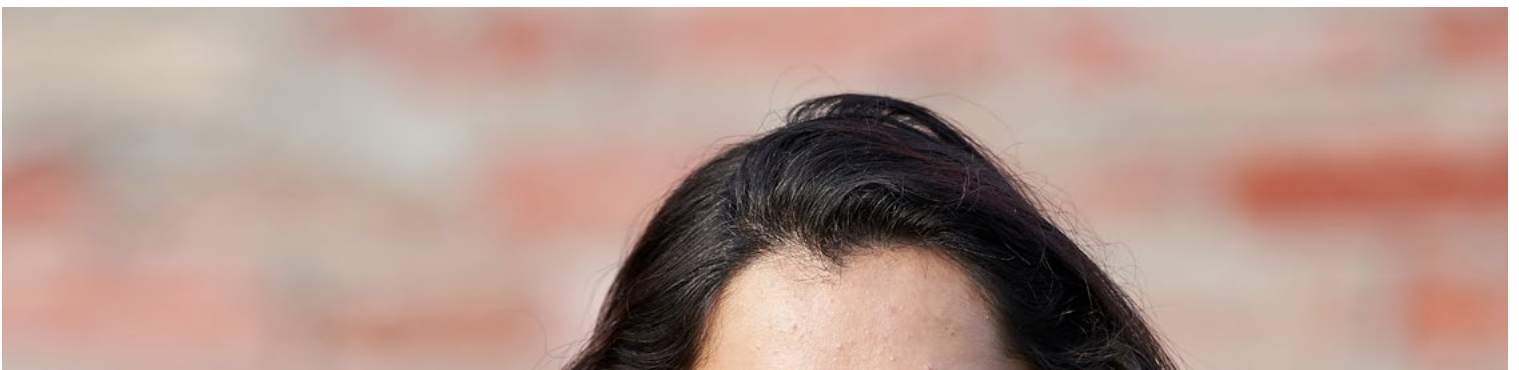




REVOLUTION IN MIND

ANNUAL REPORT
2018-2019

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**REVOLUTION
IN MIND** *ory
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REVOLUTION IN MIND
ANNUAL REPORT 2018-2019
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2018-2019

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ABOUT ORYGEN

LEADING THE REVOLUTION IN YOUTH MENTAL HEALTH

We believe that all young people deserve to grow into adulthood with optimal mental health. Everything we do is focused on that outcome.

Most mental health disorders begin between the early teens to the mid-20s. One in five young people will have experienced a depressive episode by the time they turn 18. We believe in treating early and focusing on recovery. Pioneering reform to deliver real-world practical solutions. Never settling for anything less than what young people need and deserve.

Our research is world-leading, impactful and creates change. Working directly with young people, their families and friends, we pioneer new, positive approaches to

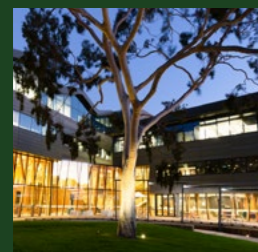
the prevention and treatment of mental disorders.

We care. We deliver clinical services for more than 3500 young people (aged 12 to 25) at four headspace centres in the north and north-west of Melbourne.

We advocate. We make sure policy makers understand the support needed and cost of mental ill-health in young people.

We educate. We use our research and evidence-based practice to develop innovative training programs and resources.

Our goal? To see young people with mental ill-health getting well and staying well.



ORYGEN ACKNOWLEDGES AND RECOGNISES ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLE AS THE TRADITIONAL OWNERS AND CUSTODIANS OF THE LAND WE SHARE.

ORYGEN'S STRATEGIC PRIORITIES 2019-22

VISION: for young people to enjoy optimal mental health as they grow into adulthood

MISSION: to reduce the impact of mental ill-health on young people, their families and society



- AT THE CENTRE OF EVERYTHING WE DO
- OUR VALUES
- OUR STRATEGIC PRIORITIES

NEW LOOK ORYGEN

Over the course of 2018-19 Orygen worked with young people, its staff and other stakeholders to develop a brand that represented the organisation's commitment to persistently developing, delivering and advocating for the best outcomes for young people experiencing mental ill-health.

The new brand captures our commitment to never settle for anything less than what young people need and deserve. Together, with young people and our partners, we are forging new paths in research, clinical care, education and policy.

Youth advisor Justin, who took part in developing the new brand, said the process involved thinking through what it meant to be part of Orygen and what Orygen stands for.

"The first thing that comes to my mind when thinking of Orygen is compassion; and being relentless, and being ingenious, and being able to say that we're here for young people, we're not giving up, we're not stopping," Justin said.

"The sense that I get when I come to Orygen and being a part of the focus groups and being a part of the space is that Orygen is willing to change with the people who are coming here."

"It really means something to me and I think, I hope, it means a lot to a lot of other people."

JUSTIN



CHAIRMAN'S REPORT

ALAN BEANLAND CHAIRMAN

I am pleased to report on another full, successful but demanding year for Orygen; a year that has revealed that mental health care in Australia is on the cusp of a once-in-a-generation transformation.

In the past 12 months the Australian Government has requested a Productivity Commission inquiry into mental health, while in Victoria a Royal Commission into mental health is underway, with the mental health minister describing the current system as "broken" and committing to implement the Royal Commission's recommendations.

Orygen has made detailed submissions to both inquiries, recommending a suite of initiatives that would see mental health supports delivered to the tens of thousands of young people with more moderate to serious mental health issues who are currently missing out on effective and expert care. These initiatives would require significant structural, governance and funding changes to ensure mental health supports were integrated and coordinated both within mental health services and across systems.

With the outcomes of both inquiries pending we are primed to continue advocating for the best possible outcomes for young people and their families.

Last year I noted progress was being made on building new Parkville facilities for Orygen, including the state government-funded specialist clinical program that serves the north and west of Melbourne. This year I am pleased to say that Orygen's new home is an inspirational, fully operational, state-of-the-art medical research facility. For this we thank the Victorian Government, the

Colonial Foundation, the University of Melbourne, the Australian Government and The Ian Potter Foundation for their combined \$78 million in support.

Now that the bricks and mortar are in place we will persist in seeking support for the collaborative work researchers, clinicians and young people continue to undertake on the design and implementation of integrated service models, developing and evaluating new clinical approaches, and on educating and training the youth mental health workforce.

Orygen drives an ambitious agenda, and we are immensely grateful for the support already provided to us by Gandel Philanthropy, Colonial Foundation, The Ian Potter Foundation, McCusker Charitable Foundation, BB & A Miller Foundation, HMS Trust, Miller Foundation, William Buckland Foundation, MaiTri Foundation, Future Generation Global, and Hearts & Minds.

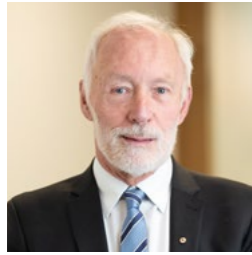
The support that Orygen receives comes thanks to the contributions of many individuals, perhaps none more dedicated than my predecessor Peter Smedley. It was with great sadness that in April we marked the passing of Peter. He is remembered for his immense contribution to Orygen and his support for young people's mental health in Australia and around the world.

Finally, I would like to acknowledge the tenacity and compassion of all those who work at Orygen, striving to provide the best possible support to young people in need. Their commitment is a hallmark of Orygen's work and I thank them for all that they do.



ALAN BEANLAND

EXECUTIVE DIRECTOR'S REPORT



PROFESSOR
PATRICK MCGORRY AO

PROFESSOR PATRICK MCGORRY AO EXECUTIVE DIRECTOR

This year Orygen made a big move—from a collection of demountable buildings and repurposed residences to a brand new, state-of-the-art research facility designed with input from young people.

The move was transformative, both symbolically and practically, and has brought us closer to our goal of providing a unified model of clinical care for young people.

The first major event held in Orygen's new home—the 'By young people, for young people' symposium—saw Orygen's Youth Advisory Council host more than 100 young people and support staff from 36 organisations for a discussion on how youth participation could drive positive change.

The appetite for change was also strong in the political arena this year, with the Victorian Government calling a Royal Commission into the state's mental health system, the Australian Government announcing the Mental Health Productivity Commission and the World Economic Forum partnering with Orygen to put youth mental health on the global agenda for the World Economic Forum Annual Meeting in Davos 2020.

Orygen seized those opportunities by providing the kind of solutions-focused evidence-based recommendations made possible by Orygen's unique mix of youth participation, cutting-edge research, innovative clinical services and evidence-based training.

Innovation was celebrated with the Australian and US launches of the #chatsafe guidelines which dealt with how young people could communicate safely online about suicide. The guidelines were the first of their kind to be informed by evidence and were developed in partnership with young people.

But while many things change, I'm thankful that others stay largely the same.

The enhanced care model piloted at Orygen's four Melbourne headspace centres had its funding from North Western Melbourne Primary Health Network extended in July, and in September the Australian Government announced that it would extend Orygen's funding until 2023. This has allowed us to continue our focus on providing national leadership for youth mental health and accelerate our strong research, policy advice and workforce programs to build evidence for effective new approaches and interventions in youth mental health.

Orygen also received Australian Government funding to continue supporting the Early Psychosis Youth Services program at 14 headspace centres across Australia and to develop a new National University Mental Health Framework.

Orygen's implementation of these novel and diverse programs continued to draw local and international attention. Orygen was greatly honoured to receive visits from the United Kingdom's Professor Matthew Broome, the United States' Dr Jean Twenge and Victorian Premier Daniel Andrews.

In November 2019 Orygen will co-host the International Association of Youth Mental Health's (IAYMH) fifth International Conference, which will see up to 1,000 youth mental health experts and young people convene in Brisbane.

This conference, together with all of our achievements this year, will inspire us further to ensure young people experiencing mental ill-health receive the care they need and deserve.

In the year ahead, Orygen is excited to build on this great momentum and deliver meaningful change.

Thank you for your continuing support.

Patrick D. McGorry

“The appetite for change was also strong in the political arena this year, with the Victorian Government calling a Royal Commission into the state's mental health system, the Australian Government announcing the Mental Health Productivity Commission and the World Economic Forum partnering with Orygen to put youth mental health on the global agenda for the World Economic Forum Annual Meeting in Davos 2020.”

REVOLUTIONARY SPACE

In December 2018, Orygen moved into a new purpose-built, state-of-the-art youth mental health facility in Parkville.

The facility will help us realise our long-held goal of developing and delivering a unique regional model of evidence-based treatment and care for all young people experiencing mental ill-health; a model that allows young people to seamlessly transition between state-funded and federally-funded mental health services while also accessing other supports such as clinics for sexual health and prevention of substance use.

Orygen executive director Professor Patrick McGorry said the facility would enable Orygen to better meet the needs of young people.

“To ensure this we consulted with the young people, as well as their families and friends, who would be using the facility,” Professor McGorry said.

“More than 140 young people provided advice on the design of our new building and you can see the results of their input

in everything from the building layout and the design of the consulting rooms through to the colour of the furnishings and the gender-neutral bathrooms.”

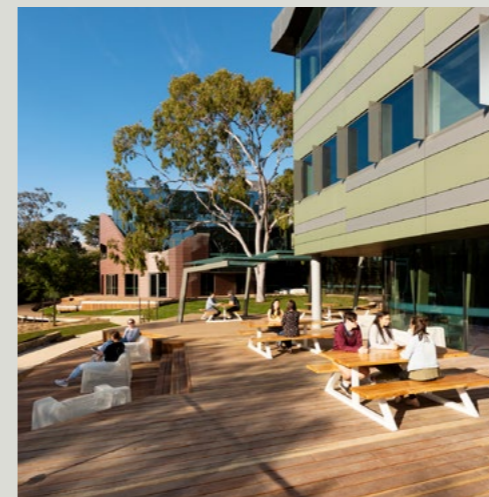
The new facility was the result of funding support by key stakeholders, including the Victorian Government who contributed \$60 million, which was augmented by additional contributions from the Colonial Foundation (\$5 million), the University of Melbourne (\$5 million), the Australian Government (\$5 million) and The Ian Potter Foundation (\$3.8 million).

Professor McGorry said the provision of modern facilities for research and clinical work was essential for Orygen’s continued national and international leadership in youth mental health innovation.

“The generosity of all of our funders has resulted in a world-class youth mental health facility that all Australians can be proud of and which will contribute greatly to building and supporting the comprehensive mental health care system that young people and their families deserve,” Professor McGorry said.



