	Sri Lanka	LKR1,000	Thailand	TH\$300
Canada	US\$8.00	Indonesia	IN\$1,000	Malaysia	MY\$1.00	Taiwan	NT\$1,000	United Kingdom	£1.00	USA	US\$1.00
China	RMB 75	South Africa	R\$1.00	USA	US\$1.00	USA	US\$1.00	USA	US\$1.00	USA	US\$1.00

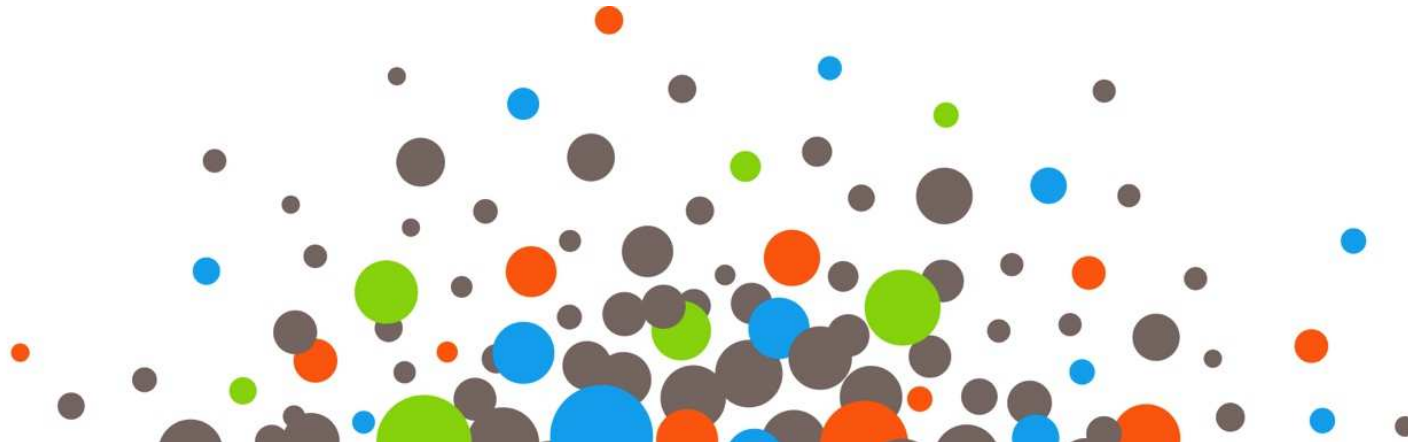
Tell them they're dreaming

Work, Education and Young People
with Mental Illness in Australia



BOUNDARIES AND NEED
FOR CARE

DIAGNOSIS WITH UTILITY



DEFINING NORMAL AND A THRESHOLD FOR ACCESS TO CARE

home **J M B** mission
read journal of mundane behavior who
submit csuf



Let children cry

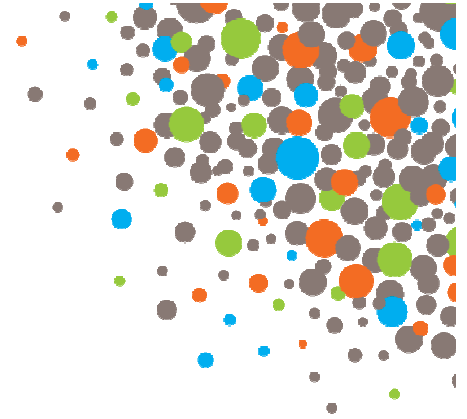
Better to be good at feelings than to feel good

Our society is intolerant and disrespectful of young people's distress. We seem to dislike it when young people are angry, ashamed, frightened, sad or disappointed. There is strong encouragement to consider such distress as being a precursor of disease,¹ so that parents, doctors and teachers are prone to label and intervene rather than sit with ordinary, healthy, but distressing feelings.

Distressed children are already inclined to numb themselves with drugs or alcohol.



“NORMAL” PEOPLE HAVE A NEED/RIGHT TO HEALTH CARE!



- Normal and high risk pregnancy
- Preventive health care: CVD, Cancer, Diabetes (NNT)
- Transient illness even if mostly benign (eg URTI, Flu)
- Illnesses that cluster within a certain life stage and tend to resolve or “desist” (asthma, DSH)
- Illnesses that are largely benign and self-limiting yet cause suffering, carry risk for persistence or recurrence, and can even kill....
- Many common mental disorders ie mild to moderate have these features (See G. Patton)
- So why is offering equity and a level playing field so contentious in mental health?

KEY FACTORS

- OVERTREATMENT AND OTHER IATROGENESIS –
(However UNDERTREATMENT is much more widespread and actually drives overtreatment)
- STIGMA/LABELLING
- “THE SOFT BIGOTRY OF LOW EXPECTATIONS”
- LACK OF CONFIDENCE IN VALUE OF INTERVENTIONS
- POOR OR INCONSISTENT QUALITY AND CULTURE OF CARE – AVERSIVE RESPONSES
- This is in large part due to serious underfunding and results in major access problems, inappropriate and delayed treatment, and further reduces quality and effectiveness of care and stigma

Predicting Psychosis

Meta-analysis of Transition Outcomes in Individuals at High Clinical Risk

Paolo Fusar-Poli, MD, PhD; Ilaria Bonoldi, MD; Alison R. Yung, PhD; Stefan Borgwardt, PhD; Matthew J. Kempton, PhD; Lucia Valmaggia, PhD; Francesco Barale, PhD; Edgardo Caverzasi, PhD; Philip McGuire, PhD

Context: A substantial proportion of people at clinical high risk of psychosis will develop a psychotic disorder over time. However, the risk of transition to psychosis varies between centers, and some recent work suggests that the risk of transition may be declining.

Objective: To quantitatively examine the literature to date reporting the transition risk to psychosis in subjects at clinical high risk.

Data Sources: The electronic databases were searched until January 2011. All studies reporting transition risks in patients at clinical high risk were retrieved.

Study Selection: Twenty-seven studies met the inclusion criteria, comprising a total of 2502 patients.

Data Extraction: Transition risks, as well as demographic, clinical, and methodologic variables, were extracted from each publication or obtained directly from its authors.

Data Synthesis: There was a consistent transition risk, independent of the psychometric instruments used, of 18% after 6 months of follow-up, 22% after 1 year, 29% after 2 years, and 36% after 3 years. Significant moderators accounting for heterogeneity across studies and influencing the transition risk were the age of participants, publication year, treatments received, and diagnostic criteria used. There was no publication bias, and a sensitivity analysis confirmed the robustness of the core findings.

Conclusions: The state of clinical high risk is associated with a very high risk of developing psychosis within the first 3 years of clinical presentation, and the risk progressively increases across this period. The transition risk varies with the age of the patient, the nature of the treatment provided, and the way the syndrome and transition to psychosis are defined.

Parity vs Stigma?

Diabetes 1



Prediabetes: a high-risk state for diabetes development

Adam G Tabák, Christian Herder, Wolfgang Rathmann, Eric J Brunner, Mika Kivimäki

Prediabetes (intermediate hyperglycaemia) is a high-risk state for diabetes that is defined by glycaemic variables that are higher than normal, but lower than diabetes thresholds. 5–10% of people per year with prediabetes will progress to diabetes, with the same proportion converting back to normoglycaemia. Prevalence of prediabetes is increasing worldwide and experts have projected that more than 470 million people will have prediabetes by 2030. Prediabetes is associated with the simultaneous presence of insulin resistance and β -cell dysfunction—abnormalities that start before glucose changes are detectable. Observational evidence shows associations between prediabetes and early forms of nephropathy, chronic kidney disease, small fibre neuropathy, diabetic retinopathy, and increased risk of macrovascular disease. Multifactorial risk scores using non-invasive measures and blood-based metabolic traits, in addition to glycaemic values, could optimise estimation of diabetes risk. For prediabetic individuals, lifestyle modification is the cornerstone of diabetes prevention, with evidence of a 40–70% relative-risk reduction. Accumulating data also show potential benefits from pharmacotherapy.

Published Online

June 9, 2012

DOI:10.1016/S0140-

6736(12)60283-9

This is the first in a Series of three papers about diabetes

Department of Epidemiology and Public Health, University College London, London, UK (A G Tabák MD, E J Brunner PhD, Prof M Kivimäki PhD);

1st Department of Internal Medicine, Faculty of Medicine, Comenius University, Bratislava, Slovakia

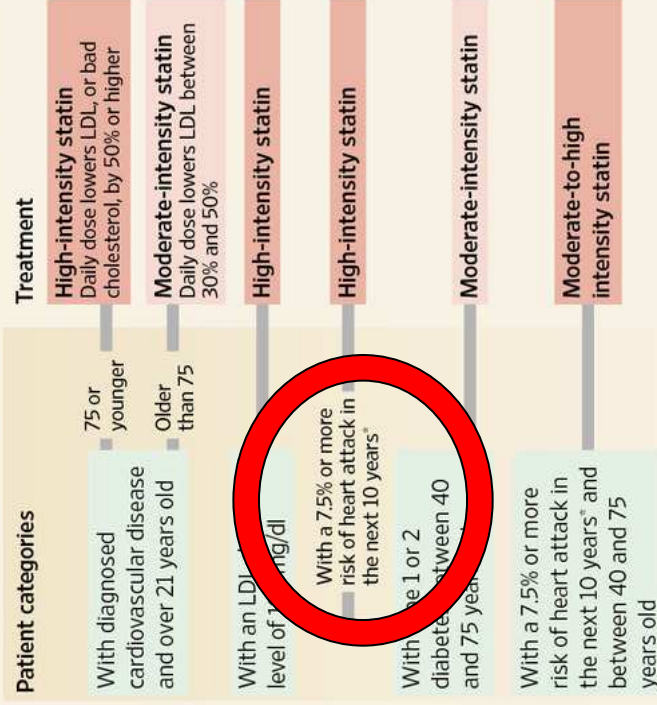
2013 ACC/AHA Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults: A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines

Neil J. Stone, Jennifer Robinson, Alice H. Lichtenstein, C. Noel Bailey Merz, Conrad B. Blum, Robert H. Eckel, Anne C. Goldberg, David Gordon, Daniel Levy, Donald M. Lloyd-Jones, Patrick McBride, J. Sanford Schwartz, Susan T. Shero, Sidney C. Smith, Jr, Karol Watson and Peter W.F. Wilson

Circulation is published online November 12, 2013; published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231. Copyright © 2013 American Heart Association, Inc. All rights reserved. Print ISSN: 0009-7322. Online ISSN: 1524-4539

New Prescription

New guidelines to reduce heart-attack risk replace long-standing cholesterol targets with recommendations for prescribing cholesterol-lowering statins to patients who fall into four different risk categories.



*Risk determined by a new calculation that accounts for age, cholesterol, blood pressure, smoking status and other risks experienced by men, women and minority groups.

Sources: American Heart Association; American College of Cardiology The Wall Street Journal

ONLINE FIRST

Long-term Follow-up of a Group at Ultra High Risk (“Prodromal”) for Psychosis

The PACE 400 Study

Barnaby Nelson, PhD; Hoï-Pue Yuen, MSc; Stephen J. Wood, PhD; Adelaide Lin, PhD; Daniela Spiliotopoulos, MSc; Annie Brunner, BA; Christina Broussard, BA; Magenta Sammons, PhD; Debra L. Foley, PhD; Warrick J. Brewer, PhD; Shona M. Prunty, PhD; G. Paul Amminger, MD; Andrew Thompson, PhD; Patrick D. McGorry, PhD; Alison R. Young, MD

Importance: The ultra high-risk (UHR) criteria were introduced to prospectively identify patients at high risk of psychotic disorder. Although the short-term outcome of UHR patients has been well researched, the long-term outcome is not known.

Objective: To assess the rate and baseline predictors of transition to psychotic disorder in UHR patients up to 13 years after study entry.

Design: Follow-up study of a cohort of UHR patients recruited to participate in research studies between 1993 and 2000.

Setting: The Personal Assessment and Crisis Evaluation (PACE) clinic, a specialized service for UHR patients in Melbourne, Australia.

Participants: Four hundred sixteen UHR patients previously seen at the PACE clinic.

Main Outcomes and Measures: Transition to psychotic disorder as measured using the Comprehensive Assessment of At Risk Mental States, Brief Psychiatric Rating Scale/Comprehensive Assessment of Symptoms and History, or state public mental health records.

Results: During the time to follow-up (2.4–14.9 years after presentation), 114 of the 416 participants were known to have developed a psychotic disorder. The highest risk for transition was within the first 2 years of entry into the service, but individuals continued to be at risk up to 10 years after initial referral. The overall rate of transition was estimated to be 34.9% over a 10-year period (95% CI, 28.7%–40.6%). Factors associated with transition included year of entry into the clinic, duration of symptoms before clinic entry, baseline functioning, negative symptoms, and disorders of thought content.