“More than 140 young people provided advice on the design of our new building and you can see the results of their input in everything from the building layout and the design of the consulting rooms through to the colour of the furnishings and the gender-neutral bathrooms.”



Orygen’s new Parkville site has been designed in partnership with young people and their families, and embraces the natural surroundings.

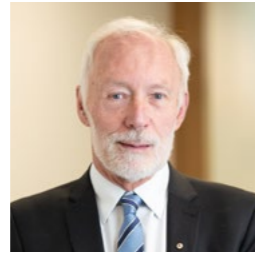
AWARDS AND RECOGNITION



PROFESSOR
EÓIN KILLACKEY



DAN KNEIPP



PROFESSOR
PATRICK MCGORRY



DR LIANNE SCHMAAL

The following staff received awards and recognition for their professional achievements during 2018-19.

Professor Eóin Killackey, Orygen's associate director of graduate research and education, was announced as president-elect of Early Intervention in Mental Health (IEPA). IEPA is a non-profit global network for mental health professionals involved in the study and treatment of the early phases of mental health disorders. Professor Killackey will take up his post in 2022.

Dan Kneipp and the fundraising team were presented with the 2019 Fundraising Institute of Australia's Best Major Gift Campaign in Australia. The award recognises the outstanding initiatives and innovative efforts of fundraisers, volunteers and organisations, specifically concerning funding capital campaigns. The award acknowledged Orygen's excellence in securing Gandel Philanthropy's support for Dr Gill Bedi's substance use prevention program.

Professor Patrick McGorry, Orygen's executive director, received the 2019 Society of Biological Psychiatry's Humanitarian Award in recognition of his dedicated service and advocacy for mental illness. Also, Professor McGorry's senior principal research fellowship application was ranked first by the National Health and Medical Research Council in the highly competitive health and medical research field, which saw him receive \$963,000 to continue his research into improving interventions and models of care for young people experiencing mental ill-health.

Dr Lianne Schmaal was awarded the Society of Mental Health Research's Rising Star Award. The award is presented to individuals whose work is beginning to make a significant impact on national and international mental health research. Dr Schmaal aims to understand the neurobiological mechanisms underlying the development and course of depression and suicidal thoughts and behaviours in young people.

YEAR AT A GLANCE

31

CONSULTANT EDUCATION
SESSIONS DELIVERED

250

YOUNG PEOPLE IN OUR YOUTH
PARTICIPATION PROGRAMS

209,355

CLINICAL RESOURCES
DOWNLOADED FROM OUR WEBSITE

202

JOURNAL ARTICLES

5

INTERNATIONAL TRAINING AND
EDUCATION PROGRAMS DELIVERED

37

RESEARCH PROJECTS
UNDERWAY

10

WEBINARS HELD

17

CLINICAL TRIALS



**RESEARCH
IN MIND**

OUR RESEARCH PRIORITIES

CLINICAL NEUROSCIENCE

This program aims to improve our understanding of the biology of mental ill-health in young people. This covers brain cognitive ability and measures derived from blood samples.

CLINICAL STAGING IN MENTAL HEALTH

This program works to develop criteria for identifying young people presenting with non-specific symptoms who are at risk of progressing to a range of mental disorders such as psychotic disorders, severe mood disorder, mania, and personality disorders.

DIGITAL MENTAL HEALTH

eOrygen pioneers the use of online social media to foster long-term recovery in youth mental health.

FIRST EPISODE PSYCHOSIS

The first episode psychosis program is focused on understanding the biological and psychosocial factors associated with the early symptoms and first experiences of psychosis and mania.

FUNCTIONAL RECOVERY

The functional recovery research team develops and trials innovative interventions that address areas of functional recovery relevant to young people with mental illness, such as helping young people return to work or education.

MOOD AND ANXIETY

The mood and anxiety program seeks to better understand mood disorders in young people and how best to treat them.

PERSONALITY DISORDER

This research program focuses on understanding, preventing and treating severe personality disorders. A key part of the activities is the Helping Young People Early (HYPE) program.

PHYSICAL HEALTH

This research program works at incorporating physical health care and interventions into the early intervention paradigm and routine clinical services.

SPORT, EXERCISE AND MENTAL HEALTH

This research program helps sporting codes understand the prevalence and nature of mental health issues among athletes, coaches and staff, and strategies to improve mental health and wellbeing in elite sporting environments.

SUBSTANCE USE

This program aims to build an understanding of substance use and substance use disorders in young people with and without other mental illnesses and to develop new treatments for substance use in young people.

SUICIDE PREVENTION

The suicide prevention research program is comprised of several discrete projects that together seek to examine the efficacy, safety and acceptability of interventions specifically designed for at-risk young people.

ULTRA-HIGH RISK FOR PSYCHOSIS

This research program seeks to clarify the risk and protective factors for psychotic disorders in young people and to identify the most effective interventions for delaying or preventing the onset of psychotic disorders in high-risk young people.

TRANSDIAGNOSTIC PSYCHIATRY – THE NEW FRONTIER?

A more holistic approach – called a transdiagnostic approach – to identifying and treating young people at risk of a range of serious mental health conditions is being trialled at Orygen.

In an article published in *World Psychiatry*, Professors Patrick McGorry and Barnaby Nelson have argued for a transition to a transdiagnostic approach to identifying risk for mental illness.

Professor McGorry said this involved applying a new set of clinical criteria to identify help-seeking young people who are at risk of progressing to a range of serious mental illnesses.

“We are seeking to build on the clinical staging model to create a new diagnostic approach that will prove much more user-friendly to clinicians, researchers and, most importantly, young people and families,” Professor McGorry said. “This is the central focus of my own NHMRC research fellowship and our Orygen-wide collaboration.”

The ultra-high risk (UHR) approach to identifying and treating young people with mental ill-health, pioneered at Orygen, has been tremendously useful for detecting those at risk of developing schizophrenia and other psychotic disorders, Professor McGorry said. “But research is telling us that there are a number of routes to developing a serious mental disorder.”

Professor Nelson said the aim was to refine these clinical criteria, use them to test preventive treatments for a range of serious mental disorders, and also use them to help understand exactly how mental disorders emerge.

“We know that there are many pathways into specific disorders so we’re trying to capitalise on that by having a broad, inclusive identification approach,” Professor Nelson said.

Professors McGorry and Nelson are trialling a transdiagnostic at-risk approach at Orygen through the Clinical High at Risk Mental State (CHARMS) study so that preventive treatments can be implemented and causes can be better understood.

Professor Nelson said that although research into the transdiagnostic approach was in its early stages, preliminary data showed that young people who meet these broad at-risk criteria show a substantially higher rate of progressing to a range of serious mental disorders compared to those who don’t meet these criteria, despite receiving treatment.

“This indicates that the criteria seem to be working well in identifying this transdiagnostic at-risk group,” he said.



PROFESSOR
PATRICK MCGORRY



PROFESSOR
BARNABY NELSON

A MODEL FOR PREDICTING ONSET OF PSYCHOTIC DISORDERS



PROFESSOR
BARNABY NELSON

About 50 per cent of people who develop a psychotic disorder will do so by the time they are in their early 20s.

However the ability to predict which high-risk patients will progress to a psychotic disorder is limited, said Professor Barnaby Nelson, head of Orygen's ultra-high risk for psychosis research program.

"Say 100 patients come into our high-risk clinic per year, we know that about 20 per cent of them will go on to develop a psychotic episode over the coming year, but we don't in advance know which 20 per cent," Professor Nelson said.

Progress in identifying the highest risk cases may be achieved by measuring and modelling the core features of psychosis, one of which is the concept of 'basic self-disturbance', he said.

"The 'basic self' refers to being the subject of experience and action—it's me who's speaking to you right now, I feel present in my body, my senses are all linked together, and this unity persists over time. This is referred to as a sense of ownership and agency," Professor Nelson explained.

"This is such a 'built in' feature of being alive. However, it's been observed that in some psychotic disorders the basic self seems to be unstable - reflected in a range of experiences such as sense of distance from one's body and thoughts, feeling anonymous or like a ghost, confusion of boundaries between yourself and other people, and so on."

To develop a model that provides a more accurate picture of basic self-disturbance, Professor Nelson gathered data from a range of sources including clinical interviews, electroencephalogram (EEG) measurements (which track and record brain wave patterns) and computer-based neurocognitive tasks assessing attention and memory.

"The neurocognitive and EEG results indicated that basic self-disturbances may be generated by what we call source monitoring deficits and aberrant salience - basically, difficulty in identifying whether the source of information is internal or external and not effectively using context to interpret information," Professor Nelson said. The research findings were published in *World Psychiatry*.

"At the moment it's pretty much a one-size-fits-all approach for young people coming into high risk services," Professor Nelson noted.

"However, if we can say that self-disturbance, or some other feature, is a really important aspect of what's going on for a particular young person—something that's underlying their symptoms—then we can tailor treatment to target these features."

This study was supported by a Brain and Behavior Research Foundation Independent Investigator Award.

FISH OIL PROVES EFFECTIVE IN TREATING DISTRESSING SYMPTOMS OF EARLY PSYCHOSIS

Omega-3 fatty acids have been linked to a range of health benefits, including improving brain health, heart health and reducing cancer risk.

Orygen researchers have applied this knowledge to mental health, and found that omega-3 fatty acids can be effective in treating young people with distressing symptoms associated with the onset of psychosis.

Their research, published in *Frontiers in Psychiatry*, investigated how blood levels of fatty acids corresponded to the severity of symptoms and daily functioning before supplementation with omega-3 fatty acids.

"Omega-3s could be effective for young people who seek help for distressing psychiatric symptoms."

DR MAXIMUS BERGER

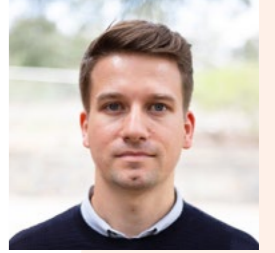
Led by Dr Maximus Berger, the study found that lower levels of omega-3 fatty acids prior to treatment were associated with more severe symptoms of depression, psychosis and mania. Similarly, the balance between omega-3 fatty acids and omega-6 fatty acids was also related to the severity of symptoms.

"The findings of the research indicated that omega-3s could be effective for young people who seek help for distressing psychiatric symptoms, with the largest effects seen in young people who had an increase of omega-3 in their blood levels during the study," he said.

Dr Berger said it had been known for some time that omega-3 fatty acids were important for brain health, including membrane stability and neurotransmission.

"Our findings now show us that deficits in omega-3 fatty acids are also associated with more severe symptoms in young people at ultra-high risk for psychosis."

This research was supported by the National Health and Medical Research Council of Australia.



DR MAXIMUS BERGER

DIGITAL TECHNOLOGY TRANSFORMING YOUTH MENTAL HEALTH



PROFESSOR
MARIO ALVAREZ-JIMENEZ

Orygen's digital mental health domain, eOrygen, seeks to transform youth mental health care through engaging evidence-based apps and the application of computing and data technologies to clinical psychology.

The eOrygen team, led by Professor Mario Alvarez-Jimenez, consists of clinical psychologists and allied health professionals, computing and information systems researchers, software developers, illustrators, professional writers, youth engagement staff and trained peer workers.

The eOrygen team continued its work on the following projects throughout 2018-19.

MOST

The moderated online social therapy (MOST) system integrates Facebook-style social networking, psychoeducational therapy units and a forum-like feature to talk about and crowdsource solutions to personal issues, all within a clinical and peer-moderated environment. To date, MOST has powered 14 trial interventions for conditions including depression, psychosis and social anxiety in young people. MOST has also powered trials to support the carers of young people experiencing mental ill-health.

SMARTPHONE-DRIVEN THERAPY

Harnessing smartphone technology to bridge the gap between therapy and real life, eOrygen has been building a client-facing mobile app and a paired provider-facing web app to augment face-to-face therapy. The client-facing mobile app will deliver personalised real-time recommendations of psychoeducational therapy exercises based on information captured from a user's smartphone. This mobile app will connect with the paired provider-facing web app allowing young people, as they choose, to share information from their smartphone sensors with their therapist.

VIRTUAL REALITY

In collaboration with the University of Melbourne's School of Computing and Information Systems, eOrygen has been working on a virtual reality application designed to transport young people into their own minds to participate fully in rumination, worry, positive emotions, upward and downward thought spirals, and cognitive biases (such as jumping to conclusions). The application also aims to help young people learn and apply evidence-based therapeutic techniques such as diffusion, mindfulness and self-compassion.

THE TELSTRA FOUNDATION

Telstra Foundation is the philanthropic arm of Telstra that invests in youth-focused non-profits that are reimagining solutions with digital technology. The Telstra Foundation offers generous support to the digital technologies that eOrygen is researching and applying that make long lasting positive impacts on the lives of young people with mental ill-health.

Jackie Coates, the head of the Telstra Foundation, said it was currently funding projects including the first virtual clinic providing integrated face-to-face, online interventions for youth mental health services; a mobile platform to be developed as a customisable platform with therapeutic content that can be easily modified to target just about any mental health condition, and a world-first digital platform to support long-term recovery in young people with psychosis.

"As a long-standing partner of eOrygen and its expert team, the Telstra Foundation recognises eOrygen's leadership to drive innovation at the intersection of technology and youth mental health," Ms Coates said. "Since 2010, we've partnered with eOrygen investing more than \$1.5 million in eOrygen's innovative projects. At the end of day, Australia needs credible, effective and scalable mental health services and eOrygen is well placed to deliver these."



"As a long-standing partner of eOrygen and its expert team, the Telstra Foundation recognises eOrygen's leadership to drive innovation at the intersection of technology and youth mental health."



B-GROUP VITAMINS CAN IMPROVE CONCENTRATION AMONG PEOPLE EXPERIENCING FIRST EPISODE PSYCHOSIS

B-group vitamins may be beneficial for maintaining concentration skills among people experiencing a first episode of psychosis.

A study led by Dr Colin O'Donnell (now at Letterkenny University Hospital) and Dr Kelly Allott from Orygen, explored the impact of increasing a person's intake of vitamins B12, B6, and folic acid (vitamin B9) after studies in people with schizophrenia revealed that increased intake of these vitamins could decrease patients' levels of an amino acid called homocysteine and improve their symptoms.

Dr Allott said elevated levels of homocysteine in people living with schizophrenia had been associated with more severe symptoms.

"Given previous studies have shown that increasing the intake of vitamin B12, B6, and folic acid decreases homocysteine levels and improves symptoms among people with schizophrenia, we wanted to find out whether giving these vitamins to people experiencing first episode psychosis would achieve similar results," she said.

A first episode of psychosis can be a precursor to developing schizophrenia but psychotic symptoms may also be associated with bipolar disorder or severe depression.

In the study 100 young people attending Orygen Youth Health's Early Psychosis Prevention and Intervention Centre (EPPIC) were randomly assigned to receive either B-vitamin supplements or a placebo tablet once per day over 12 weeks. During this period, patients' homocysteine levels, symptoms and

cognitive functioning (e.g. memory, attention, language and learning abilities) were assessed.

The results were published in the journal *Biological Psychiatry*.

Dr Allott said the results showed that participants who received the B-vitamin supplements performed better in completing concentration and attention tasks over the 12 weeks than the participants who received placebo.

"This indicates the B-vitamins could have a neuroprotective effect; although they are not improving a patient's concentration skills, they may be protecting these skills from declining," Dr Allott said.

"Psychosis is a diverse condition where everybody presents with different symptoms and a different biological profile. What was particularly interesting was that the participants who had abnormally high homocysteine levels at baseline were most responsive to the B-vitamin supplements, in terms of improvement in attention.

"The results of this study support a more personalised approach to vitamin supplementation in first episode psychosis, suggesting those with elevated homocysteine are likely to benefit most."

The research was supported by the Stanley Medical Research Institute, the University of Melbourne, the National Health and Medical Research Council, the Blackmores Institute and the Colonial Foundation.



DR KELLY ALLOTT

AI COULD BE USED TO PREDICT OUTCOMES FOR PEOPLE AT RISK OF PSYCHOSIS AND DEPRESSION



PROFESSOR
STEPHEN WOOD

Machine learning, also known as artificial intelligence, could be a useful tool for predicting how well people at high risk of psychosis or with recent onset depression will function socially in the future.

An international research study, led in Australia by Orygen's Professor Stephen Wood, evaluated whether clinical, neuroimaging-based, or machine-learning methods could better predict patients' social outcomes (e.g. their ability to undertake social interactions or create and maintain relationships with others) than methods currently in use.

In all three approaches the results of brain imaging and clinical measures from client interviews were analysed.

Professor Wood said the research team found that machine learning outperformed human experts and could correctly predict social outcomes one year later in up to 83 per cent of patients in clinical high-risk states for psychosis and 70 per cent of patients with recent-onset depression.

"Predicting social outcomes is important as among young people and emerging adults in OECD countries the top causes of 'disability'—and poor social functioning is included in that—are mostly disorders of mental health, including those that typically present with a first episode of psychosis," Professor Wood said.

"By being able to better predict what will happen to people at high risk of psychosis or with recent onset depression over time, we are able to provide individualised treatments to clients when they first present to mental health services and potentially improve their social functioning.

For the study the research team followed 116 people at clinical high-risk of developing psychosis and 120 people experiencing recent onset depression aged 15 to 40, as well as 176 healthy control participants.

The research was published in the journal *JAMA Psychiatry*. It was funded by the European Union's 7th Framework Programme, the National Health and Medical Research Council of Australia, and the European Union National Health and Medical Research Council.



#CHATS SAFE: WORLD-FIRST GUIDELINES HELP YOUNG PEOPLE TALK SAFELY ONLINE ABOUT SUICIDE



ASSOCIATE PROFESSOR
JO ROBINSON

The world's first guidelines to support young people in communicating safely online about suicide were launched by Orygen in August 2018.

The guidelines, called '#chatsafe: A young person's guide for communicating safely online about suicide', were the first to be informed by evidence and were developed in partnership with young people.

Associate Professor Jo Robinson, head of suicide prevention research at Orygen, said young people use social media all the time to talk about suicide-related thoughts, feelings and behaviours.

"It's really challenging, because although young people don't do that with any intent to cause harm or distress to others, we know that certain types of communication about suicide can lead to contagion or copycat-type instances," Associate Professor Robinson said.

"So rather than to take the view that you shouldn't talk about suicide on social media, we decided that it was important to develop some safety guidelines for young people who are talking online about this topic."

The guidelines are intended to support young people who might be responding to suicide risk or suicide-related content posted by others, for young people who might be looking for information about support or help for suicidal feelings, and for those who might want to share online their own feelings and experiences with suicide.

Associate Professor Robinson also hoped that the guidelines would be useful for people who supported young people, such as parents, teachers and mental health professionals.

As well as providing advice on how to communicate on memorial posts, the guidelines provide tips on appropriate language and images to use, how to share personal experience of suicidal behaviour, and guidance on how to respond to someone who may be suicidal.

Zoe, a young person involved in the development of the guidelines, said young people were talking about suicide on social media every day.

"Social media is just going to keep growing and we use it every day. So, we need these guidelines now, more than ever," Zoe said.

Associate Professor Robinson said the guidelines were easy to use, easy to access and incorporate the ideas and firsthand experiences of young people.

"We really believe that by equipping young people with the skills to have these conversations safely, we will be able to save young lives," she said.

The work was funded by the Australian Government under the National Suicide Prevention Leadership and Support Program.

WILLIAM BUCKLAND FOUNDATION AND FUTURE GENERATION GLOBAL INVESTMENT

The pioneering work that Associate Professor Jo Robinson and her team are doing in the crucial field of suicide prevention is made possible by generous funding from the Future Generation Global Investment Co Ltd (FGG) and the William Buckland Foundation

Louise Walsh, the CEO of Future Generation, said the organisation was proud to support Orygen as one of its designated Future Generation Global charities. "Future Generation delivers both investment and social returns," Ms Walsh said.

"Our pro bono fund managers forgo management and performance fees, allowing us to invest one per cent of assets in high-impact charities. Future Generation Global's objective is to provide a stream of annual investments in charities focused on youth mental health and we decided to support Orygen to fulfil that objective."

Dr Jane Gilmour, chairman of the William Buckland Foundation, described Orygen as Australia's leading youth mental health research organisation. "Orygen has an outstanding track record of research and clinical care and is a powerful and passionate advocate for youth suicide prevention and the provision of appropriate care for young people with mental ill-health," Dr Gilmour said. "The William Buckland Foundation's support for Orygen has been matched many times over by research grants and other government support. We are proud to be a supporter of this outstanding organisation."

THE
WILLIAM BUCKLAND
FOUNDATION
WBF

Future
Generation
Global

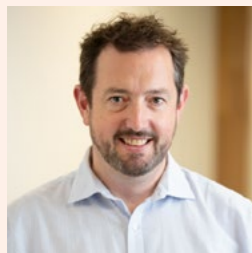
"Future Generation Global's objective is to provide a stream of annual investments in charities focused on youth mental health and we decided to support Orygen to fulfil that objective."

LOUISE WALSH
FUTURE GENERATION

"Orygen has an outstanding track record of research and clinical care and is a powerful and passionate advocate for youth suicide prevention and the provision of appropriate care for young people with mental ill-health."

DR JANE GILMOUR
WILLIAM BUCKLAND FOUNDATION

INDIVIDUALISED SUPPORT LEADS TO BETTER EMPLOYMENT OUTCOMES IN YOUNG PEOPLE



PROFESSOR
EÓIN KILLACKEY

An approach used to help older people with chronic psychotic illnesses find employment could also be effective in assisting young people with first episode psychosis.

The approach, called individual placement and support (IPS), has been tested by Orygen's Professor Eóin Killackey through a randomised control trial.

Professor Killackey said although previous studies had shown that the IPS model was effective for people with long-standing illness, there had been only been two small trials to test the IPS model with young people experiencing first episode psychosis.

"We wanted to test the model with these young people on a larger scale," he said.

Under the IPS model, people with mental ill-health work with a vocational specialist who is employed as part of their clinical team. The vocational specialist provides individualised support and connects the person to employers. Once employment is secured, the vocational specialist provides support to ensure employment is maintained.

Professor Killackey said approximately 90 per cent of people with psychosis experience long-term unemployment, as people often experience first episode psychosis in early adulthood, a time when they are finishing secondary education and making a transition into further training or entering the workforce. The onset of their illness disrupts this process.

In the trial, 146 young people attending Orygen Youth Health's Early Psychosis Prevention and Intervention Centre (EPPIC) for first episode psychosis were randomly assigned to receive either their usual treatment plus IPS, or treatment as usual without IPS. Each group was followed up at six-month intervals for a period of 12-months following the trial.

The results were published in the *British Journal of Psychiatry*.

Professor Killackey said the results showed that at the trial's conclusion, the people who had received IPS had a significantly higher rate of employment (71.2 per cent) than those who did not receive IPS (48 per cent). Additionally, people who received IPS were slightly more likely to be studying than those who did not receive IPS. Professor Killackey said this suggested IPS may be most useful for young people who require additional assistance in making a vocational recovery.

The trial was supported by the Australian Research Council, Australian Rotary Health, the National Health and Medical Research Council, the University of Melbourne and the BB & A Miller Foundation.

THE LINK BETWEEN THE DEVELOPMENT OF SELF AND VULNERABILITY TO MENTAL ILLNESS

Orygen researchers are examining whether there is a connection between the development of a sense of self and mental illness.

The fact that mental illness emerges in young people at the same time as their sense of themselves is developing is a clue that the processes are probably related, said Associate Professor Chris Davey.

In a study published in *Developmental Cognitive Neuroscience*, Associate Professor Davey showed that the brain regions that are important for the self are more active, and show greater connectivity, in earlier adolescence.

"We know that mental illness affects the sense of self that a young person has, and we can assume that this is accompanied by changes in brain connectivity between the relevant brain regions."

ASSOCIATE PROFESSOR
CHRISTOPHER DAVEY

"Our examination of the particular brain regions that change as the self develops is a guide as to the brain regions that are likely to be vulnerable to mental illness," Associate Professor Davey said.

"As the young person gets older, these brain regions show less activity, and less connectivity, when they think about themselves. We attribute this to young adults having a firmer self-concept than adolescents: as being able to more easily think about their attributes.

"The findings cast light on important developmental processes. We think these developmental trajectories are likely to be affected by mental illness."

Associate Professor Davey said the next step would be to examine how the developmental processes are affected by mental illness.