Conclusions and Relevance: The UHR patients are at long-term risk for psychotic disorder, with the highest risk in the first 2 years. Services should aim to follow up patients for at least this period, with the possibility to return for care after this time. Individuals with a long duration of symptoms and poor functioning at the time of referral may need closer monitoring. Interventions to improve functioning and detect help-seeking UHR patients earlier also may be indicated.

JAMA Psychiatry.

Published online June 5, 2013.

doi:10.1001/jamapsychiatry.2013.1270

Outcomes of Nontransitioned Cases in a Sample at Ultra-High Risk for Psychosis

Ashleigh Lin, Ph.D.

Stephen J. Wood, Ph.D.

Barnaby Nelson, Ph.D.

Amanda Beavan, B.Sc.

Patrick McGorry, M.D., Ph.D.,
F.R.A.N.Z.C.P.

Alison R. Yung, M.D.,
F.R.A.N.Z.C.P.

Objective: Two-thirds of individuals identified as at ultra-high risk for psychosis do not develop psychotic disorder over the medium term. The authors examined outcomes in a group of such patients.

Method: Participants were help-seeking individuals identified as being at ultra-high risk for psychosis 2–14 years previously. The 226 participants (125 female, 101 male) completed a follow-up assessment and had not developed psychosis. Their mean age at follow-up was 25.5 years ($SD=4.8$).

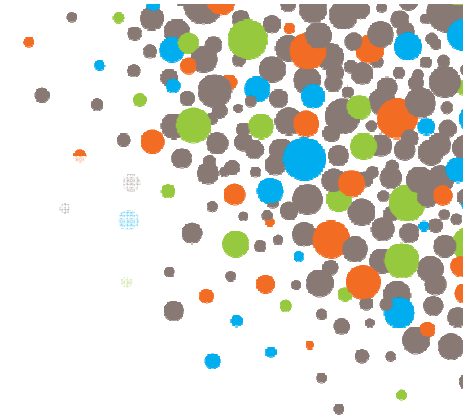
Results: At follow-up, 28% of the participants reported attenuated psychotic symptoms. Over the follow-up period, 68% experienced nonpsychotic disorders: mood disorder in 49%, anxiety disorder in 35%, and substance use disorder in 29%. For the majority (90%), nonpsychotic disorder was present at baseline, and it persisted for

52% of them. During follow-up, 26% of the cohort had remission of a disorder, but 38% developed a new disorder. Only 7% did not experience any disorder at baseline or during follow up. The incidence of nonpsychotic disorder was associated with more negative symptoms at baseline. Female participants experienced higher rates of persistent or recurrent disorder. Meeting criteria for brief limited intermittent psychotic symptoms at intake was associated with lower risk for persistent or recurrent disorder.

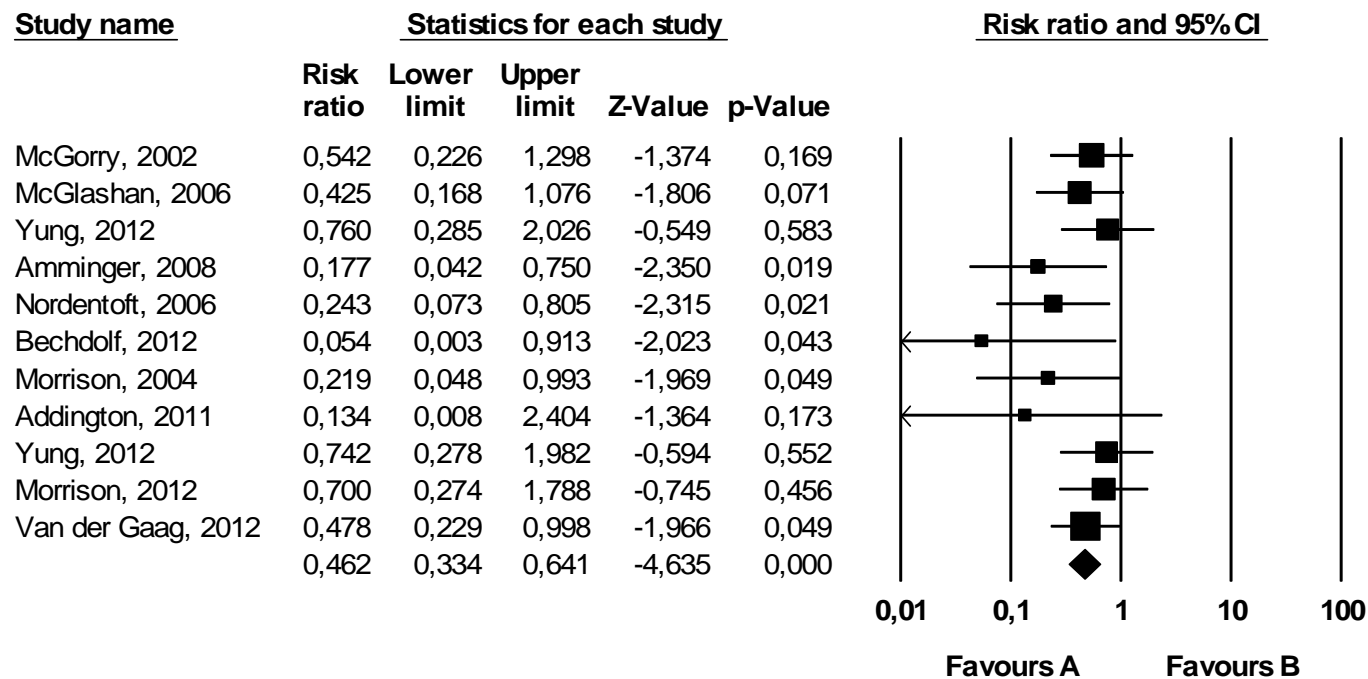
Conclusions: Individuals at ultra-high risk for psychosis who do not transition to psychosis are at significant risk for continued attenuated psychotic symptoms, persistent or recurrent disorders, and incident disorders. Findings have implications for ongoing clinical care.

Am J Psychiatry Lin et al.; *AiA*:1–10

Van der Gaag et al (2013)



Forest plot of Risk Ratios at 12 months



Participating sites and numbers recruited (N=304)



Schizophrenia Bulletin Advance Access published November 11, 2014

Schizophrenia Bulletin

doi:10.1093/schbul/sbu161

EDITORIAL

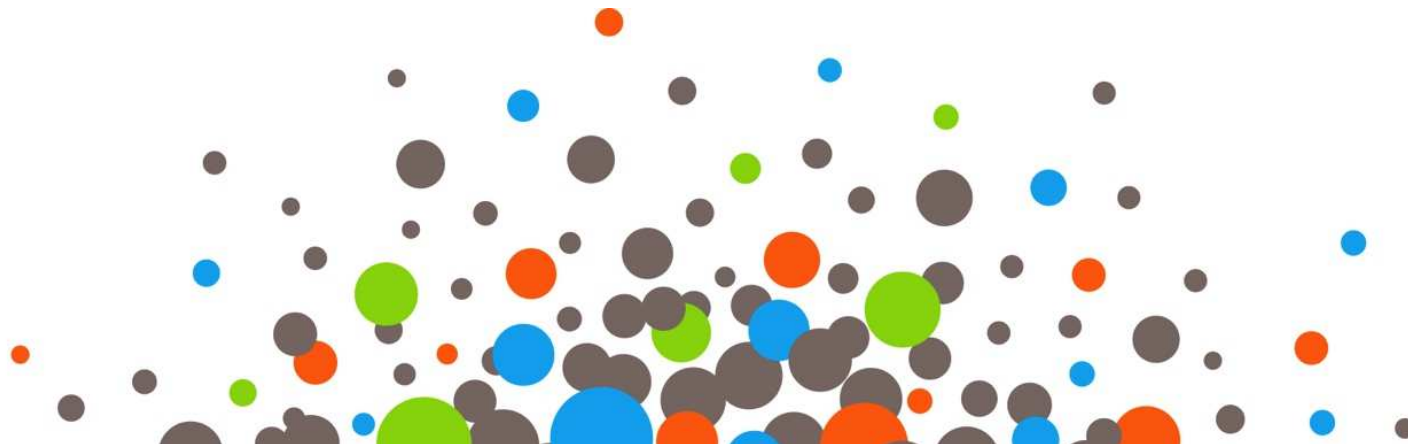
Preventing the Onset of Psychosis: Not Quite There Yet

Robert K. Heinsen^{*,1} and Thomas R. Insel¹

¹National Institute of Mental Health, Bethesda, MD

^{*}To whom correspondence should be addressed; National Institute of Mental Health Room 7141, Mail Stop 9629 6001 Executive Blvd, Bethesda, MD 20892-9629, US; tel: 301-435-0371, fax: 301-443-4045, e-mail: rheinsse@mail.nih.gov

BEYOND EARLY PSYCHOSIS: DIAGNOSIS WITH UTILITY





Redeeming diagnosis in psychiatry: timing versus specificity

Patrick McGorry, Jim van Os

In general medicine, diagnosis is a crucial step in the choice of appropriate treatment, prediction of the future course of an illness, education of patients and families, and helping patients to realise that they are not alone. By contrast, in psychiatry, attitudes to diagnosis remain mixed and polarised, and the value of diagnosis is continuously questioned. With revisions to the international diagnostic systems for psychiatry on the horizon, this deep ambivalence—derived from Cartesian tensions between “mindless” and “brainless” perspectives¹—has surfaced once again, breathing new life into an enduring culture war.² How can this impasse be overcome? What is diagnosis actually about?

Essentially, diagnosis is classification with utility.³ The aims are to characterise the clinical phenotype in a condensed or shorthand way that helps to distinguish people who are ill and in need of health care from those who are not, and to genuinely improve selection of treatment and prediction of outcomes. Utility in medicine is the ultimate test, and this utilitarian definition is necessary and sufficient to justify the diagnosis strategy in clinical practice. Value might be added to a diagnosis if

little more than incremental and desultory change is expected in the forthcoming new versions of the DSM and International Classification of Diseases (ICD), which are increasingly buffeted by the forces of public opinion, politics, and ideology.^{4–11} A transformation is needed, but is it feasible?

Mental ill health has to start somewhere. Eaton and colleagues¹² described how symptoms arise either from intensification of subjective experiences or behaviours that have been present for some time or from acquisition of new experiences or behaviours, or most frequently from a combination of both. Human experience involves periodic and sometimes intense and mercurial changes in affect and salience in response to the social environment. When these changes become more prominent, they can be discerned as so-called subclinical microphenotypes, which wax and wane, interact sequentially, or become confluent, and might mature or stabilise towards pure or hybrid macrophenotypes.¹³ This process is undeniably fluid and dimensional, and several (but not endless) dimensions of psychopathology can be readily identified, such as aberrant salience and affective

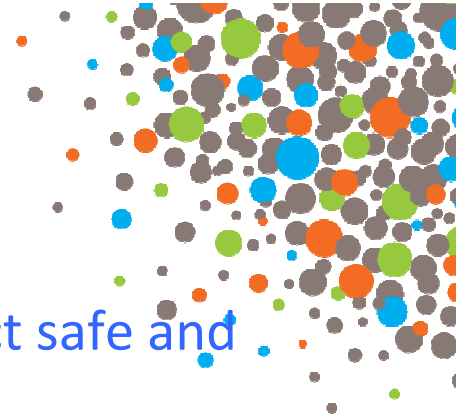
Lancet 2013; 381: 343–45

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Lancet Jan 26th 2013

CLINICAL STAGING



- Staging is a useful subtyping strategy to help select safe and effective treatments and predict outcome
- A more refined method of diagnosis
- Staging benefits
 - restore the utility of diagnosis
 - promote early intervention
 - Clarify confusing array of biological research findings in psychiatry, by organising data into a coherent clinico-pathological framework.
- Key principles:
 - Treatment needs differ by stage
 - Treatment more benign and effective in earlier stages

(McGorry et al 2006, 2010; McGorry 2007)

Clinical staging of psychiatric disorders: a heuristic framework for choosing earlier, safer and more effective interventions

Patrick D. McGorry, Ian B. Hickie, Alison R. Young, Christina Pantelis, Henry J. Jackson



ANZJoP 2006

AJP 2007

Editorial

As the American Psychiatric Association committees begin formal work on DSM-V, we welcome brief editorials on issues that should be considered in its formulation.

Issues for DSM-V: Clinical Staging: A Heuristic Pathway to Valid Nosology and Safer, More Effective Treatment in Psychiatry

Clinical staging is a proven strategy whose value is clear in the treatment of malignancies and many other medical conditions in which the quality of life and survival rely on the earliest possible delivery of effective interventions, yet it has not been explicitly endorsed in psychiatry (1–4). Clinical staging differs from conventional diagnostic practice in that it defines the progression of disease in time and where a person lies along this continuum of the course of illness. It enables the clinician to select treatments relevant to earlier stages because such interventions may be more effective and less harmful than treatments delivered later in the illness course (5). Although staging links treatment selection and prediction, its role in the former is more crucial than in the latter, particularly since early successful treatment may change the prognosis and thus prevent progression to subsequent stages.

A disorder that is potentially severe and may progress if untreated is likely to be most appropriate for staging. Treatment and particularly early treatment should also demonstrably increase the chances of cure or at least of reducing mortality and disability. This could include

“Defining discrete stages according to progression of disease creates a prevention-oriented framework for understanding pathogenesis and evaluation of interventions.”

Can J Psychiatry 2010

Can J Psychiatry 2013;58(1):xxx-xxx

Guest Editorial

Early Clinical Phenotypes and Risk for Serious Mental Disorders in Young People: Need for Care Precedes Traditional Diagnoses in Mood and Psychotic Disorders

Patrick McGorry, AO, MD, PhD, FRCP, FRANZCP, FASSA¹

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Editorial

Clinical staging in psychiatry:
a cross-cutting model of diagnosis
with heuristic and practical valueJan Scott, Marion Leboyer, Ian Hickie, Michael Berk, Flavio Kapczinski,
Ellen Frank, David Kupfer and Patrick McGorry

Summary

Staging models are used routinely in general medicine for potentially serious or chronic physical disorders such as diabetes, arthritis and cancers, describing the links between biomarkers, clinical phenotypes and disease extension, and promoting a personalised or stratified medicine approach to treatment planning. Clinical staging involves a detailed description of where an individual exists on a continuum of disorder progression from stage 0 (an at-risk or latency stage) through to stage IV (late or end-stage disease). The approach is popular owing to its clinical utility and is increasingly being applied in psychiatry. The concept offers

an informed approach to research and the active promotion of indicated prevention and early intervention strategies. We suggest that for young persons with emerging bipolar disorder, such transdiagnostic staging models could provide a framework that better reflects the developmental psychopathology and matches the complex longitudinal inter-relationships between subsyndromal and syndromal mood, psychotic and other disorders.

Declaration of interest

None.

Molecular Psychiatry (2014), 1–9
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EXPERT REVIEW

All the world's a (clinical) stage: rethinking bipolar disorder
from a longitudinal perspective

E Frank, VL Nimgaonkar, ML Phillips and DJ Kupfer

Psychiatric disorders have traditionally been classified using a static, categorical approach. However, this approach falls short in facilitating understanding of the development, common comorbid diagnoses, prognosis and treatment of these disorders. We propose a 'staging' model of bipolar disorder that integrates genetic and neural information with mood and activity symptoms to describe how the disease progresses over time. From an early, asymptomatic, but 'at-risk' stage to severe, chronic illness, each stage is described with associated neuroimaging findings as well as strategies for mapping genetic risk factors. Integrating more biologic information relating to cardiovascular and endocrine systems, refining methodology for modeling dimensional approaches to disease and developing outcome measures will all be crucial in examining the validity of this model. Ultimately, this approach should aid in developing targeted interventions for each group that will reduce the significant morbidity and mortality associated with bipolar disorder.

Molecular Psychiatry advance online publication, 22 July 2014; doi:10.1038/mp.2014.71

In Review

Clinical Staging: A Heuristic and Practical Strategy for
New Research and Better Health and Social Outcomes
for Psychotic and Related Mood DisordersPatrick D McGorry, MD, PhD, FRCP, FRANZCP¹; Barnaby Nelson, MPsy (Clin), PhD²;
Sherilyn Goldstone, PhD³; Alison R Yung, MD, MPM, FRANZCP⁴

Most mental illnesses emerge during adolescence and early adulthood, with considerable associated distress and functional decline appearing during this critical developmental phase. Our current diagnostic system lacks therapeutic validity, particularly for the early stages of mental disorders when symptoms are still emerging and intensifying and have not yet stabilized sufficiently to fit the existing syndromal criteria. While this is, in part, due to the difficulty of distinguishing transient developmental or normative changes from the early symptoms of persistent and disabling mental illness, these factors have contributed to a growing movement for the reform of our current diagnostic system to more adequately inform the choice of therapeutic strategy, particularly in the early stages of a mental illness. The clinical staging model, which defines not only the extent of progression of a disorder at a particular point in time but also where a person lies currently along the continuum of the course of an illness, is particularly useful as it differentiates early, milder clinical phenomena from those that accompany illness progression and chronicity. This will not only enable clinicians to select treatments relevant to earlier stages of an illness, where such interventions are likely to be more effective and less harmful than treatments delivered later in the course of illness, but also allow a more efficient integration of our rapidly expanding knowledge of the biological, social, and psychological vulnerability factors involved in the development of mental illness into a useful diagnostic framework.

Can J Psychiatry. 2010;55(8):486–497.

Editorials

Editorials

Clinical staging for mental disorders:
a new development in diagnostic
practice in mental health

Matching the timing and intensity of interventions to the specific needs of patients

Ian B Hickie
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Executive Director¹

Jan Scott
MB BS, MD, FRCPsych,
Professor of Psychological
Medicine²

Patrick D McGorry
MD, PhD, FRANZCP,
Executive Director³ and
Head⁴

The release of the fifth edition of the *Diagnostic and statistical manual of mental disorders* (DSM-5)¹ classification system, scheduled for May 2013, will create controversy due to the expanded range of problems now classed as mental disorders. However, in our view, it is unlikely to improve clinical care. The ultimate test for any system of diagnosis is its clinical utility. That is, does it assist clinicians to improve their selection or sequencing of treatments and enable them to make more accurate

major mental disorders begin between 15 and 25 years of age, a focus on enhanced care and novel clinical research during this critical developmental phase is a timely test of this framework.^{5,8,9}

At its core, the clinical staging model recognises the full spectrum of illness experience. For example, for ischaemic heart disease, the staging model identifies individuals at risk (because of genetics, lifestyle or other risk factors), those with symptoms or related syndromes that suggest

COMMENTARY

Early Clinical Phenotypes, Clinical Staging, and Strategic Biomarker Research: Building Blocks for Personalized Psychiatry

Patrick D. McGorry

[Biological Psychiatry 2013;74:394-395](#)

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 PLOS ONE

Psychiatric Diagnosis Revisited: Towards a System of Staging and Profiling Combining Nomothetic and Idiographic Parameters of Momentary Mental States

Johanna T. W. Wigman^{1,2*}, Jim van Os^{1,3}, Evert Thiery⁴, Catherine Derom⁵, Dina Collip¹, Nele Jacobs^{1,6}, Marieke Wichers¹

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Origen: National Centre of Excellence in

Youth Mental Health

Original Investigation

Patterns of Heterotypic Continuity Associated With the Cross-Sectional Correlational Structure of Prevalent Mental Disorders in Adults

Benjamin B. Lahey, PhD, David H. Zuck, PhD, John K. Huhes, PhD, Robert F. Krueger, PhD, Paul J. Rathouz, PhD

IMPORTANCE: Mental disorders predict future occurrences of both the same disorder (homotypic continuity) and other disorders (heterotypic continuity). Heterotypic continuity is inconsistent with a view of mental disorders as fixed entities. In contrast, hierarchical-dimensional conceptualizations of psychopathology, in which each form of psychopathology is hypothesized to have both unique and broadly shared etiologies and mechanisms, predict both homotypic and heterotypic continuity.

OBJECTIVE: To test predictions derived from a hierarchical-dimensional model of psychopathology that (1) heterotypic continuity is widespread, even controlling for homotypic continuity, and that (2) the relative magnitudes of heterotypic continuities recapitulate the relative magnitudes of cross-sectional correlations among diagnoses at baseline.

DESIGN, SETTING, AND PARTICIPANTS: Ten prevalent diagnoses were assessed in the same person twice (ie, in 2 waves separated by 3 years). We used a representative sample of adults in the United States (ie, 28 058 participants 18–64 years of age in the National Epidemiologic Study of Alcohol and Related Conditions who were assessed in both waves).

MAIN RESULTS AND MEASURES: Diagnoses from reliable and valid structured interviews.

RESULTS: Adjusting for sex and age, we found that bivariate associations of all pairs of diagnoses from wave 1 to wave 2 exceeded chance levels ($P < .05$) for all homotypic (median tetrachoric correlation of $\rho = 0.54$ [range, 0.40–0.70]) and for nearly all heterotypic continuities (median tetrachoric correlation of $\rho = 0.28$ [range, 0.07–0.50]). Significant heterotypic continuity was widespread even when all wave 1 diagnoses (including the same diagnosis) were simultaneous predictors of each wave 2 diagnosis. The rank correlation between age- and sex-adjusted tetrachoric correlation for cross-sectional associations among wave 1 diagnoses and for heterotypic associations from wave 1 to wave 2 diagnoses was $\rho = 0.86$ ($P < .001$).

CONCLUSIONS AND RELEVANCE: For these prevalent mental disorders, heterotypic continuity was nearly universal and not an artifact of failure to control for homotypic continuity. Furthermore, the relative magnitudes of heterotypic continuity closely mirrored the relative magnitudes of cross-sectional associations among these disorders, consistent with the hypothesis that both sets of associations reflect the same factors. Mental disorders are not fixed and independent entities. Rather, each diagnosis is robustly related to other diagnoses in a correlational structure that is manifested both concurrently and in patterns of heterotypic continuity across time.

Author Affiliations: Department of Health Studies, University of Chicago, Chicago, Illinois (Lahey); Department of Psychology and Behavioral Neuroscience, University of Chicago, Illinois (Lahey); Department of Psychology, Vanderbilt University, Nashville, Tennessee (Zuck); Department of Psychiatry, Vanderbilt University, Nashville, Tennessee (Huhes); US Census Bureau, Suitland, Maryland (Lahey); Department of Psychology, University of Minnesota, Minneapolis (Krueger); Department of Biostatistics and Medical Informatics, University of Wisconsin School of Medicine and Public Health, Madison (Rathouz).
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THE GRAND DSM V RAILROAD