"We know that mental illness affects the sense of self that a young person has, and we can assume that this is accompanied by changes in brain connectivity between the relevant brain regions.

"We would be interested to understand how mental illness affects the underlying developmental processes, and also how effective treatment might improve any deviations from a normal trajectory of illness," he said.

This research was supported by the National Health and Medical Research Council of Australia and the Australian Research Council.



ASSOCIATE PROFESSOR
CHRISTOPHER DAVEY

LEADING THE WAY IN SUBSTANCE USE RESEARCH



DR GILLINDER BEDI

Many young people with a mental disorder also have a substance use disorder. One in four young people report that they use drugs, i.e. self-medicate, to manage their mental illness.

In 2018-19, Dr Gillinder Bedi, who leads Orygen's substance use research, worked with her team on several projects examining substance use and the mental health of young people. One, the INTEGRATE project, is a randomised controlled trial of a novel integrated psychological therapy that aims to reduce substance use, while also treating mental ill-health in young people presenting for treatment at headspace.

"If proven effective, the INTEGRATE approach could be used more broadly across headspace centres to provide early intervention for young people with emerging mental ill-health and substance use, who are at high risk for developing substance use disorders," Dr Bedi said.

The substance use research group also initiated and completed data collection for the MASH-uP study, which investigated substance use in young people presenting at headspace.

"The team recruited 300 young people to complete the study, finding that the use of alcohol, cannabis and tobacco is common among this group, with some young people presenting to headspace also using a range of other drugs, such as ecstasy, amphetamines and sedatives," Dr Bedi said.

The MASH-uP findings suggest that headspace could present a unique access point for early intervention for substance use disorders in young people.

Dr Bedi said historically, mental health and alcohol and other drug services have been separated. "They are operated by different organisations, are frequently not located at the same facility and, even if they are co-located, require young patients to see two providers.

"This places the onus on the young person to seek separate help for their mental health and substance use issues," Dr Bedi said.

"This is particularly problematic as young people may not seek help for substance abuse because it doesn't cause serious problems for them until further down the track."

Another research project underway in the past year included a study of under-diagnosis of serious mental illness in young methamphetamine users presenting to emergency departments, and a study of financial incentives to encourage young people with borderline personality features to quit cigarette smoking.

"In the coming year, we look forward to continuing our research into substance use and young people's mental health and how best to coordinate treatment and services to meet their needs," Dr Bedi said.

GANDEL PHILANTHROPY

One of Australia's largest independent family philanthropic funds, Gandel Philanthropy, has generously funded Orygen's research into clinical treatments to reduce drug and alcohol use in young people with mental illness.

With a funding boost of \$1.25 million over three years, Gandel Philanthropy's support is allowing Dr Gillinder Bedi and her team to develop integrated and prevention-oriented drug and alcohol and mental health services for young people aged 12-25.

Orygen will also use the grant funds to establish a best-practice treatment focused on early intervention that could be leveraged within Australia, Israel, and internationally.

Vedran Drakulic, the CEO of Gandel Philanthropy, said the organisation was proud to be supporting this new and integrated approach to address two of the most challenging issues young people may be facing.

"To try and support young people early to tackle both their mental health problems and their substance abuse could provide lifelong positive benefits," he said.



"To try and support young people early to tackle both their mental health problems and their substance abuse could provide lifelong positive benefits."

VEDRAN DRAKULIC
GANDEL PHILANTHROPY

DOGS – OUR BEST FRIENDS WHEN IT COMES TO MENTAL HEALTH THERAPY



PROFESSOR SUE COTTON

Dogs may be a better ‘therapist’ for young people when they are part of a psychotherapy session rather than a waiting-room companion, Orygen researchers have found.

A study by Melanie Jones, Dr Simon Rice and Professor Sue Cotton found that integrating a dog into the psychotherapy process may help reduce symptoms of post-traumatic stress disorder, depression and anxiety in young people aged 10–19.

It may also decrease interpersonal issues in young people with autism and increase a young person’s ability to connect and talk with the therapist about their mental health.

Published in the journal *PLOS One*, the study was the first literature review to focus on young people and the mental health benefits of formally integrating dogs into therapy sessions versus the benefit of using them in more informal settings, such as doctors’ waiting rooms, schools or ‘dog spaces.’

Professor Cotton, Orygen’s head of health services and outcomes research, said the growing use of dogs in Australian mental health settings had increased the need to differentiate informal activities involving dogs from the more formal, professionally-directed canine-assisted psychotherapy. There was also an increased need to develop standards for this therapy, she said.

“This study has helped create a better consensus about what different interventions look like and a greater understanding that having a dog in a waiting room or visiting is not the same—or as potentially beneficial—as having a dog that’s participating in a therapy session,” Professor Cotton said.

“In the wider community, there are also a lot of people offering dog-assisted therapy interventions and using the terminology, but they may not necessarily be medically trained or trained in the appropriate discipline, such as psychology.”

Professor Cotton said the research review was an important first step in assessing the current evidence for canine-assisted psychotherapy and improving this evidence so that the therapy could be offered to young people, who often struggle with stigma around mental illness and engaging with treatment.

“There are indications that canine-assisted psychotherapy can actually be beneficial to young people. However, we need larger research studies with improved methodologies in order to get a better understanding of the benefits of using canines in therapy.”

HEARING VOICES COULD SUGGEST A MORE SEVERE FORM OF BORDERLINE PERSONALITY DISORDER

Clinicians treating young people living with borderline personality disorder (BPD) should be asking them if they hear voices, as this may indicate a more severe form of BPD, a new study has found.

The Voices study, by researchers at Orygen, was the first to comprehensively examine the characteristics of hearing voices (such as the frequency, duration, loudness, and beliefs about the voices’ origins) and other psychotic symptoms in young people living with BPD.

The researchers assessed interview and questionnaire data from 68 young people living with either BPD or schizophrenia who were attending Orygen Youth Health, to evaluate whether there were any differences in the voices and other psychotic symptoms experienced by young people living with BPD and schizophrenia.

“Young people who report psychotic symptoms such as hearing voices should be treated with the same seriousness as a young person with schizophrenia who hears voices.”

DR MARIALUISA CAVELTI

Dr Marialuisa Cavelti, who led the research team at Orygen, said the team found no significant difference in the voices heard by young people experiencing BPD and schizophrenia. However, young people with BPD who heard voices showed significantly higher levels of self-harm, paranoia, dissociation, anxiety and stress than those with BPD who did not hear voices, indicating a more severe form of BPD, she said.

The research findings were published in November 2018 in the journal *Early Intervention in Psychiatry*.

Dr Cavelti said the study results showed there was a need for clinicians to ask young people who experience BPD whether they hear voices. Determining whether a young person with BPD heard voices could enhance the accuracy of their treatment and improve their overall outcomes and recovery, she said.

“Clinicians working with people with BPD often dismiss psychotic symptoms such as hearing voices in their clients as these symptoms are not clearly listed in the criteria used to diagnose BPD,” Dr Cavelti said.

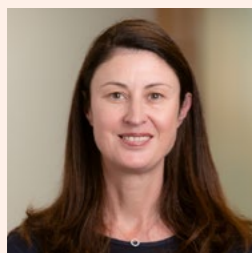
“Our study clearly shows that young people who report psychotic symptoms such as hearing voices should be treated with the same seriousness as a young person with schizophrenia who hears voices.”

The Voices study was supported by the Swiss National Science Foundation and the Bangerter-Rhyner Foundation.

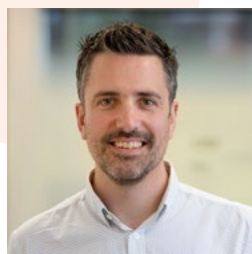


DR MARIALUISA CAVELTI

MENTAL HEALTH OF ELITE ATHLETES RECEIVES IOC COMMITMENT



ASSOCIATE PROFESSOR
ROSEMARY PURCELL



DR SIMON RICE

The International Olympic Committee (IOC) has made an unprecedented commitment to supporting the mental health of elite athletes, with guidance from researchers at Orygen.

Orygen's Associate Professor Rosemary Purcell and Dr Simon Rice were the only Australian co-authors of the world-first document—*Mental health in elite athletes: International Olympic Committee consensus statement*—which was published in May 2019 in the *British Journal of Sports Medicine*.

Associate Professor Purcell, Orygen's director of research, said it was the first time a group of experts in mental health and sports medicine had come together to review the evidence on mental health issues and treatments in elite athletes.

"We found that the prevalence of mental health symptoms and disorders ranged from around one in five (19 per cent) for alcohol misuse, while as many as one in three elite athletes (34 per cent) experienced anxiety or depression," Associate Professor Purcell said.

Dr Rice said the work aimed to fill a significant gap in athlete support networks.

"Most elite athletes have doctors, physiotherapists and nutritionists, but they don't always have access to appropriate mental health support," Dr Rice said.

Dr Rice added that better mental health support could help improve athletes' performance both on and off the field.

"If we had better mental health supports in place for our athletes at the elite level, sub-elite level and community level, we'd start to see greater career longevity, and potentially support their role as ambassadors for sport," he said.

The IOC statement found that one of the greatest risk factors for mental ill-health in elite athletes was injury.

"Mental health cannot be separated from physical health, as evidenced by mental health symptoms and disorders increasing the risk of physical injury and delaying subsequent recovery," it stated.

"The IOC has committed to improve the mental health of elite athletes, recognising that doing so will reduce suffering and improve quality of life in elite athletes and serve as a model for society at large."

Associate Professor Purcell said the Orygen researchers would continue to work with the IOC consensus group to improve mental health outcomes.

"Over 10 years ago the first expert consensus statement on concussion in sport was produced. Now, when you see a player concussed in football, the medical staff are following the guidelines that came out of that initial consensus group," she said.

"We hope that this work will have a similar impact for mental health."

MCCUSKER CHARITABLE FOUNDATION

Dr Simon Rice's work focusing on sport and the mental health of young men is being generously supported by the McCusker Charitable Foundation. With the foundation's focus on improving health and education, particularly in Western Australia in the past year, Dr Rice has delivered a number of workshops and training in Western Australia in the area of sport and mental health.

The long-term vision is to develop ongoing relationships with schools and sporting organisations throughout Western Australia to enhance knowledge and basic skills to foster better mental health in young people.

Tonya McCusker, the director and administrator of the McCusker Charitable Foundation, said mental health was a priority issue. "I do believe mental health is becoming more recognised, it's no longer as stigmatised. But we still have a long way to go," Mrs McCusker said. "I really hope the work that Orygen is doing can continue to make it easier for people with mental health challenges and their family."

McCusker Charitable Foundation

"I really hope the work that Orygen is doing can continue to make it easier for people with mental health challenges and their family."

TONYA McCUSKER
CHARITABLE FOUNDATION

UNDERSTANDING SYMPTOMS OF CHILDHOOD TRAUMA COULD HELP TREAT PSYCHOSIS



DR SARAH BENDALL

There is growing evidence of a link between childhood trauma and first-episode psychosis.

Research led by Orygen's Dr Sarah Bendall has added to that body of evidence with a study showing that 53 per cent of young people with psychosis had experienced childhood trauma.

"More than half of the young people who attend early psychosis services have experienced moderate to severe trauma," Dr Bendall said. "If we include mild traumas the percentage could be higher."

Dr Bendall's study, published in the *British Journal of Clinical Psychology*, investigated the relationships between trauma, psychotic symptoms (hallucinations and delusions), post-traumatic intrusions and trauma-related beliefs.

"Analyses revealed that post-traumatic intrusions were independently associated with hallucination severity; while post-traumatic intrusions and trauma-related beliefs were associated with delusion severity."

Dr Bendall said post-traumatic intrusions included flashbacks.

"Post-traumatic intrusions are where people have unwanted memories of traumatic experiences and extreme emotions when reminded of traumatic experiences," Dr Bendall said.

Trauma-related beliefs included feeling vulnerable, picturing others as hostile and self-blame for the trauma.

"People with trauma-related beliefs are having strong beliefs about the effects of trauma—things like thinking that the world is an unsafe place, or thinking they might be damaged as a result of the trauma," Dr Bendall said.

The findings implied that treating post-traumatic intrusions and beliefs could lead to a reduction in psychotic symptoms.

"It gives us more confidence that we can treat some hallucinations and delusions with the same psychological interventions we use to treat PTSD," Dr Bendall said.