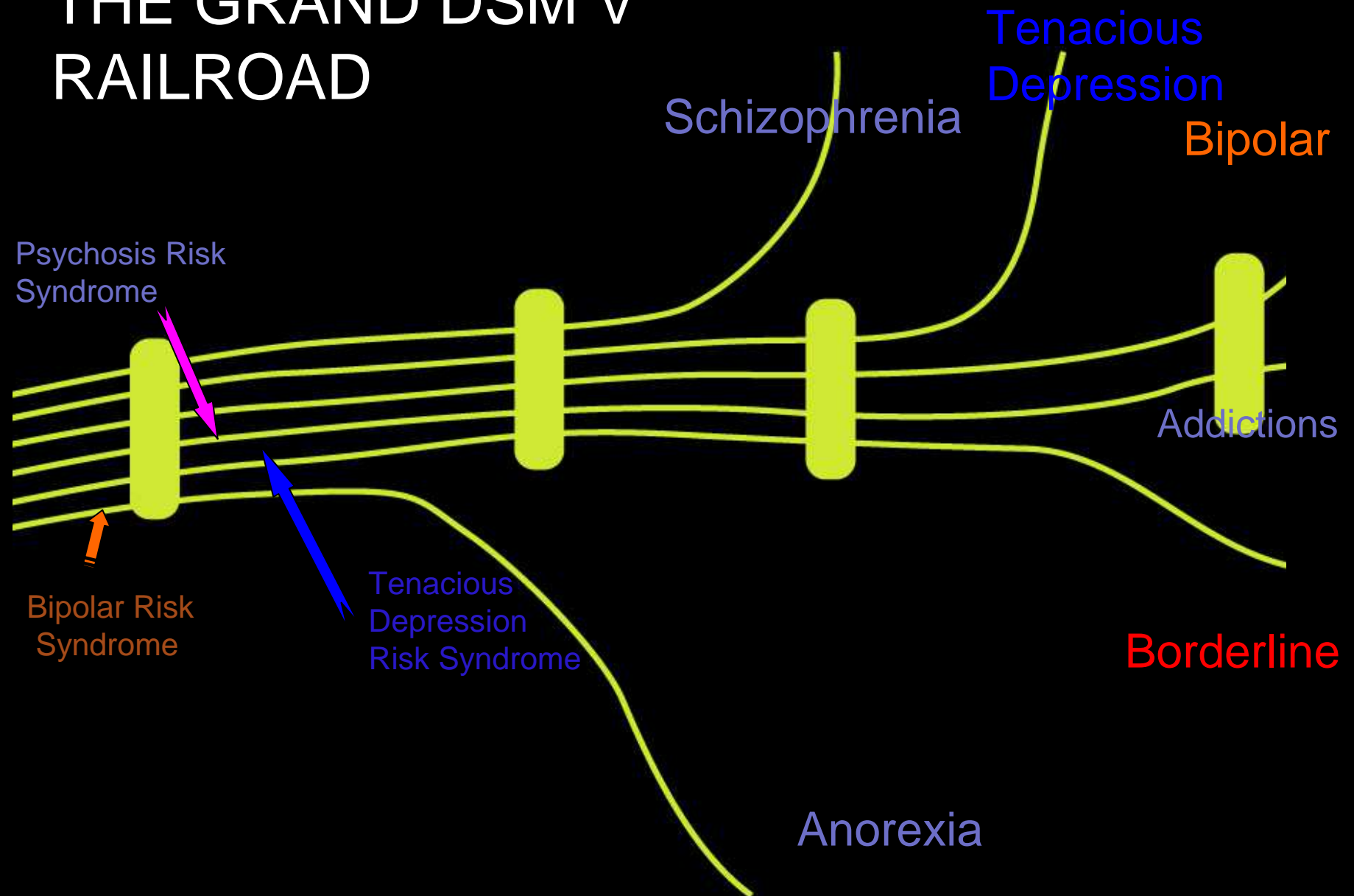
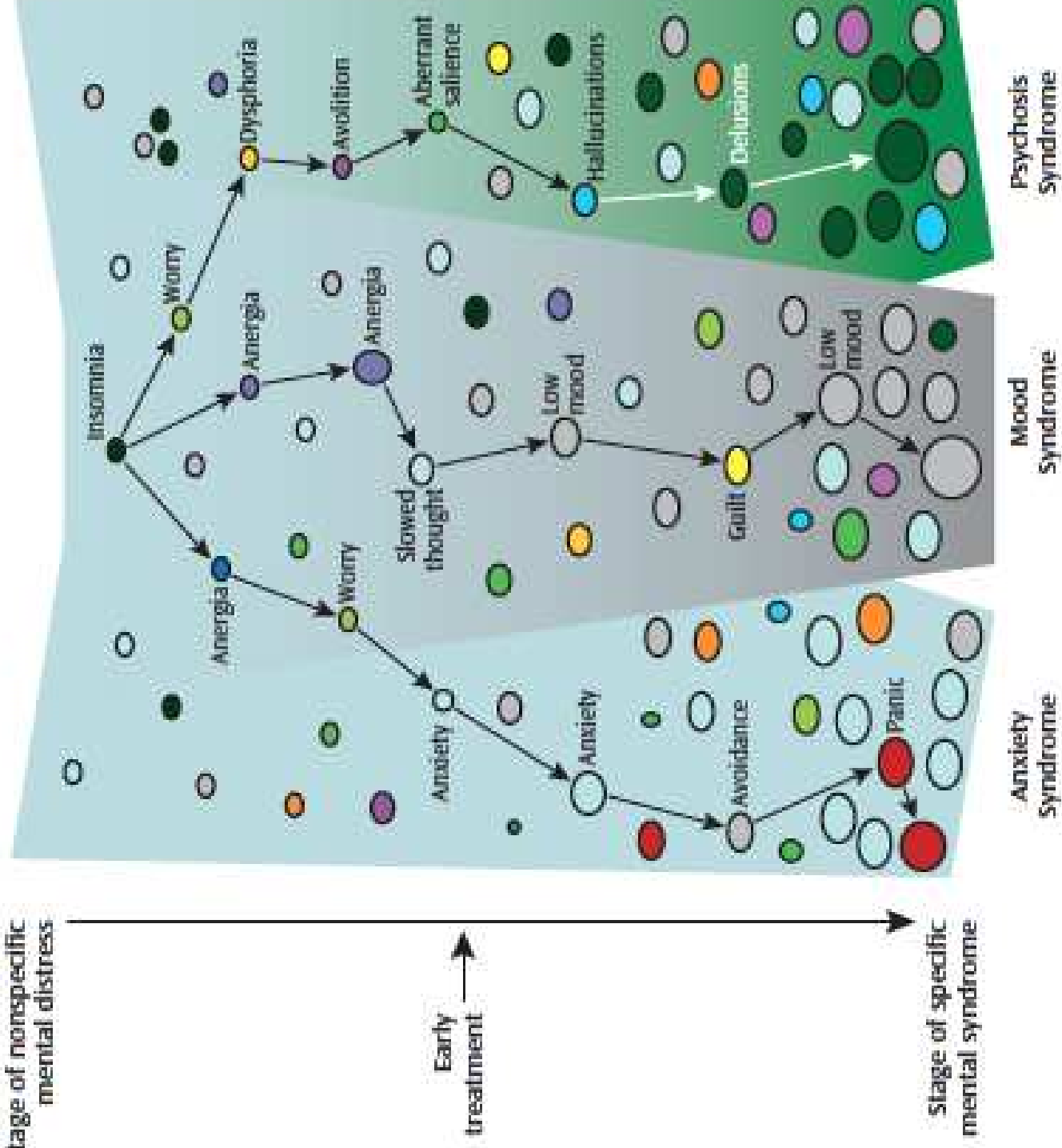
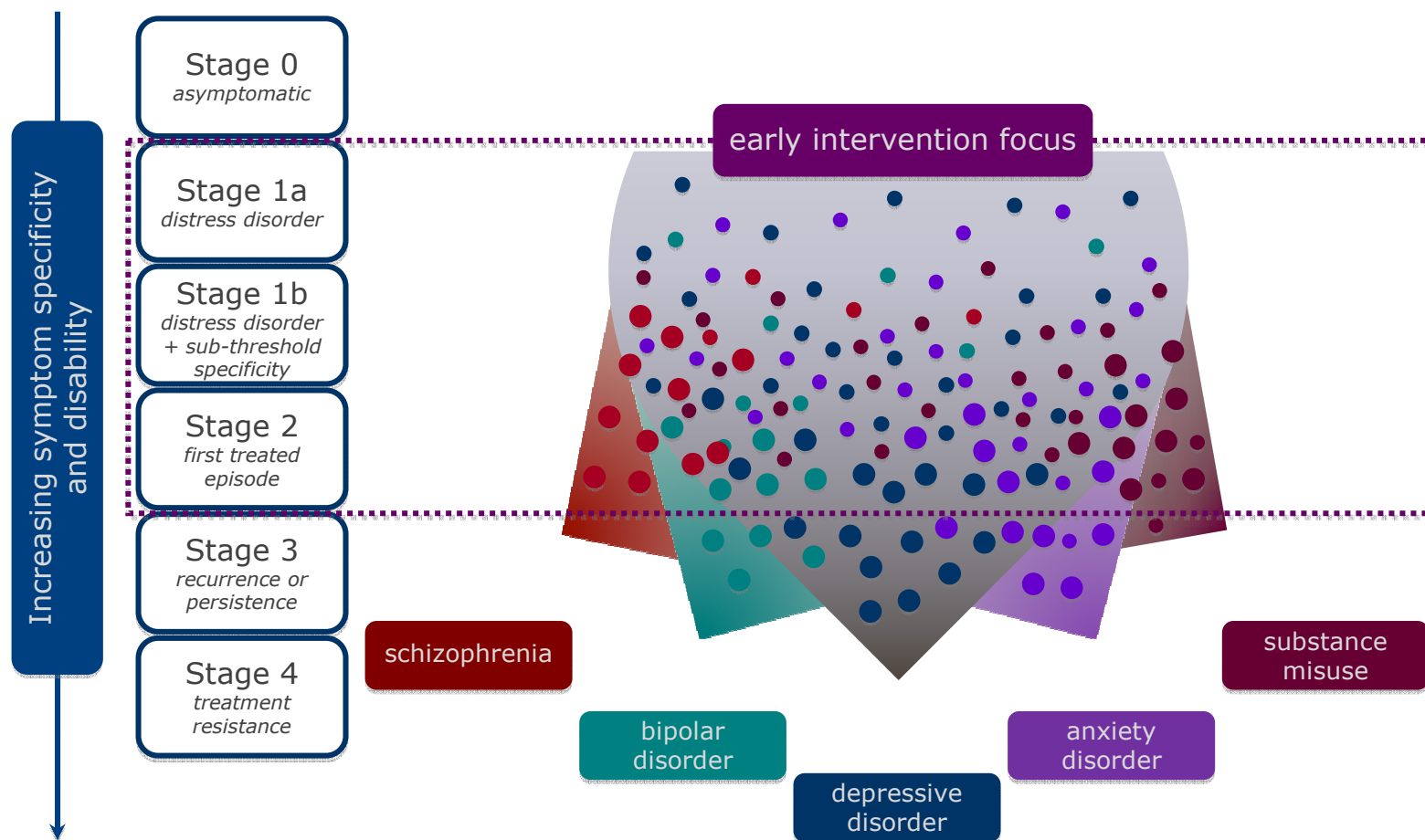


FIGURE 1. Staging Model of Causal Symptom Circuits^a



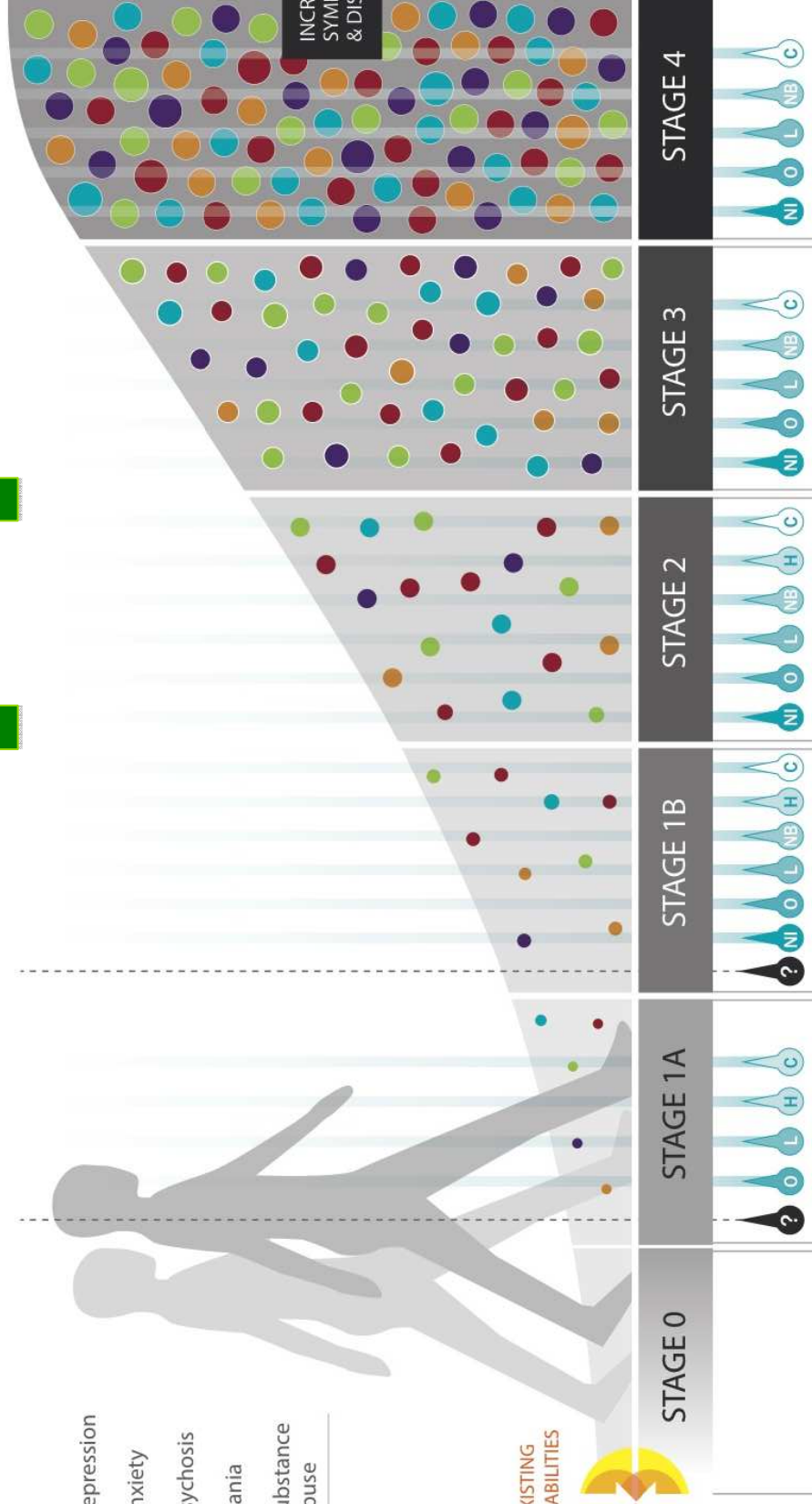
Clinical Staging: Diagnostic Utility And Stepwise Care