Dr Bendall hoped that the research would lead to routine assessment and treatment of childhood trauma and post-traumatic stress in clinical services dealing with first-episode psychosis.

"We need early psychosis clinicians to be comfortable treating trauma and we need to have clear evidence-based treatments for them to use," she said.

"It should be seen as a normal part of early psychosis treatment."

This research was supported by the University of Melbourne's Faculty of Medicine, Dentistry and Health Sciences.

SOCIAL DEPRIVATION AND MIGRANT STATUS RISK FACTORS FOR PSYCHOTIC DISORDERS

International studies have demonstrated that migrants have at least double the risk of developing a psychotic disorder compared to the native-born population. But little is known about the risk of psychosis in migrants to Australia.

"Young African migrants are between three and 10 times more likely to develop a first episode of psychosis - compared to young people born in Australia."

DR BRIAN O'DONOGHUE

To address this gap in knowledge, Orygen researchers have been examining the relationship between where migrant populations live in Australia and their risk of developing psychosis.

Dr Brian O'Donoghue and his research team have identified that young African migrants are between three and 10 times more likely to develop a first episode of psychosis - compared to young people born in Australia. Further, they have demonstrated that the incidence of psychotic disorders is twice as high in more disadvantaged neighbourhoods in Melbourne; and that young people from these areas are more likely to disengage from mental health services.

"Mental health services tend to be funded on a per capita basis, as a result, more disadvantaged areas, or those with a higher proportion of migrant population will continue to be underfunded, further compounding the inequality," Dr O'Donoghue said.

In the coming year Orygen researchers will turn their attention to understanding why migrant status and social deprivation can increase the risk for psychotic disorders.



DR BRIAN O'DONOGHUE

CHOICE MODELLING TECHNIQUE USED TO BETTER INFORM HEALTH SERVICE REFORM



MATTHEW HAMILTON

Orygen's economic research team, led by Matthew Hamilton, began a new strand of its economic research in 2018-19, called choice modelling.

Choice modelling is a technique used to understand how individuals or a group behave when presented with different choice situations.

Orygen is using this model to engage young people to better inform health service reform.

The economic research team is seeking to develop models that predict the impacts of potential policy and service reforms in youth mental health, Mr Hamilton said. "One of the main challenges to doing this is that much of the performance of youth mental health systems is driven by human behaviours," he said.

"Help-seeking, and service engagement behaviours of young people, prescribing and referral behaviours of clinicians, and support behaviour of family and friends all need to be better understood to adequately capture the complex nature of youth mental health."

The first component of Mr Hamilton's choice modelling research is the Entourage Discrete Choice Experiment (DCE).

"Funded by The Movember Foundation, the Entourage project uses an online platform developed by Orygen to create and pilot an app that provides moderated online social therapy support for socially anxious young people," Mr Hamilton said. "The DCE aims to understand which potential configurations of the app would make it most likely for young people to use it."

"We have also tested whether enough young people would be prepared to pay for such an app by designing a number of hypothetical choice situations for young people to respond to via an online survey."

"To produce results that can be used to predict future behaviours, the choices had to be carefully designed. This process was assisted by a partnership with the National University of Ireland Galway, consultation with the Entourage youth working group, and two focus groups with young people with social anxiety," Mr Hamilton said.



NEXT GENERATION RESEARCHERS

THE FOLLOWING STUDENTS ARE CURRENTLY COMPLETING GRADUATE DEGREES BY RESEARCH AT ORYGEN

DOCTOR OF PHILOSOPHY (RESEARCH)

ILIAS KAMITSIS

The subjective experience of taking neuroleptic medication: a qualitative study of people with psychotic illness and a history of childhood trauma.

SUPERVISOR
Sarah Bendall

MARK PHELAN

The medium-term course and outcome of major depressive disorder in a youth-aged clinical sample.

SUPERVISOR
Andrew Chanen

ANNELIESE SPITERI-STAINES

Axis I and Axis II Disorders in young people with ultra-high risk of developing a psychotic disorder: a follow up study.

SUPERVISORS
Barnaby Nelson
Paul Amminger
Alison Yung

ALAN BAILEY

A physical activity intervention for young people with depression: in search of mechanisms of change.

SUPERVISOR
Alexandra Parker

LAURA FINLAYSON-SHORT

Investigating self-referential processing in youth social anxiety disorder and its association with personality disorder traits.

SUPERVISOR
Christopher Davey

HOK PAN YUEN

Application of joint modelling to the analysis of transition to psychosis.

SUPERVISORS
Andrew Mackinnon
Barnaby Nelson

LARA MICHELLE BALDWIN

Childhood trauma and the effects on cognition and functioning in first episode psychosis.

SUPERVISORS
Kelly Allott
Sarah Bendall
Shona Francey

LEE VALENTINE

Factors influencing engagement in online first episode psychosis interventions.

SUPERVISORS
Mario Alvarez-Jimenez
Sarah Bendall

WILMA PETERS

Effectiveness of 'the integrated trauma treatment model' in the treatment of complex trauma in adolescent and young adults with early onset mental illness at headspace.

SUPERVISORS
Mario Alvarez-Jimenez
Sarah Bendall

MELANIE GILLIAN JONES

Canine and equine assisted group psychotherapy for adolescents with common mental health disorders.

SUPERVISORS
Sue Cotton
Simon Rice

NICOLE HILL

Suicide and self-harm hospitalisation among young people in Tasmania, Australia: an epidemiological study of risk factors and the provision of care in acute settings.

SUPERVISORS
Jo Robinson
Eóin Killackey

ERIN DOLAN

Secondary traumatic stress and rural youth: understanding peer support and vulnerabilities of young people in rural environments.

SUPERVISORS
Jo Robinson
Eóin Killackey

EMMA HALPIN

Towards an understanding of dissociation in psychosis.

SUPERVISOR
Sarah Bendall

MARIANNE MULLER

Does antipsychotic dose reduction lead to better functional recovery in first episode psychosis: a randomised controlled trial.

SUPERVISORS
Stephen Wood
Eóin Killackey

YARA TOENDERS

Subtyping young people with major depressive disorder and the association with biological correlates and treatment response.

SUPERVISORS
Lianne Schmaal
Christopher Davey

JOHANNA BAYER

Identifying neurobiological correlates of disease profiles and disease course in affective disorders.

SUPERVISORS
Lianne Schmaal
Christopher Davey

JESSICA O'CONNELL

Temporal relationship between post-traumatic intrusions and positive psychotic symptoms.

SUPERVISOR
Sarah Bendall

CARL MOLLER

Characteristics and longitudinal predictors of suicidality in young people with depression.

SUPERVISORS
Sue Cotton
Christopher Davey
Paul Badcock

SHAUNAGH O'SULLIVAN

Pilot evaluation of world leading technological interventions in youth mental health: eOrygen. MOST.

SUPERVISORS
Mario Alvarez-Jimenez
Lianne Schmaal
Barnaby Nelson

ADITYA BASU

Using social media to reduce the risk of suicide among young immigrants in Australia: a pilot study.

SUPERVISORS
Jo Robinson
Simon Rice

MASTER OF PHILOSOPHY (RESEARCH)

TRACEY DRYDEN-MEAD

Cross sectional study of PTSD symptoms, psychotic symptoms and risk factors for ultra high risk.

SUPERVISORS
Sarah Bendall
Barnaby Nelson



**CARE
IN MIND**

OUR WORLD-LEADING CLINICAL CARE SERVICES SUPPORT YOUNG PEOPLE AND THEIR FAMILIES

Orygen aims to create and deliver innovative services that can be rolled out across Australia and internationally. To do this, Orygen works collaboratively with other research partners, young people, families, schools and health service providers.

Orygen delivers clinical services through four headspace centres located in the north-west Melbourne suburbs of Sunshine, Craigieburn, Werribee and Glenroy.

DEVELOPING AND DELIVERING INNOVATIVE MODELS OF CARE

In February 2019, Orygen received \$2 million from the Victorian Department of Health and Human Services to establish and pilot innovative models of mental health care.

Orygen's director of clinical service innovation, Amelia Callaghan, said the government funding was supporting initiatives including the investigation of emerging treatments for young people with mental health concerns, and the development and implementation of a regional model of mental health care. This will be an integrated model of care, commencing with the western region of Melbourne.

Ms Callaghan said the emerging treatments project included the establishment of a virtual reality lab that will design, build and test virtual reality for both research and clinical use at Orygen. "We will also establish a Transcranial Magnetic Stimulation clinic for young people with treatment-resistant depression and also expand the Moderated Online Social Therapy digital platform for young people," Ms Callaghan said.

"There are three parts to the development and implementation of a regional model which aims to improve the way young people access and are provided mental health support, regardless of whether their needs are mild, moderate, high or acute," Ms Callaghan said. The first part of this improvement is to review the

engagement, entry and assessment processes that are currently used for young people and their families to gain access to clinical and support services. The second part will involve recruiting young people to participate in the co-design and co-implementation of a new engagement and entry process. Family representatives will also be consulted to develop a new 'front end' system that can provide the best possible experience and service response to young people and their families.

The final part of the project will progress the demonstration of an integrated 'one stop shop' at Orygen's Parkville site – known as the Parkville hub. The hub will focus on each component of care including mental health service provision, alcohol and other drugs, vocational and educational services, peer work, family peer work, physical health, assertive outreach, culturally appropriate service provision and youth participation. The Parkville hub will also aim to integrate a primary care service with Orygen's specialist clinical program at Parkville to provide a continuous spectrum of care to young people regardless of their level of need.

Both the new engagement and entry system and the Parkville hub pilot are being developed with the intention that they could be scaled up to expand to other regions or across a region to provide a seamless and coordinated model of care for young people.

SUCCESS OF ENHANCED MODEL OF CARE LEADS TO FURTHER INVESTMENT

The enhanced care model piloted at Orygen's four headspace centres in Melbourne's north-west has had its funding extended following successful results in its first year.

The enhanced model of care is centred on enhanced care coordinators who play a vital role in addressing gaps in mental health care for young people with severe and complex health issues, and better identifying those young people at risk of suicide.

The funding from the North Western Melbourne Primary Health Network supports the four enhanced care coordinators who have been recruited across Orygen's headspace sites in Craigieburn, Glenroy, Sunshine and Werribee.

Orygen's program manager of primary clinical services, Brendan Pawsey, said the enhanced care coordinators were the interface between the headspace access/intake teams, medical staff and private clinicians, as well as the liaison point between primary, secondary and tertiary services.

"These senior clinical roles have been a fantastic opportunity to start to fill in some gaps, join the dots and connect the pieces of the puzzle that at other times can result in young people not engaging in help or dropping out of treatment," Mr Pawsey said.

NEW PROGRAM SUPPORTS YOUNG PEOPLE WITH COMPLEX MENTAL HEALTH NEEDS

In July 2018 the North Western Melbourne Primary Health Network awarded \$1.78 million to Orygen to support young people living with, or at risk of, severe mental illness.

The resulting program, called Enrich, supports young people aged 12-25 living in the outer north-west Melbourne areas of Macedon Ranges, Sunbury, the city of Melton, and Moorabool to access appropriate care by connecting them with, and enhancing, existing local services.

Over the past year, across the four regions, the Enrich program has received 182 new referrals, delivered 1725 individual occasions of service, engaged in 240 community engagement activities and seen 75 young people for primary psychiatric services.

Enrich is delivered locally by Cobaw Community Health Services, Sunbury Community Health Centre and Djerriwarrh

Health Services, with Orygen providing support, consultation and promotion of a community of practice alongside the remaining consortium members Orygen Youth Health, Odyssey House Victoria, and the Youth Support and Advocacy Service (YSAS).

Across the consortium the services:

- provide intensive and assertive outreach services to young people and their families/carers;
- provide a range of active interventions that best support young people to address their mental health and situational issues to live active and engaged lives; and
- work collaboratively with young people, their families/carers, community professionals/agencies to achieve positive outcomes for young people.

THE ENRICH PROGRAM

182

NEW REFERRALS

240

COMMUNITY ENGAGEMENT ACTIVITIES

1725

INDIVIDUAL OCCASIONS OF SERVICE

75

YOUNG PEOPLE SEEN FOR PRIMARY PSYCHIATRIC SERVICES



HEADSPACE CRAIGIEBURN GLENROY, SUNSHINE, WERRIBEE SNAPSHOT 2018-19



27,719

SERVICES WERE PROVIDED TO YOUNG PEOPLE

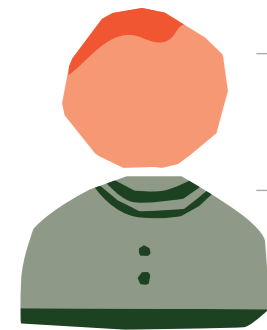
4,663

YOUNG PEOPLE ACCESSED A HEADSPACE CENTRE

5.95

AVERAGE VISIT FREQUENCY

DEMOGRAPHIC

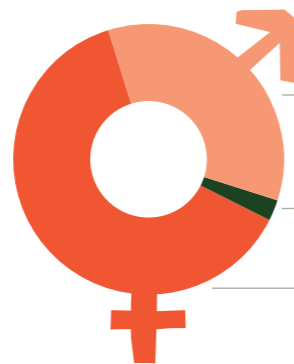


22.2%
LGBTIQ+

22.6%
CULTURALLY OR LINGUISTICALLY DIVERSE

2.4%
ABORIGINAL AND TORRES STRAIT ISLANDER

GENDER



36.3% MALE

2.2% OTHER

61.5% FEMALE

AGE



MAIN REASONS YOUNG PEOPLE CAME TO HEADSPACE

72.3%

PROBLEMS WITH HOW I FEEL



3.7% PROBLEMS WITH SCHOOL OR WORK

8.9% I WAS MADE TO COME

5.2% PROBLEMS WITH RELATIONSHIPS

2.6% PHYSICAL AND SEXUAL HEALTH

0.3% VOCATIONAL SERVICES

1.7% PROBLEMS WITH ALCOHOL AND OTHER DRUGS

5.3% THOUGHTS THAT BOTHER ME

PRESENTING ISSUES

82.5%

MENTAL HEALTH AND BEHAVIOUR



11.4% SITUATIONAL (E.G. RELATIONSHIPS, CONFLICT, BULLYING)

1.4% OTHER

1.8% VOCATIONAL ASSISTANCE

1.8% PHYSICAL HEALTH

1.4% ALCOHOL AND OTHER DRUGS

0.4% SEXUAL AND REPRODUCTIVE HEALTH

This data represents the information that young people chose to provide when attending headspace Sunshine, Werribee, Craigieburn and Glenroy

HEADSPACE HIGHLIGHTS

headspace is a world-first youth mental health initiative that supports young people who are going through a tough time; whether it's depression, anxiety, relationship break-ups or alcohol and other drug issues. The youth-friendly services at headspace are aimed at teenagers and young adults in recognition of the fact that 75 per cent of mental disorders emerge before the age of 25.

Orygen operates four headspace centres and associated services in Glenroy, Sunshine, Werribee and Craigieburn.

A DECADE OF SUPPORTING YOUNG PEOPLE

Staff and young people came together to celebrate headspace Glenroy's 10th anniversary in September 2018. Since the centre opened its doors to young people and their families in 2008, approximately 7,000 young people have accessed support for mental health, physical health, drug and alcohol and vocational services.

WINGS OF AN ANGEL

headspace Werribee held its fourth NinjaArt exhibition bringing together young people, their families and friends to showcase current works from the art therapy group. The NinjaArt program is supported by The James Marcon Foundation and is held each week at headspace Werribee to create a supportive and stimulating environment that allows young people to explore their creativity and establish friendships and connections.

TACKLING YOUTH CRIME

headspace Glenroy joined a consortium of services set up to address youth crime in the north-west of Melbourne. The Broadmeadows Community Youth Justice Alliance was established to reduce offending behaviour and recidivism among participants by:

- decreasing known crime-related risk factors and increasing protective factors;
- achieving sustained improvement in engagement in school, training or employment; and
- increasing connectedness with community.

ENGAGING WITH COMMUNITY

The Youth Advisory Group at headspace Sunshine continued a successful program of community engagement. The group visited a number of libraries in the north-west of Melbourne to play video games with other young people, engaged with the community students and runners at Victoria University's fun run, and for the International Day Against Homophobia, Transphobia and Biphobia (IDAHOBIT), organised a screening of the film *Boy Erased*.

TUNING INTO TEENS

headspace Craigieburn has continued to roll out the successful 'Tuning into Teens' parenting program in partnership with Dianella Plenty Valley Health. The six-week program gives parents the skills to better understand their teenager and shows parents how to help their teenager better understand and deal with their emotions. To further support the program the headspace national office has provided additional training to staff.



HELPING MIGRANT YOUNG PEOPLE ADAPT TO A NEW CULTURE

A youth-led education program is helping migrant young people adapt to Australian culture—supporting improvement in school engagement and increased uptake of support services.

The Global Ambassadors Program was developed by Orygen's headspace centre at Werribee. It has been delivered at two schools within north-west Melbourne throughout 2018-19 and builds resilience-based life skills among culturally diverse young people.

Tharindu Jayadeva, the community awareness officer at headspace Werribee, said the eight-week program that ran

over the latter half of 2018 created a safe space where culturally diverse young people could openly discuss their cultural experiences and how they were connected to identity and mental health. The information gleaned from the discussions was then used to inform further safe conversations outside the classroom, he said.

"We've seen such great engagement with the program's content, and real practical outcomes as students have created close bonds with peers and have celebrated each other's cultures both within the program and in their wider school community," Mr Jayadeva said.

L - R
headspace Werribee stages its fourth NinjaArt exhibition and headspace Glenroy celebrates its 10th anniversary.

“Positive outcomes of the Global Ambassadors Program have included increased improvements in school engagement, increased uptake of support services, and a significant increase in levels of resilience among participants.”

Mr Jayadeva said the program’s content had also promoted youth mental health awareness and inspired confident cultural advocacy in local communities. The region of north-west Melbourne where the program has been operating is home to people from more than 120 countries, who speak more than 52 different languages and dialects.

“Through the Global Ambassadors Program students have been able to have conversations that they would usually avoid in a school environment,” Mr Jayadeva said.

“They also have had direct access to headspace Werribee’s Youth Advisory Group (YAG) members, who have acted as mentors.”

By contributing to the program, members of the YAG have learned valuable skills to help develop and showcase their leadership and facilitation skills, Mr Jayadeva said.

PAINTING WITH PURPOSE

Orygen’s director of clinical programs, Amelia Callaghan, said the Foundation had been a valued supporter of Orygen for several years. “We are incredibly grateful for the support of the James Marcon Foundation in memory of their son James,” Ms Callaghan said.

“The generosity of the Foundation has enabled us to run our art group at headspace Werribee. The group is now into its fourth year, thanks to the foundation’s fundraising.

“We know that creating art is a wonderful thing to be able to do, it’s not only creative it’s therapeutic,” Ms Callaghan said. “For our young people to be able to create with ELLE is what many artists only dream about.

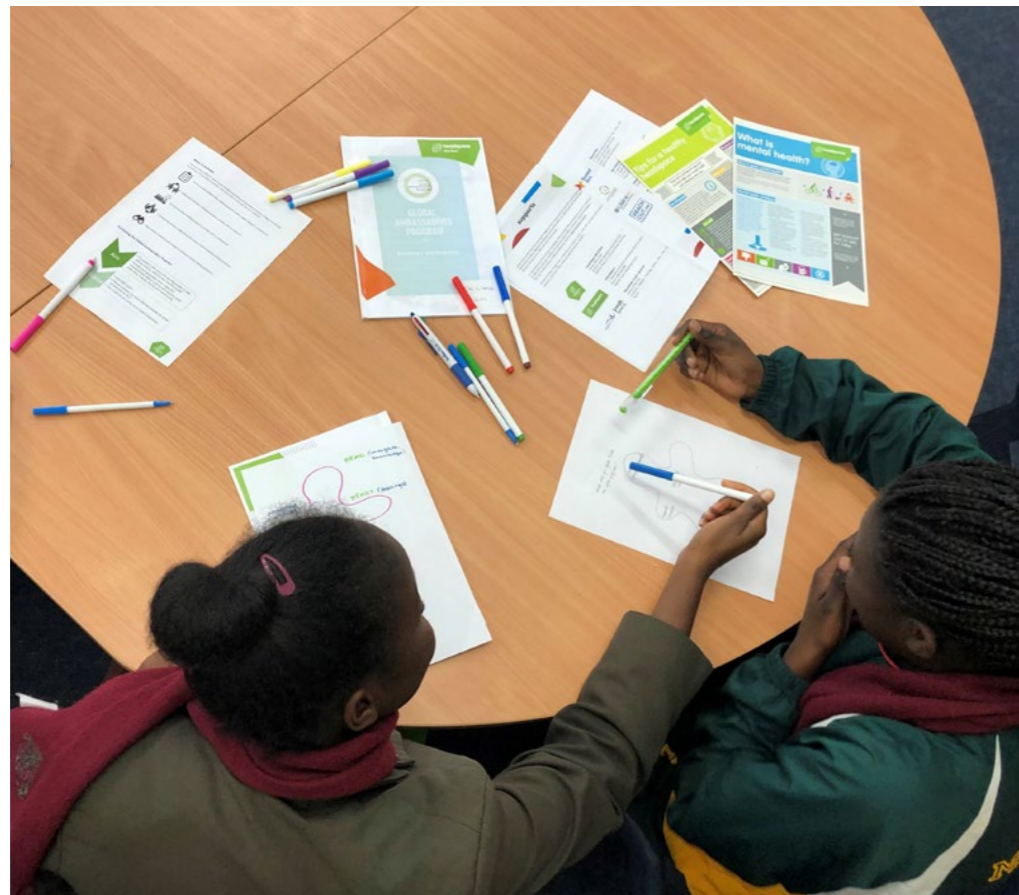
“We thank the James Marcon Foundation for their continued commitment to fostering recovery through art.”

World-renowned New York street artist ELLE collaborated with young people from Orygen’s headspace centre at Werribee in August 2018 to produce an artwork that was auctioned to raise funds for the centre’s art program.

The artwork sold for \$15,000 at a fundraiser held by the James Marcon Foundation, a non-profit organisation that embraces art therapy to aid the recovery of children and young people affected by mental ill-health.

L - R
Street artist ELLE sharing her creativity with young people at headspace Werribee.

Young people from migrant backgrounds participate in the Global Ambassadors Program developed by headspace Werribee.





**PARTNERSHIPS
IN MIND**

SUPPORTING AUSTRALIA'S IMPLEMENTATION AND COMMISSIONING OF MENTAL HEALTH SERVICES

Orygen's National Programs team has continued the successful management of two major programs throughout the year. The Youth Enhanced Services (YES) program, which supports Australia's 31 Primary Health Networks (PHNs) to implement mental health services for young people with complex and severe mental ill-health, and the Australian Early Psychosis Program (AEPP) that continued to support the headspace Early Psychosis program. This program exists within headspace centres located in six states and territories across Australia and is based on the EPPIC model of care that started within the Orygen Youth Health program in 1992.

YOUTH ENHANCED SERVICES

Funded by the Australian Government, the Youth Enhanced Services (YES) team continued to support all 31 PHNs across Australia in commissioning services for young people with complex mental health needs. The team supported PHNs in ensuring the services commissioned were evidence-based, accessible, culturally appropriate and inclusive.

The YES team partnered with the Centre for Multicultural Youth and developed a best-practice guide to improve mental health services for young people from refugee and migrant backgrounds. PHNs, community services, groups of young people, and the Multicultural Youth Advocacy Network were also engaged in the project.

Some of the key findings were that young people from migrant and refugee backgrounds are a highly diverse group of young people with differing needs and service preferences. Key barriers to accessing services included lack of cultural responsiveness, negative experiences when visiting mental health services, and racism. The multi-stakeholder consultations found that good service responses included those that are well-connected with migrant and refugee communities in their local areas, are operating in locations that young people frequent, and employ workers from migrant and refugee communities.

The YES team also produced a range of written resources that included:

- Bridging the gap: an introduction to implementation science
- Program evaluation: laying the foundations
- Co-designing with young people: the fundamentals
- Clinical considerations when working with complex young people in primary care
- Youth mental health service model and approaches: considerations for primary care

AUSTRALIAN EARLY PSYCHOSIS PROGRAM

The Australian Early Psychosis Program (AEPP) continued a strong focus on supporting the implementation of the headspace Early Psychosis program by offering expert technical and clinical advice that ensured ongoing quality improvements in service delivery, as well as supporting fidelity to the EPPIC (Early Psychosis Prevention and Intervention Centre) model on which headspace Early Psychosis is based.