Staging Model of Mental Illness

- Depression
- Anxiety
- Psychosis
- Mania
- Substance Abuse

PRE-EXISTING VULNERABILITIES



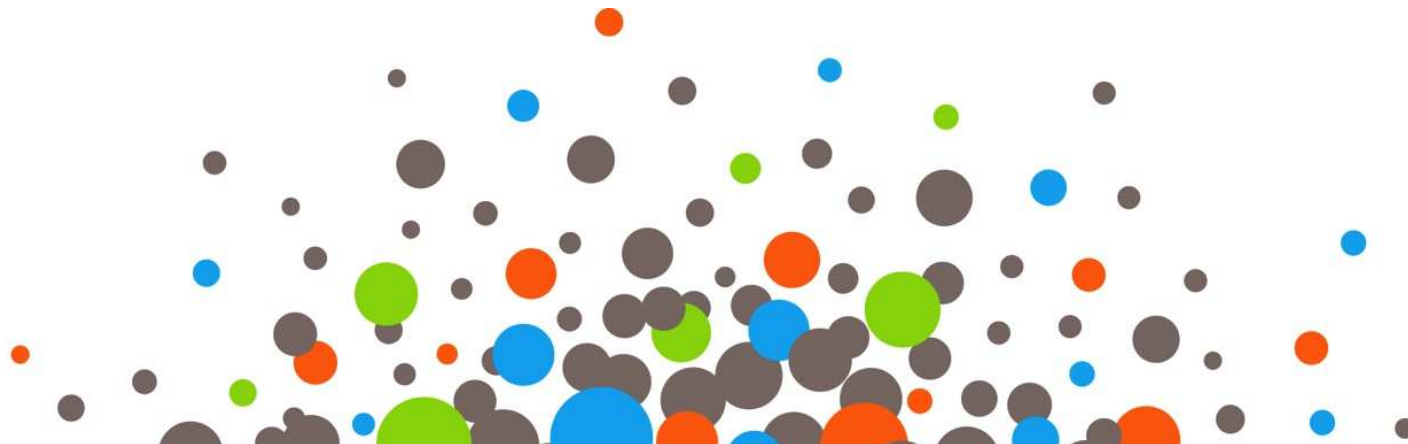
STEPWISE INTERVENTIONS

Eg. Diet > Exercise > Fish Oil > Psychosocial > CBT > Medication etc.

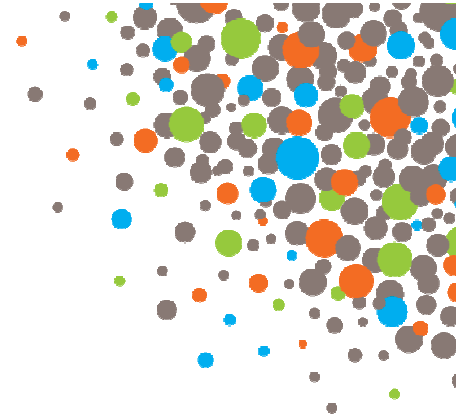
BIOMARKERS

- Neuroinflammation
- Oxidative Stress
- Lipid metabolism
- Neurobiology
- HPA Axis
- Chronobiology

THE NEW THERAPEUTICS OF EARLY INTERVENTION AND PERSONALISED CARE



STRATIFIED AND PERSONALISED CARE



- Clinical Staging and Profiling
- Enhanced with Risk and Biomarker Profiles (Wigman)
- Risk Classes (Ruhrmann)
- Machine Learning
- Cross-diagnostic
- SMART or Sequential approach

Biomarkers and clinical staging in psychiatry

**PATRICK MCGORRY¹, MATCHERI KESHAVAN², SHERILYN GOLDSTONE¹, PAUL AMMINGER¹, KELLY ALLOTT¹,
MICHAEL BERK^{1,3}, SUZIE LAVOIE¹, CHRISTOS PANTELIS⁴, ALISON YUNG⁵, STEPHEN WOOD⁶, IAN HICKIE⁷**

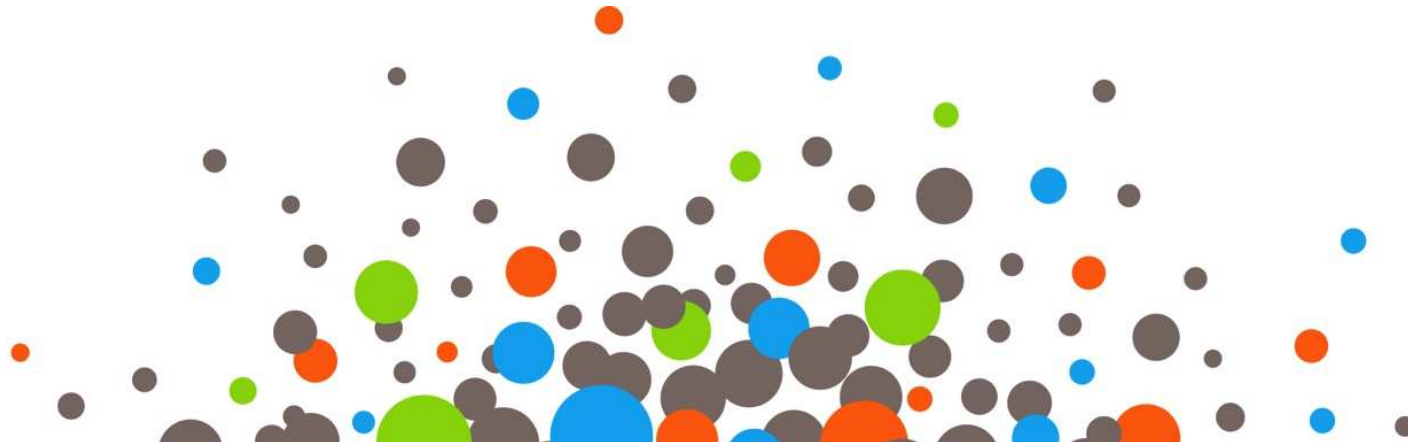
¹Orygen Youth Health Research Centre, Centre for Youth Mental Health, Department of Psychiatry, University of Melbourne, Melbourne, Australia; ²Beth Israel Deaconess Medical Centre, Harvard Medical School, Boston, MA, USA; ³School of Medicine, Deakin University, Geelong, Australia; ⁴Melbourne Neuropsychiatry Centre, Department of Psychiatry, University of Melbourne, Melbourne, Australia; ⁵Institute of Brain, Behaviour and Mental Health, University of Manchester, Manchester, UK; ⁶School of Psychology, University of Birmingham, Birmingham, UK; ⁷Brain and Mind Research Institute, University of Sydney, Sydney, Australia

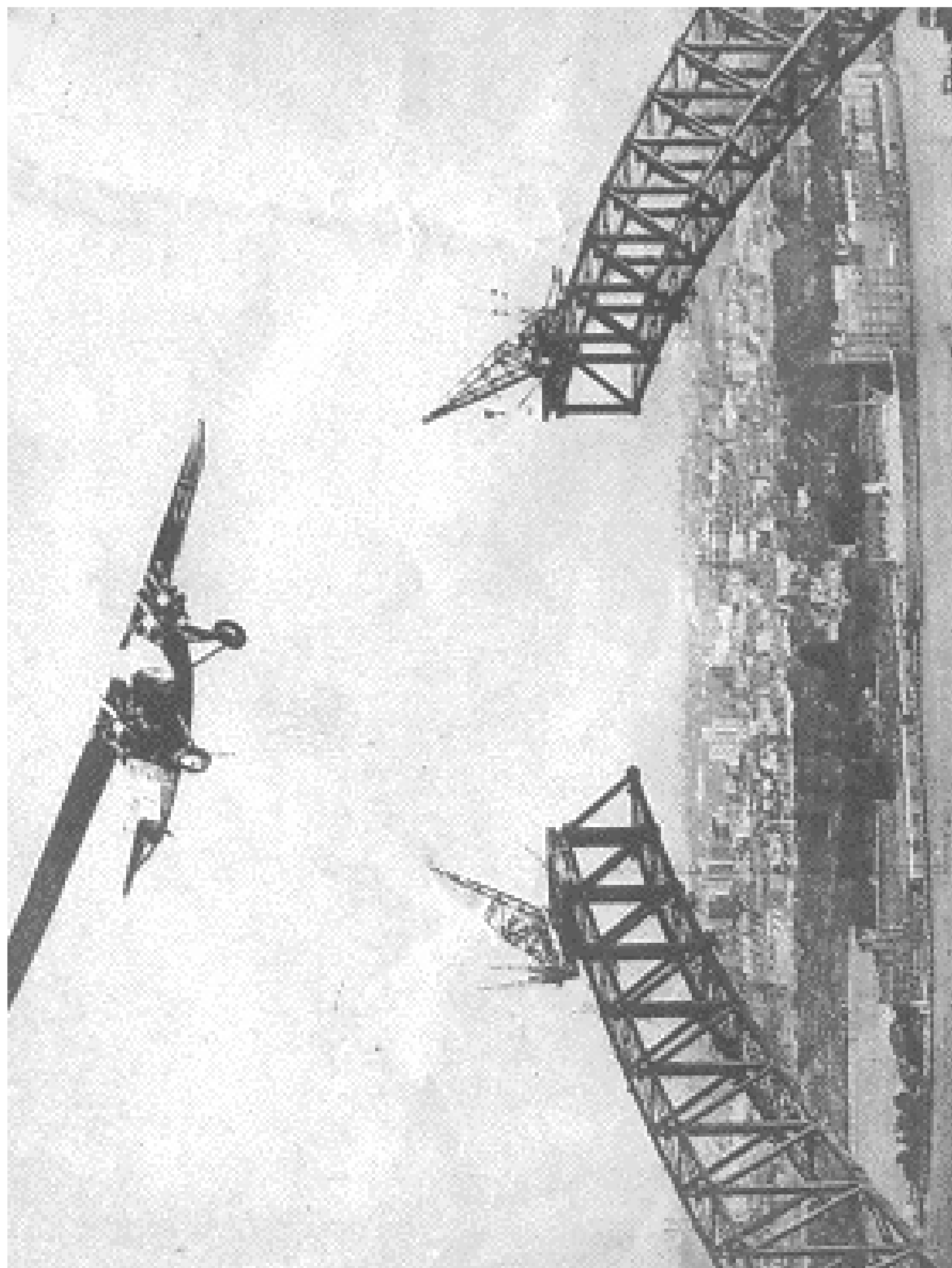
Personalized medicine is rapidly becoming a reality in today's physical medicine. However, as yet this is largely an aspirational goal in psychiatry, despite significant advances in our understanding of the biochemical, genetic and neurobiological processes underlying major mental disorders. Preventive medicine relies on the availability of predictive tools; in psychiatry we still largely lack these. Furthermore, our current diagnostic systems, with their focus on well-established, largely chronic illness, do not support a pre-emptive, let alone a preventive, approach, since it is during the early stages of a disorder that interventions have the potential to offer the greatest benefit. Here, we present a clinical staging model for severe mental disorders and discuss examples of biological markers that have already undergone some systematic evaluation and that could be integrated into such a framework. The advantage of this model is that it explicitly considers the evolution of psychopathology during the development of a mental illness and emphasizes that progression of illness is by no means inevitable, but can be altered by providing appropriate interventions that target individual modifiable risk and protective factors. The specific goals of therapeutic intervention are therefore broadened to include the prevention of illness onset or progression, and to minimize the risk of harm associated with more complex treatment regimens. The staging model also facilitates the integration of new data on the biological, social and environmental factors that influence mental illness into our clinical and diagnostic infrastructure, which will provide a major step forward in the development of a truly pre-emptive psychiatry.

Key words: Biomarkers, clinical staging, diagnostic reform, early intervention, personalized medicine, pre-emptive psychiatry, youth mental health

(World Psychiatry 2014;13:211–225)

A New Architecture and Culture of Care: Youth Mental Health





Adolescent mental health 2



Cultures for mental health care of young people: an Australian blueprint for reform

Patrick D McGorry, Sherrilyn D Goldstone, Alexandra G Parker, Debra J Rickwood, Ian B Hickie

Mental ill health is now the most important health issue facing young people worldwide. It is the leading cause of disability in people aged 10–24 years, contributing 45% of the overall burden of disease in this age group. Despite their manifest need, young people have the lowest rates of access to mental health care, largely as a result of poor awareness and help-seeking, structural and cultural flaws within the existing care systems, and the failure of society to recognise the importance of this issue and invest in youth mental health. We outline the case for a specific youth mental health stream and describe the innovative service reforms in youth mental health in Australia, using them as an example of the processes that can guide the development and implementation of such a service stream. Early intervention with focus on the developmental period of greatest need and capacity to benefit, emerging adulthood, has the potential to greatly improve the mental health, wellbeing, productivity, and fulfilment of young people, and our wider society.