Activities included providing evidence-based workshops and biannual forums to support the implementation of the 16 core components of the EPPIC model. As part of the process, Orygen continued to conduct fidelity assessments, assist with operational policy and procedures, guidance and support to the Primary Health Networks that commission the programs, and provide advice and reports to the Australian Government.

Throughout the year, the AEPP provided hands-on support to headspace Early Psychosis sites by delivering clinical staff workshops covering topics that included working with bipolar and psychosis, physical and sexual health, trauma-informed care, peer work and assessing and working with young people at risk of psychosis. Psycho-educational resources were also developed around understanding psychosis and translated into five different languages to be used at local sites. Stories from young people and their families have highlighted that they feel they receive a great deal of support and assistance from the headspace Early Psychosis programs and that outcomes for young people have improved.

BUILDING CAPACITY OF SERVICE PROVIDERS IN TASMANIA

This year the National Programs team also piloted a telepsychiatry project in Tasmania and produced a series of videos in service locations in rural South Australia, northern Brisbane, northern Queensland, south-east Melbourne and Tasmania to document and share different youth mental health service models implemented across the PHNs and various service providers.

INTERNATIONAL VISITORS AND EVENTS

Orygen hosted several international visitors during the year who met with staff and young people to learn about the work that we do, to exchange ideas and forge new collaborations. We welcomed visitors from the United Kingdom, the United States and Canada.

Dr Jean Twenge, Professor of Psychology at San Diego State University, visited Australia in July 2018 to speak at a number of events on the impact of technology on the wellbeing and mental health of young people in America.

Hosted by Orygen, Dr Twenge presented at a half-day research symposium in Melbourne on the topic of young people, technology and social connection.

The symposium included presentations by Orygen's Associate Professor Mario Alvarez-Jimenez, Dr Lyn O'Grady from the Australian Psychological Society, Irene Verins from VicHealth and concluded with a panel discussion featuring Lucy Williams from Orygen's Youth Research Council.

In partnership with UNSW Centre for Ideas, Dr Twenge also presented to a sold-out audience at the Sydney Opera House on the topic *iGen: Understanding the connected generation*.

Facilitated by the ABC's Hamish Macdonald, the evening featured a lively panel discussion about the cultural changes shaping today's teens and young adults, documenting how their changed world has impacted their attitudes, worldviews, and mental health.

Panellists included Professor Patrick McGorry, executive director of Orygen; Associate Professor Frances Kay-Lambkin from the University of New South Wales and the University of Newcastle; and

Amelia Morris, a member of Orygen's Youth Advisory Council.

In October 2018, Orygen invited the public to join Professor Patrick McGorry and Professor Matthew Broome from the University of Birmingham to unpack the challenges and discuss the opportunities needed to 'bridge the gap.'

Facilitated by the ABC's Natasha Mitchell, the *Bridging the gap* forum offered the panel and members of the audience the opportunity to discuss why there still remains serious underinvestment in mental health care for young people with moderate or serious mental health conditions, after significant gains have been made to improve the way we respond to the mental health needs of this group.

Jimmy Tan came to Orygen on knowledge exchange in June 2019. He is a young Canadian who has been advocating for youth mental health since 2011. He supports national projects including ACCESS Open Minds, Jack.org, and has presented at the International Association of Youth Mental Health conference. Jimmy is a medical student at the University of Toronto.



SHARING THE WORK THAT WE DO



Throughout the year Orygen held a number of special symposiums bringing together mental health experts, nationally and internationally, to share their work with colleagues and the public.

Let's get functional: Australian early psychosis symposium, was hosted by the National Programs team in May 2019. The two-day national forum provided an opportunity to showcase the work of early psychosis services in Australia, and to share the latest research in functional recovery.

Youth mental health: from phenomenology to virtual reality and back again, held in November 2018, brought together international and Australian experts conducting research into understanding the experience of mental illness in young people. The forum focussed on developing digital interventions with the potential to transform the lives of young people and youth mental health services globally.

Youth mental health in the digital age held in February 2019 featured a line-up of researchers from the United States and the United Kingdom, to share their expertise in the application of digital and



online initiatives to support youth mental health and suicide prevention.

Exercise and Youth Mental Health - Moving in the right direction held in March 2019, looked at the growing interest in exercise as a treatment option for young people experiencing mental-ill health, both physiologically and psychologically. Global researchers came together to discuss the promises and pitfalls of online and digital technologies and their application to mental health and suicide prevention for young people.

Rising to the challenge: providing services to young people with complex mental health needs hosted by the National Programs team was held in Melbourne over two days in March 2019. The symposium attracted more than 250 people from around Australia who attended to discuss how to best design and deliver services for young people experiencing severe and complex mental health issues.

We look forward to hosting, welcoming and sharing the work that we do with national and international visitors and colleagues in the coming year.

L - R
Associate Professor Jo Robinson and her team join international guests to discuss youth mental health in the digital age, Orygen's Gina Chinnery presents at the Let's get functional forum.

PICTURED ON RIGHT
Orygen hosted Dr Jean Twenge's Australian visit, where Dr Twenge delivered a number of presentations on the impact of technology on the wellbeing and mental health of young people.

PARTNERING WITH THE WORLD ECONOMIC FORUM TO IMPROVE GLOBAL YOUTH MENTAL HEALTH

Orygen has partnered with the World Economic Forum as part of a concerted and coordinated effort to improve global mental health.

The collaboration is part of the Forum's *System Initiative on Shaping the Future of Health and Healthcare* aimed at developing a global youth mental health model and an associated investment framework that accounts for differentials between high, middle and low-income countries.

Professor Patrick McGorry, executive director of Orygen, said the project would draw on Orygen's expertise in youth mental health research, clinical innovation, service delivery and reform, to establish a global model of integrated youth mental health care.

The model would take into account the disparities between high, middle and low-income countries, he said.

"We are honoured to be partnering with the World Economic Forum on this landmark project," Professor McGorry said.

"Although youth mental health integration and reform has commenced and has momentum in several high-income countries, the situation globally remains fragmented and lacks sufficient political will to transform the landscape of care and health economics. This is what makes this partnership so critical."

The World Economic Forum estimates that global mental ill-health costs \$2.5 trillion a year in lost productivity, and that the direct and indirect costs of mental illness amount to more than that of cancer, diabetes and chronic respiratory disease combined.

"The economic imperative for investing in mental health cannot be underestimated or ignored," Professor McGorry said.

The Orygen-led World Economic Forum project, which will report back to the Forum's annual meeting in Davos in 2020, will focus on delivering:

- a youth mental health model of care developed in consultation with international experts and young people;
- an investment framework to ensure optimal mental health outcomes for young people and their families;
- an economic briefing for governments that will highlight the benefits to both government and communities of investing in youth mental health; and
- a toolkit to support local advocates of youth mental health to engage with public and private sectors to make the economic case for local investment in youth mental health.

"This partnership between Orygen and the World Economic Forum has the potential to transform the way in which the world cares for our young people," Professor McGorry said.

IMPROVING INTERNATIONAL STUDENTS' MENTAL HEALTH AND WELLBEING

Orygen has partnered with Study Melbourne to encourage international students to participate in a series of focus groups and content development sessions with the aim of creating a digital application to support students' mental health and wellbeing.

Orygen's International Student Welfare Project team completed the first round of focus groups and engaged 44 international students from the University of Melbourne to identify the mental health and wellbeing needs,

help-seeking preferences, and support structures for international students. The team consulted with international student peer leaders involved in activities that promoted the health and wellbeing of other international students in the co-design of the focus groups.

The team presented to the Study Melbourne student ambassadors on the common mental health challenges faced by university students, the risk factors for poor mental health, and strategies to maintain good mental wellbeing.

SUPPORTING YOUNG PEOPLE IN THEIR RETURN TO WORK

As part of the Jobs Victoria Employment Network, Orygen has continued to provide specialised employment support to hundreds of unemployed young people in the west and north-west of Melbourne.

Orygen boosted the Individual Placement and Support (IPS) program with the inclusion of youth vocational peer workers. The peer workers worked collaboratively with vocational specialists and provided emotional and social support to clients from the perspective of another young person with a lived experience of mental ill health, sharing their experiences of work and/or study.

IPS supports people experiencing mental health difficulties into employment and involves intensive, individualised support, a rapid job search followed by placement into paid employment, and ongoing support for both the employee and the employer.

Orygen's Jobs Victoria IPS team has placed more than 100 young people into employment since joining the network, with many young people engaging in the peer work component of the program for additional support.

TRAINING, ADVOCACY AND PARTNERSHIPS

Orygen's vocational recovery team provided input to a series of youth employment projects throughout the year including:

- Social Ventures Australia's design working group on youth employment initiatives that increase the likelihood of a young person moving from unemployment to meaningful employment;
- the VicHealth Bright Futures collaboration to support young Victorians navigate the gap between education and finding purposeful work; and
- presenting a submission to the National Youth Commission into Youth Employment and Transition.

The vocational team also presented at a range of conferences and facilitated training including:

- hosting a national webinar for the Career Development Association of Australia on supporting meaningful careers for young people experiencing mental ill-health;
- presenting at Orygen's Rising to the Challenge and Let's Get Functional conferences on IPS, the Youth Online Training and Employment System, and vocational peer work programs;
- attending the IPS International Learning Community Meeting in Denver, Colorado, to meet with researchers and IPS providers from more than 120 sites worldwide;
- presenting at the ISS Institute and Jobs Victoria Illuminate conference; and
- hosting an IPS two-day information forum for headspace centres providing IPS services throughout Australia.

TAL COMMUNITY FOUNDATION PARTNERSHIP

Insurance company TAL continued to sponsor Orygen's vocational programs through its Community Foundation and extended its commitment another three years, taking the sponsorship arrangement through to 2020.

Members of Orygen's vocational team attended TAL's partner event in Melbourne, providing an opportunity to talk to key TAL stakeholders about Orygen's work and answer questions on youth mental health through a panel discussion.





**POLICY
IN MIND**

POLICY DRIVING REFORM

The policy think tank has provided policy advice to the Australian Department of Health since 2015.

The policy team develops advice across a broad range of youth mental health issues that include research and analysis, evidence synthesis, and expert consultation. Young people's participation and engagement is undertaken in providing such advice.

The advice the policy team provides considers the role of government, services, practitioners, data and research and young people in improving youth mental health services and outcomes for young people.

KEY POLICY THEMES IN 2018-19 WERE:

EXPERIENCES OF ANXIETY

Anxiety can be normal and helps us confront life's challenges. However, too much anxiety can prevent a young person from reaching their potential. There are evidence-based treatments for working with young people to relieve anxiety symptoms. Although treatments exist, barriers to accessing services can prevent young people experiencing anxiety from receiving them. The nature of anxiety means that clinic-based services may not be the most appropriate model for all young people. New approaches to service delivery that meet young people where they feel safe are needed.

RURAL AND REMOTE MENTAL HEALTH SERVICES

Providing quality, viable mental health services in rural and remote Australia requires developing an approach that reflects the reality of available and potential workforce capacity. Many of the workforce issues facing policy makers and service providers persist despite having been addressed in previous policies and public inquiries. Innovative responses are required to optimise a rural and remote workforce that provides mental health care for young people and ensures a mental health workforce for the future.

THE NEEDS OF YOUNG PEOPLE FROM NEW AND EMERGING SUBPOPULATIONS

Young people who migrate to Australia have a wide range of personal experiences. Some young people arrive from countries that have experienced political instability and armed conflict. New and emerging population groups include refugees, migrants and asylum seekers living in the community on temporary visas. Comparatively little policy development and data collection has been undertaken to understand the mental health needs of these communities and young people. For services to meet the needs of this group will require adaptation and innovation based on an improved understanding of young people's experiences and what makes a service and therapy acceptable to them.

THE REALITY OF IMPLEMENTING OUTCOME MEASUREMENTS IN YOUTH MENTAL HEALTH SERVICES

In youth mental health, outcome measures are tools, such as questionnaires, that are used by services to assess the improvements being made to the wellbeing of young people. Outcome measures are currently focused on service delivery, as service funders and providers use outcome measures to analyse and benchmark service performance. For outcome measures to be successfully implemented, a policy focus is needed to ensure that outcome measures are meaningful to clinicians who work with young people. Additionally, they need to be youth-friendly, meaningful and appropriate for young people.