Lancet Psychiatry 2014;
1: 559–68

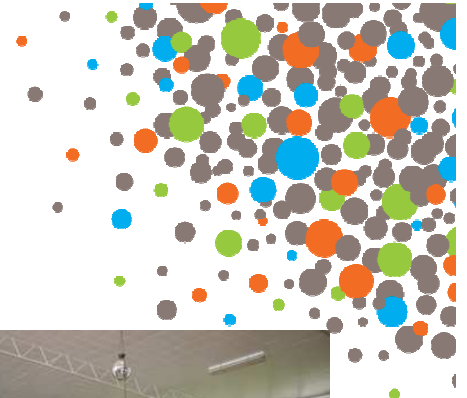
This is the second in a Series of three papers about adolescent mental health

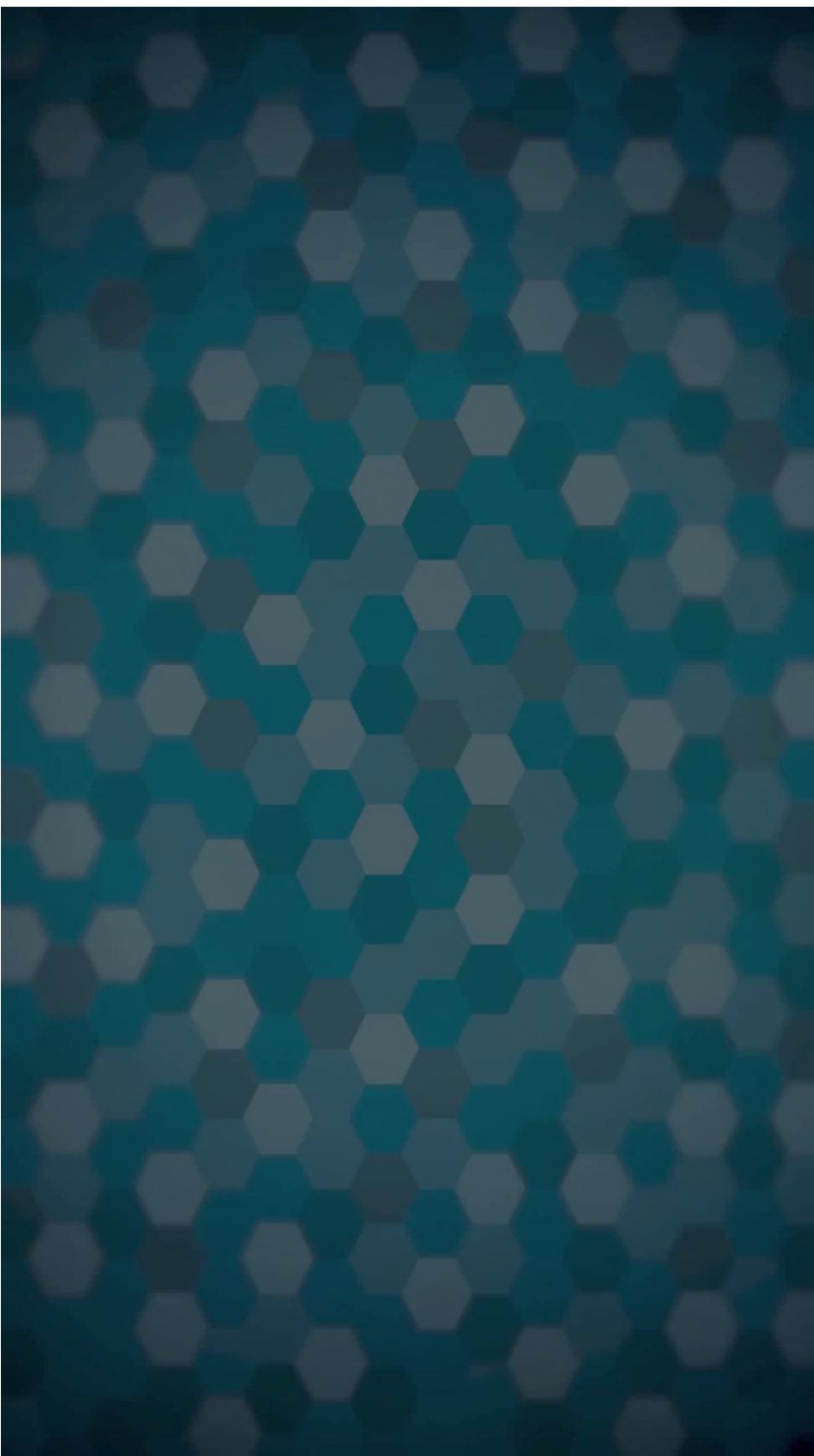
Orygen Youth Health Research Centre, Centre for Youth Mental Health, Department of Psychiatry, University of Melbourne, Melbourne, VIC, Australia (Prof P D McGorry MD,

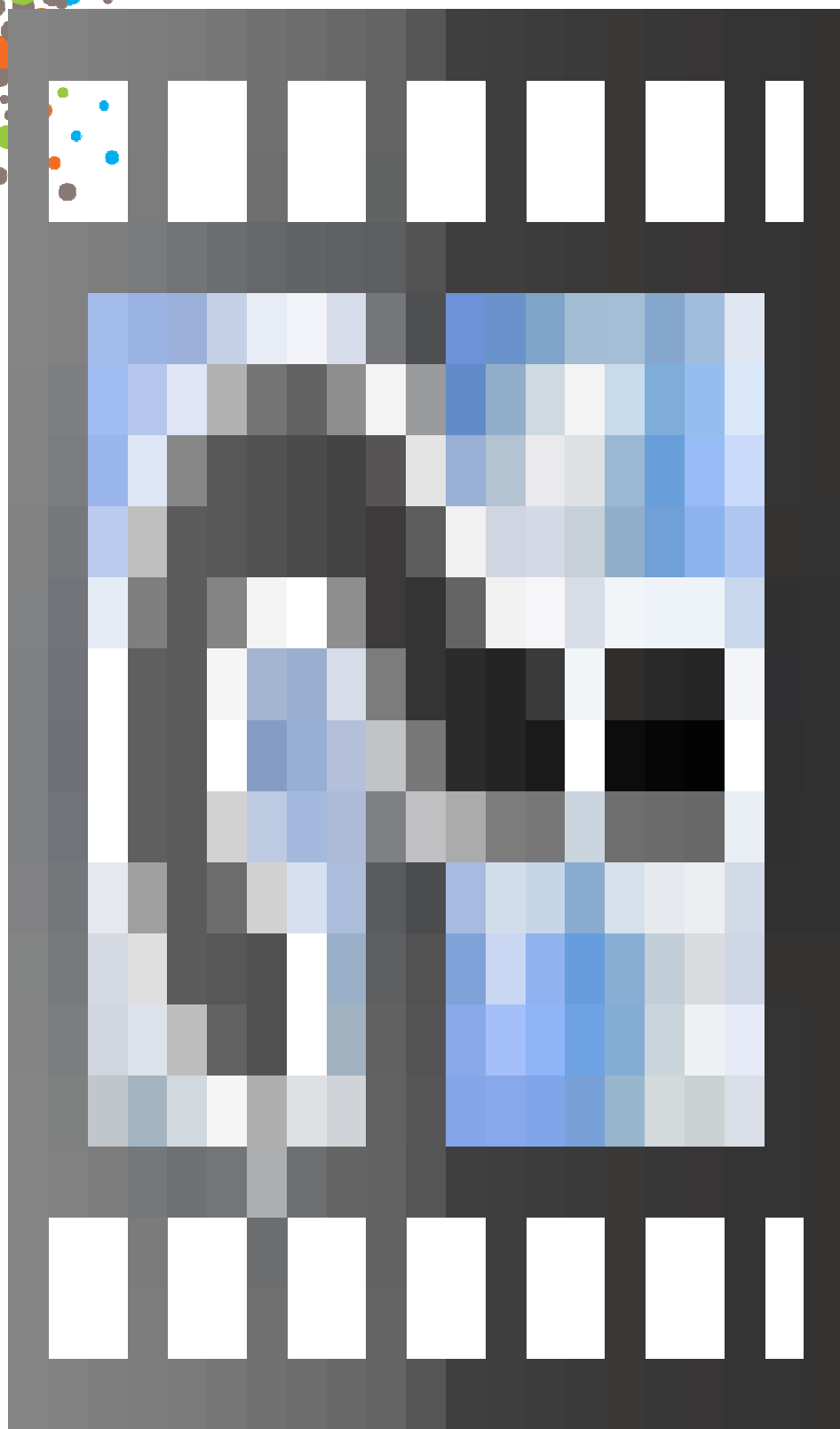
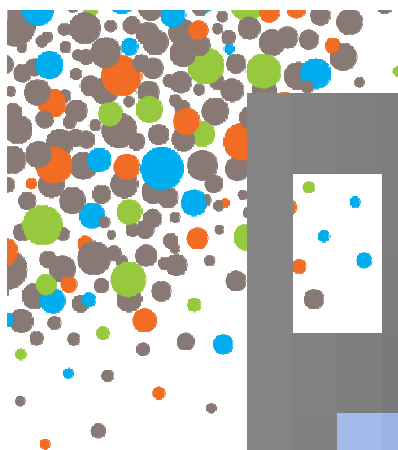




One stop service for mental health,
AOD, physical health, vocational
assistance that is youth friendly and
free or low cost







headspace centres 2014

Northern Territory

Alice Springs
Darwin

Western Australia

Albany
Broome
Bunbury
Rockingham
Armadale*
Kalgoorlie*

Perth

Fremantle
Joondalup
Midland
Osborne Park

South Australia

Adelaide
Edinburgh North
Noarlunga
Woodville
Norwood*

Tasmania

Hobart
Launceston

Queensland

Cairns
Hervey Bay
Ipswich
Mackay
Maroochydore
Mt Isa
Redcliffe

Rockhampton
Southport
Townsville
Warwick
Logan*
Toowoomba*

Brisbane

Inala
Nundah
Woolloongabba
Indooroopilly*

New South Wales

Bathurst
Coffs Harbour
Gosford
Lismore
Maitland
Newcastle
Nowra
Port Macquarie
Tamworth
Wagga Wagga
Wollongong
Dubbo*
Queanbeyan*
Tweed Heads*

Sydney

Brookvale
Campbelltown
Camperdown
Chatswood
Hurstville
Liverpool
Miranda
Mt Druitt
Parramatta
Penrith
Bankstown*
Bondi Junction*
Strathfield/Burwood*

ACT

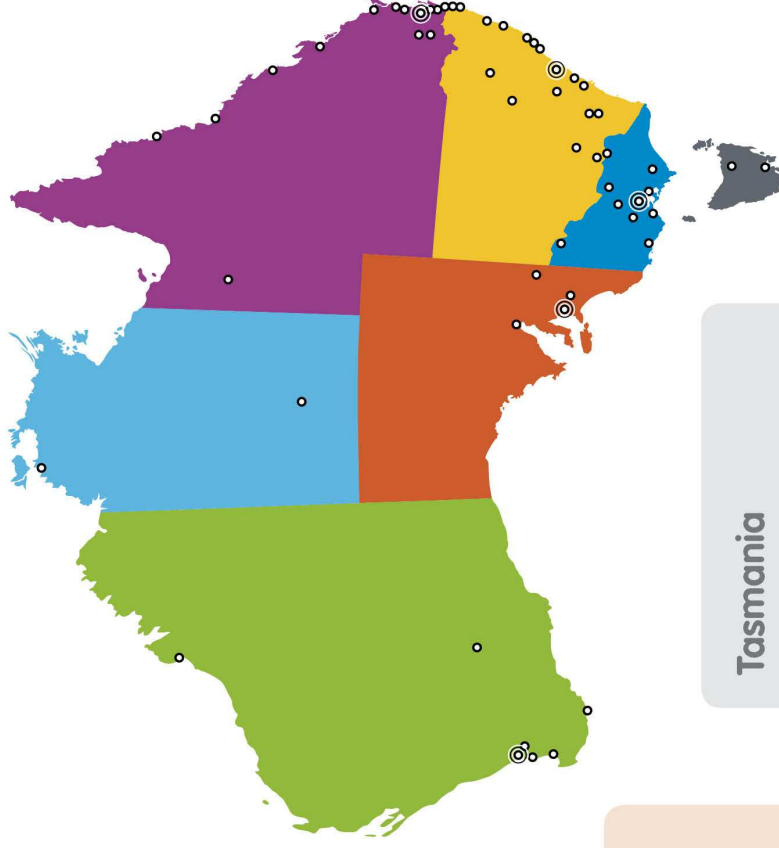
Canberra

Victoria

Ballarat
Bendigo
Frankston
Geelong
Morwell
Shepparton
Warrnambool
Mildura*
Wodonga/Albury*

Melbourne

Collingwood
Craigieburn
Dandenong
Elsternwick
Glenroy
Hawthorn
Knox
Sunshine
Werribee
Narre Warren*



*Opening late 2014. Centre names subject to change

headspace — Australia's innovation in youth mental health: who are the clients and why are they presenting?

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headspace National Youth Mental Health Foundation is the Australian Government's major investment in the area of youth mental health.¹ The National Survey of Mental Health and Wellbeing (NSMHW) revealed that one in four young people experience a clinically relevant mental health problem within any 12-month period, compared with one in five in the general population.² Half of a cohort of young people were shown to suffer diagnosable mental ill health at some point during the transition from childhood to adulthood, which reduces fulfilment of their potential and increases likelihood of disability and premature death.³ Australian data are consistent with international trends and the adolescent and early adult years are periods of peak prevalence and incidence for most mental disorders.^{4,5} Yet, despite having the highest prevalence, young people have the lowest level of professional help seeking for

Abstract

Objectives: To provide the first national profile of the characteristics of young people (aged 12–25 years) accessing headspace centre services — the Australian Government's innovation in youth mental health service delivery — and investigate whether headspace is providing early service access for adolescents and young adults with emerging mental health problems.

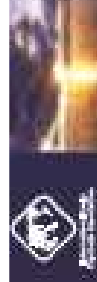
Design and participants: Census of all young people accessing a headspace centre across the national network of 55 centres comprising a total of 21 274 headspace clients between 1 January and 30 June 2013.

Main outcome measures: Reason for presentation, Kessler Psychological Distress Scale, stage of illness, diagnosis, functioning.

Results: Young people were most likely to present with mood and anxiety symptoms and disorders, self-reporting their reason for attendance as problems with how they felt. Client demographic characteristics tended to reflect population-level distributions, although clients from regional areas and of Aboriginal and Torres Strait Islander background were particularly well represented, whereas those who were born outside Australia were underrepresented.

Conclusion: headspace centres are providing a point of service access for young Australians with high levels of psychological distress and need for care in the early stages of the development of mental disorder.

behalf of a local partnership of organisations responsible for the delivery of services, comprising mental health, alcohol and other drug services, and other. This content has been peer-reviewed and accepted for publication, but has not yet been fully edited and copyedited. This content has been peer-reviewed and accepted for publication, but has not yet been fully edited and copyedited.



Early Intervention in the Real World

Treatment patterns and short-term outcomes in an early intervention youth mental health service

Shane P.M. Cross, Daniel F. Hermens and Ian B. Hickie

Abstract

Aim: Early intervention mental health services tailored for young people are being developed across the world, yet reports on service use patterns and short-term clinical outcomes for the clinically diverse group accessing these services are very limited. The current study employed the clinical staging model to examine whether young people within the two clinical stages that precede full-threshold disorder (stage 1a and stage 1b) differed in terms of treatments received and short-term symptomatic and functional outcomes.

Methods: Eight hundred ninety young people aged 12–25 years seeking mental healthcare within a 12-month period were analysed in this study.

Results: Attenuated syndrome (stage 1b) patients used significantly more services than help-seeking (stage 1a) patients, including significantly higher rates of psychotropic medication prescription (9.3% vs. 43.6%). Stage 1a patients started with significantly lower levels of psychological distress and significantly higher levels of functioning at service entry and showed improvement only in psychological distress over 10 sessions. Despite using significantly more services, stage 1b patients remained impaired on both measures after 10 sessions; however, they showed some modest improvements in their levels of psychological distress and functioning over this time.

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Email: shane.cross@sydney.edu.au

Received 6 April 2014; accepted 19 August 2014

SUMMARY OF MDS data

- Excellent direct access across the age range achieved with no evidence of stigma or cost as a barrier
- Female preferential access but much better male access than standard care
- Good indigenous access but less so for some recent immigrant groups
- High level distress especially with e-headspace but early stage presentations dominate (80%)
- Nevertheless 20% have established disorder and 10% severe persistent disorder. 1/3 NEET and disengaged already even though early stage.
- Average functional impairment was moderate on SOFAS
- More severe functional impairment in older group and higher in males (20%)
- Rapid short term response in functioning and distress in large subset

Specialist Expertise



PSYCHOSIS



MOOD



PERSONALITY
DISORDERS



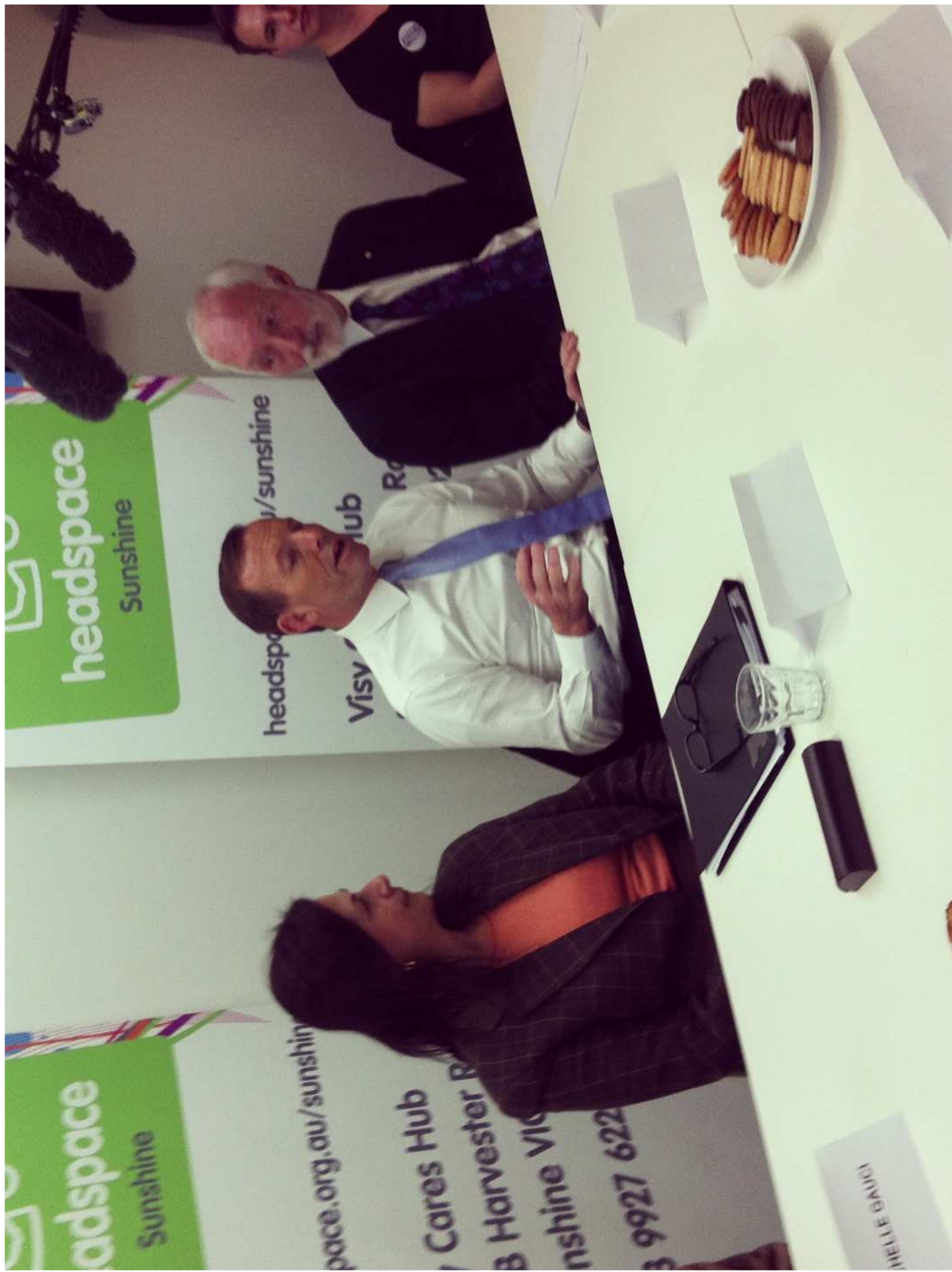
EATING DISORDERS



SUBSTANCE USE
DISORDERS





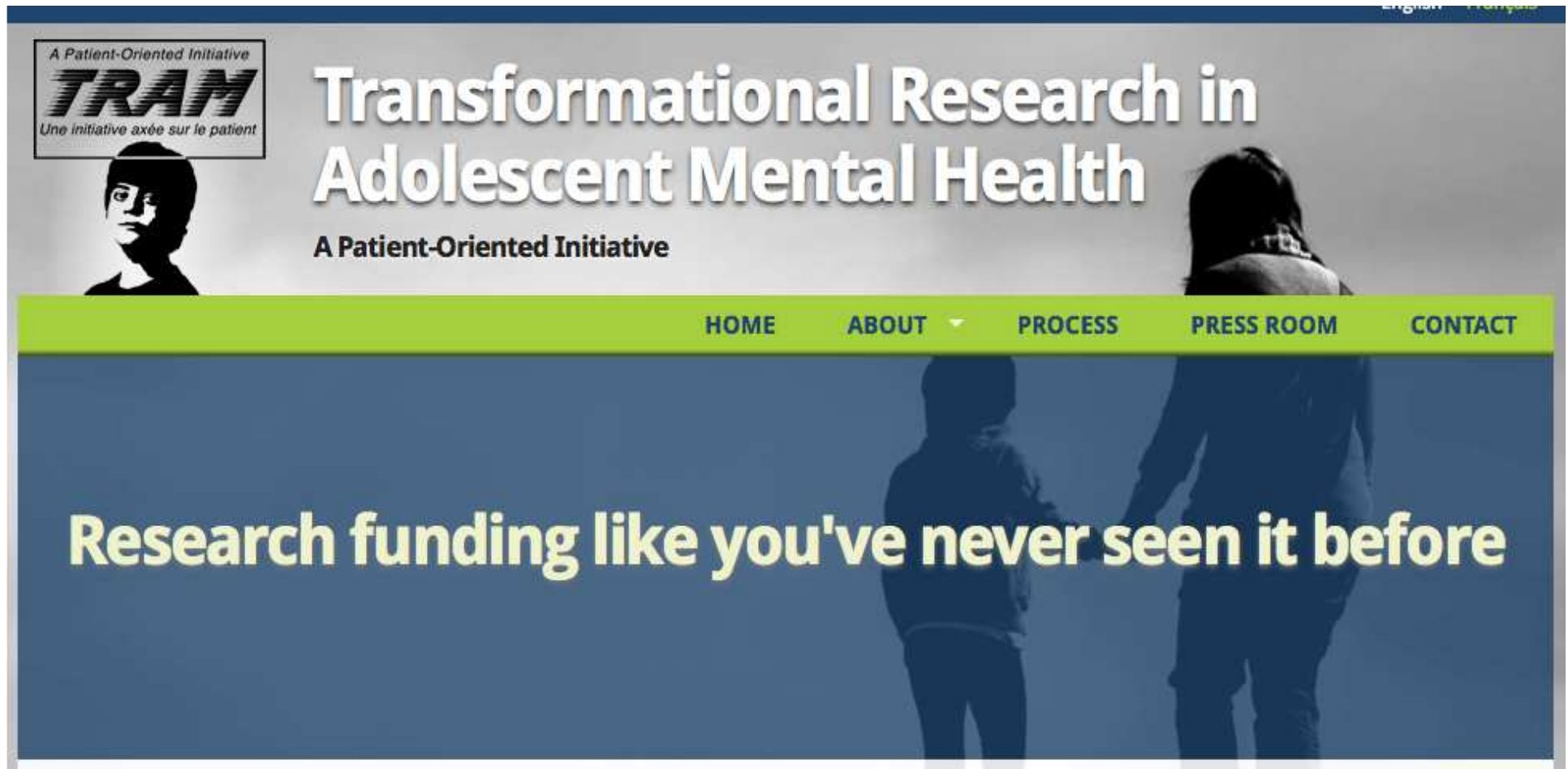


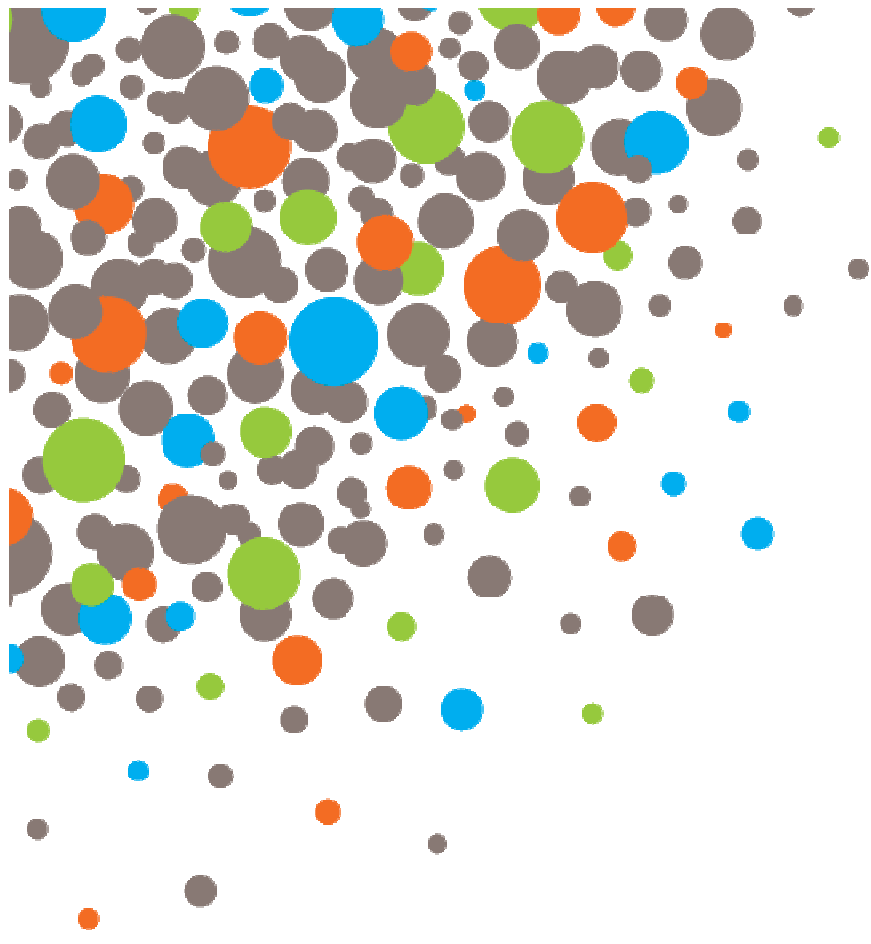


HEADSPACE DENMARK



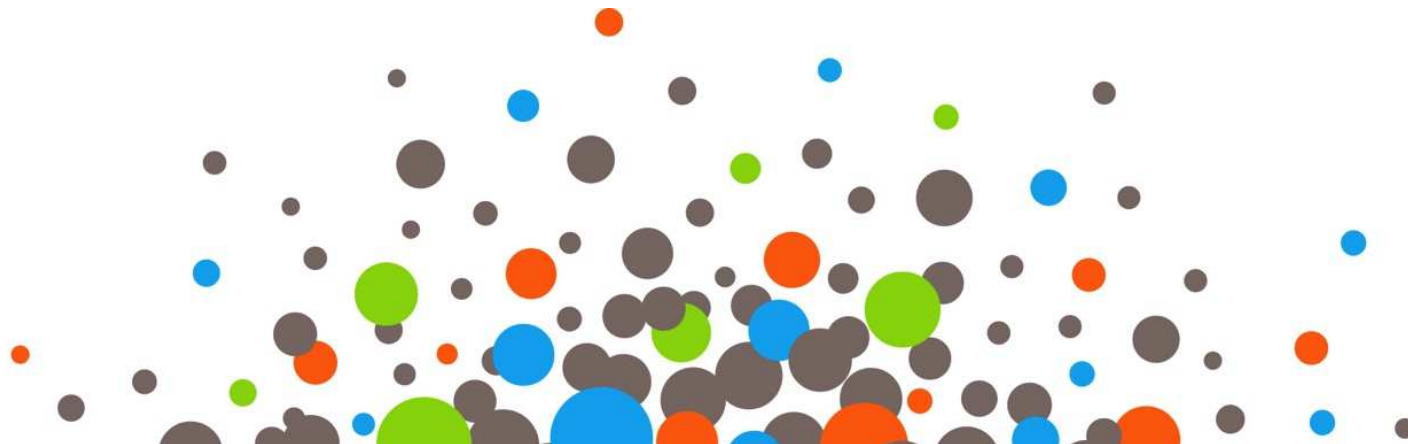
<http://tramcan.ca/>





Vision for Youth Mental Health

“In 2020 young people in all communities will have access to the knowledge, skills and services necessary to respond to, and support them in periods of mental ill-health”



The International Declaration on Youth Mental Health

A shared vision, principles and action plan for mental health service provision for young people aged 12–25 years



Imagine a world where....

- Every young person has a meaningful life and can fulfil their hopes and dreams
- All young people are respected, valued and supported by their families, friends and communities
- Young people feel empowered to exercise their right to participate in decisions that affect them
- Young people with mental ill-health get the support and care they need when and where they need it
- No young person with mental ill-health has to endure stigma, prejudice and discrimination
- The role of family and friends in supporting young people is valued and encouraged

10-year targets

1. Suicide rates for young people aged 12–25 years will have reduced by a minimum of 50% over the next ten years.
This minimum target means that we do not accept that the death of any young person by suicide is inevitable.
2. Every young person will be educated in ways to stay mentally healthy, will be able to recognise signs of mental health difficulties and will know how to access mental health support if they need it.
3. Youth mental health training will be a standard curriculum component of all health, youth and social care training programmes
4. All primary care services will use youth mental health assessment and intervention protocols
5. All serious events will have their families or carers fully involved in

Why an International Declaration on Youth Mental Health?

"International declarations that articulate core values, goals and standards have played an important role in enhancing the quality of care in a number of areas of medicine"
(*Journal of Medical Ethics*)

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Announcing the Third International Youth Mental Health Conference

Transformations: Next Generation Youth Mental Health

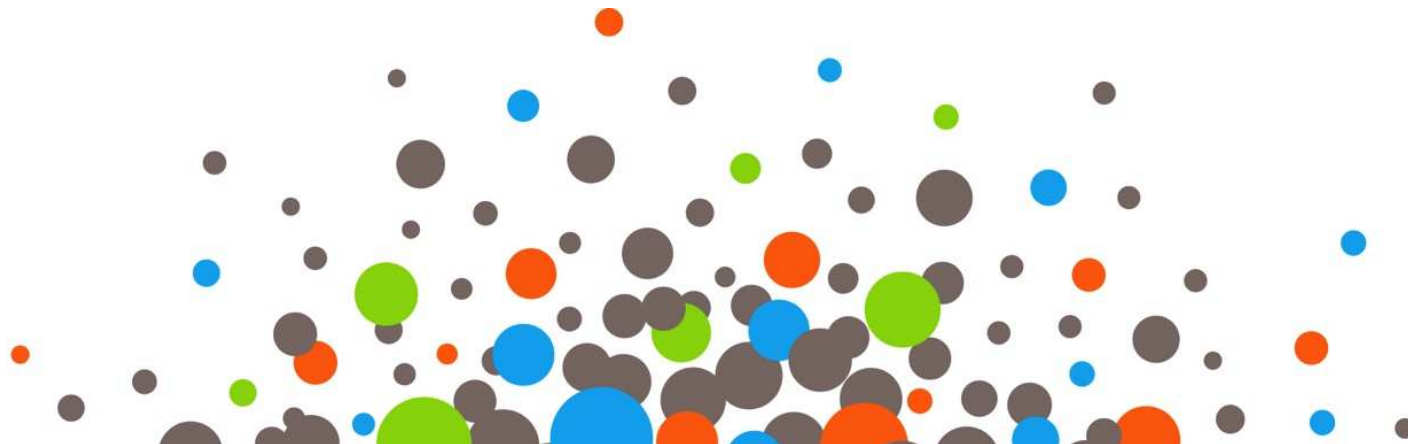
**Hosted by the International Association of Youth Mental Health in
partnership with The Graham Boeckh Foundation and McGill**

University

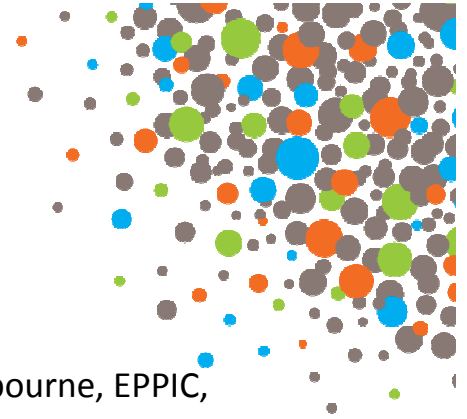
8th – 10th October 2015, Place des Arts, Montreal, Quebec, Canada

“If you come to a fork in the
road, take it”

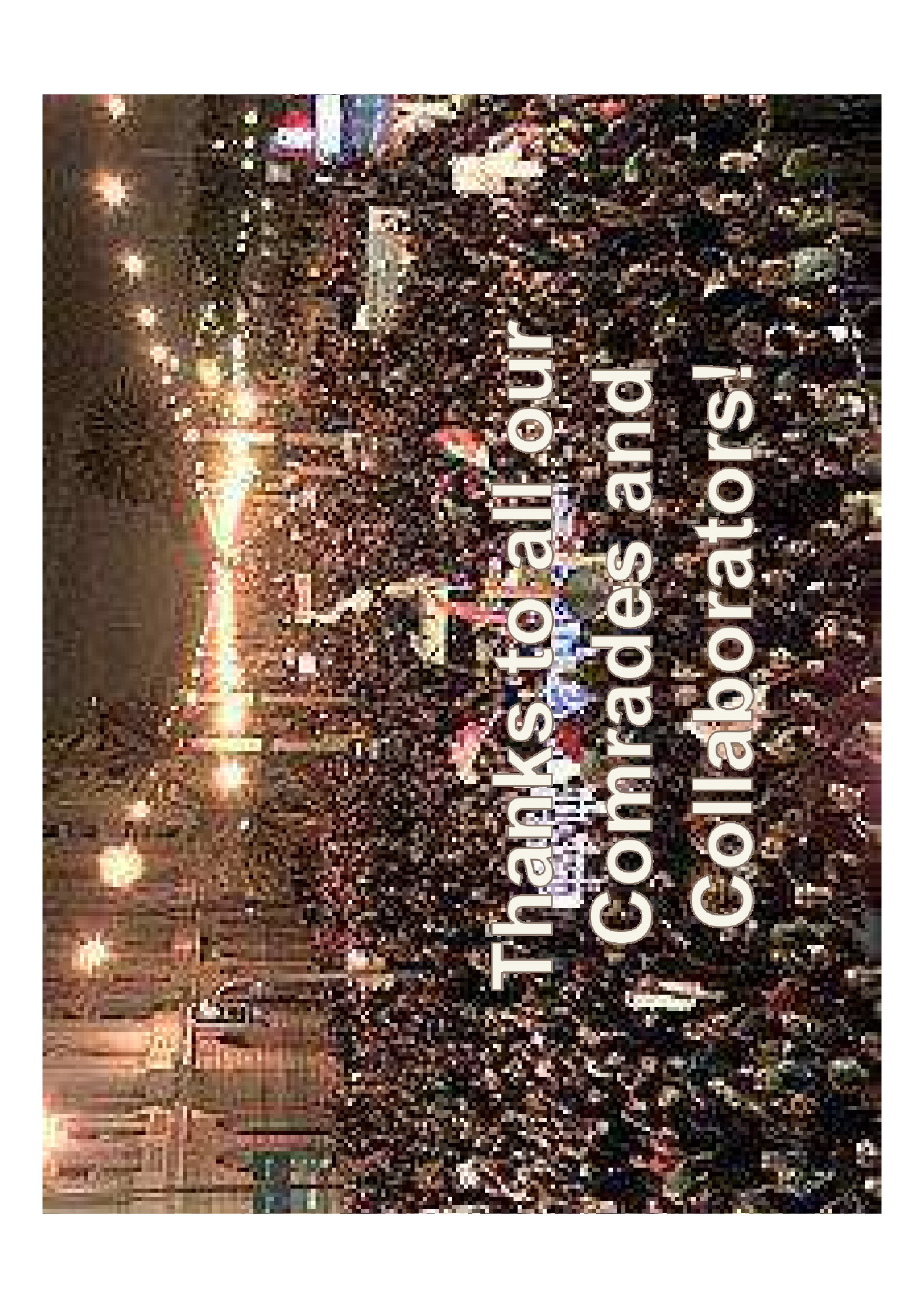
Yogi Berra



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A large, dense crowd of people is gathered at night, illuminated by warm, golden lights. A vibrant rainbow light effect is visible on the left side of the image. The text "Thanks to all our Comrades and Collaborators!" is overlaid in the center in a white, bold, sans-serif font.

**Thanks to all our
Comrades and
Collaborators!**