BUILDING RELATIONSHIPS THROUGH POLICY AND PROJECTS

Orygen's policy think tank is Australia's first and only innovative response for youth mental health policy, developing original policy based on global research. It aims to promote understanding, recognition and consideration of young people's needs and preferences as they intersect with the Australian mental health system.

Stakeholder engagement is critical to developing policy solutions and in 2018-19 Orygen's strategy and development team undertook two major policy projects that involved collaborating with key stakeholders from the mental health sector.

In February 2019, the policy team travelled to Canberra to meet with senior staff from the National Mental Health Commission and the Australian Institute of Health and Welfare. The team heard about progress towards the development and implementation of measures for mental health treatment and outcomes, and service performance at a national level.

Stakeholder engagement with both organisations provided Orygen with

an understanding of the barriers to be overcome and where headway was being made. Through this process, Orygen was able to provide input to extend the impact of policy research and analysis undertaken in developing policy advice for the Department of Health.

In September 2018, Orygen made a submission to the Senate Community Affairs References Committees inquiry into the My Health Record system. The submission identified several specific issues regarding the My Health Record system and vulnerable young people experiencing mental ill-health.

In response to Orygen's submission, the Australian Digital Health Agency (ADHA) has commissioned Orygen to learn from young people, families and carers and clinicians what information young people need and how they want to receive it. This information will be used by the ADHA to design tailored My Health Record system communications suitable for young people aged 14-17.

YOUTH MENTAL HEALTH KEY TO AUSTRALIA'S ECONOMIC SUCCESS

Orygen welcomed the Productivity Commission's inquiry into the role of mental health in supporting economic participation and enhancing productivity and economic growth.

This inquiry provided a once-in-a-generation opportunity to highlight the impact of mental ill-health on the nearly five million Australians, their families and their communities, who are affected each year; and to deliver recommendations that recognise the human, social and economic imperative for all state and territory governments, as well as the Australian Government, to respond to these preventable and treatable conditions.

Orygen and headspace made a joint submission to the Productivity Commission, calling on the Australian Government to widen and deepen youth mental health support to ensure that Australia reaches its economic potential.

Orygen's executive director Professor Patrick McGorry said the mental health of Australia's young people was key to the nation's productivity and economic success.

"The experience and impact of mental ill-health during this life stage can derail key developmental milestones and significantly increase the risk of poor health, social, education and employment outcomes," he said.

"The human and economic impact then lasts for decades, through what should be the prime years of productivity and economic participation."

Orygen and headspace have made 17 recommendations aimed at improving

young people's mental health, supporting social and economic participation, and enhancing productivity and economic growth.

The recommendations span five key priority areas:

1. Increase access to effective mental health services and supports for young people across all stages of mental ill-health
2. Improve education and workforce participation for young people with mental illness
3. Reduce self-harm and suicide-related behaviours in young people
4. Build a youth mental health workforce to meet the current and future needs
5. Drive improvements through research, data, and outcome monitoring

Professor McGorry said although Australia had made encouraging progress in improving the mental health of young people, there remained an urgent need to widen and deepen the mental health supports available to this vulnerable group.

"Young people with more moderate to severe and complex mental health issues are slipping through the gaps in care," Professor McGorry said.

"Described as the 'missing middle' these young people need more specialised, intensive and extended care than is currently available within primary care. They are often seriously unwell, but are not yet acutely ill enough or considered suicidal enough to reach the high threshold for access to state-funded acute and continuing care."

IMPROVING THE MENTAL HEALTH SYSTEM FOR VICTORIA'S YOUNG PEOPLE

A Royal Commission into Victoria's mental health system was initiated by the Victorian Government in late 2018 following the re-election of the Labor Government.

Orygen's executive director Professor Patrick McGorry was appointed the chair of the expert advisory panel to the Royal Commission.

Professor McGorry said the Royal Commission was the only way to mobilise the power of the Victorian community to secure the major redesign and funding growth that was essential if the problems afflicting the mental health system were to be overcome.

"At present out of the three per cent of Victorians experiencing serious mental illness only 1.1 per cent are receiving specialist care," Professor McGorry said. "This means every day two out of three seriously ill Victorians miss out on the care and treatment they need. We've seen the overwhelming surge of people into our emergency departments and hospitals as more and more people present in desperate crises.

"More than 600 Victorians die annually from suicide. They don't have terminal illnesses and their deaths are all, therefore, preventable.

"To ensure that all young people experiencing mental ill-health have access to the treatment they need, structural changes must be made to the governance and financing of youth mental health services in Victoria."

Orygen's submission to the Royal Commission recommended Victoria's mental health system:

- provide evidence-based, effective and seamless mental health services for 12–25 years across all stages of ill-health;
- provide a fully integrated response for co-presenting substance use issues, physical and sexual health and family support into standard youth mental health care;
- respond to complexities among vulnerable and specific youth populations in Victoria;
- ensure that young people experiencing mental ill-health are not disadvantaged in their educational and vocational pathways;
- respond urgently and effectively to increased risk of self-harm and suicide-related behaviours among young people; and
- prioritise research and its translation into service improvement and innovation.

The Royal Commission's interim report is expected to be released in November 2019.

THE MENTAL HEALTH OF UNIVERSITY STUDENTS



In late 2018 the Australian Government announced funding for Orygen to develop an Australian University Mental Health Framework to protect students' mental health.

The framework was a key recommendation in a 2017 report released by Orygen that found at least 25 per cent of young university students experienced mental ill-health in any one year.

Titled *Under the radar: the mental health of Australian university students*, the report also found that current student counselling and disability services were struggling to meet the escalating volume, complexity and severity of mental ill-health presentations.

Ms Vivienne Browne, Orygen's principal advisor on government relations and policy, said the framework was being developed and informed by a national consultation with both the university and mental health sectors to identify best practice in responding to mental health issues within post-secondary education settings.

"In particular, the framework will recognise and tap into the great initiatives that have already been developed by a number of Australian and international universities that have been on the front foot responding to this issue," Ms Browne said.

Orygen has established an advisory group of experts, including university stakeholders, current students and mental health experts, who will help to establish the overall structure of the framework and review the proposed content.

Mental health is everyone's responsibility, including universities, Ms Browne said. "This national framework means that we can strengthen partnerships between the university and mental health sectors and work towards safeguarding and restoring the mental health and wellbeing of university students and ensure they achieve the best possible outcomes."

Members of the Australian University Mental Health Framework advisory group meet at Orygen to help establish the overall structure of the framework.





EDUCATION IN MIND

SUPPORTING THE MENTAL HEALTH WORKFORCE LOCALLY, NATIONALLY AND INTERNATIONALLY

As one of the world's leading research and knowledge translation organisations focused on mental ill-health in young people, a key role for Orygen is providing mental health professionals with the skills and clinical evidence they need to improve their capacity to help young people.

Orygen's translation team continued to produce a range of workforce development resources under Orygen's agreement with the Australian Government.

Throughout the year, the team engaged with a wide range of state-funded mental health services, Primary Health Networks (PHNs) and PHN-commissioned service providers to develop and deliver specific training for the youth mental health workforce in Victoria, New South Wales, Tasmania, Queensland and Western Australia. The team also provided training across education settings and primary and tertiary mental health services.

The team continued to provide enhanced training for youth justice workers across Victorian youth remand centres in Parkville and Malmsbury and redeveloped both induction and refresher training for all staff employed in these services. In addition, team members continued to work with national mental health support services, including Mind Australia and Neami National, to provide training and consultancy services for their clinical and non-clinical providers.

The translation team managed two major projects this year, the education and support of the Doctors in Secondary Schools initiative, in partnership with University of Melbourne, headspace, the Royal Children's Hospital and Family Planning Victoria; and a large project commissioned by Adelaide PHN to support case detection and community development activities of the headspace Adelaide Early Psychosis Program.



400

PARTICIPANTS IN FACE-TO-FACE TRAINING SESSIONS



890

NEW REGISTRATIONS FOR ONLINE LEARNING MODULES

350

LIVE WEBINAR PARTICIPANTS

CLINICAL AND NON-CLINICAL SERVICES TRAINING AND CONSULTATIONS

6

INTERNATIONAL TRAINING AND EDUCATION PROGRAMS DELIVERED: IRELAND, HONG KONG, NEW ZEALAND, USA



IRELAND

1. HSE National Clinical Program for Early Intervention in Psychosis



HONG KONG

2. MIND Hong Kong Coolminds youth mental health



NEW ZEALAND

3. Auckland District Health Board
4. Te Pou: Mental Health workforce education



UNITED STATES

5. Missouri Mental Health Coalition
6. Riverside Psychosis Program

GOVERNMENT DELIVERABLES COMPLETED

- 10 WEBINARS
- 5 ONLINE LEARNING MODULES
- 4 TOOLKITS
- 4 FACTSHEETS
- 3 VIDEO RESOURCES
- 2 TRAINING PACKAGES

- 2 CLINICAL PRACTICE POINTS
- 1 GUIDE
- 1 EVALUATION SUMMARY
- 1 RESEARCH BULLETIN
- 1 MYTHBUSTER
- 1 EVIDENCE SUMMARY



AUSTRALIA'S FIRST FULLY-ONLINE GRADUATE COURSES IN YOUTH MENTAL HEALTH

Orygen has continued to deliver graduate courses in youth mental health through the Centre for Youth Mental Health at the University of Melbourne, with more than 70 students enrolled in the past year.

The courses have been designed by researchers and clinicians and are delivered online to accommodate working professionals who want to enhance their skills and knowledge to work more effectively with young people experiencing mental ill-health.

The current structure of the courses allows for varied exit points depending on level of commitment and prior knowledge.

THE COURSES ON OFFER ARE:

- 01 **Master of Youth Mental Health**
- 02 **Graduate Certificate in Youth Mental Health**
- 03 **Graduate Diploma in Youth Mental Health**
- 04 **Graduate Certificate in Managing Youth Self-Harm and Suicide**



**YOUNG
PEOPLE
IN MIND**

PARTNERING WITH YOUNG PEOPLE



Orygen recognises that young people and their families are key partners in improving young people's mental health. We are committed to partnering with young people to ensure they remain at the core of everything we do.

The youth engagement and participation program has continued to grow with more than 250 young people currently members of our programs. The young people are representatives of a number of organisational groups including headspace Youth Advisory Groups, Youth Research Council, Youth Advisory Council, and Orygen's online youth engagement training initiative (YETI).

A major event on the calendar was the symposium 'By young people for young people' hosted by Orygen's Youth Advisory Council. The day-long symposium provided a platform for more than 100 young people and support staff

from 36 organisations across Australia to connect and to share their work and experience of youth participation. More than 20 young people shared their thoughts, along with several inspiring keynote speakers working in mental health.

Orygen also supported three paid intern positions within the youth engagement and participation, policy and national programs teams and ran the fourth summer experience program which saw eight young people participate in a two-week intensive learning experience of the inner workings of a youth mental health organisation. Participants met with more than 70 staff members from our research, clinical, policy and advocacy, workforce educators, communications and design teams and gained an understanding of the variety of career pathways involved in a growing mental health organisation.

Members of Orygen's Youth Advisory Council and Youth Research Council attending the 'By young people for young people' symposium.

OUR YOUTH ADVISORS

YOUTH RESEARCH COUNCIL

Adele Romagnano
Kate Obst
Lilian Ma
Lucy Williams
Paris Jeffcoat
Sarah Langley
Somayra Mamsa
Taylor Johnstone

YOUTH ADVISORY COUNCIL

Amelia Morris
Britt Liebeck
Emily Cole
Harry Koelyn
Madeline Wills
Maria Bilal
Rebecca Langman
Roxxanne MacDonald

LIVE IT, SPEAK IT

Bridget Murray (October 2018)
Dylan Langley (October 2018)
Emily Parry (October 2018)
Jessica Ranson (October 2018)
Nic Juniper (October 2018)
Rebecca Langman (October 2018)
Rian Smit (October 2018)

YOUTH ADVISORY GROUP HEADSPACE CRAIGIEBURN

Abdul Mume
Areeba Sadiq
Brianna Preece
Cassandra Jankovic
Delali Zevon
Isabella Bolton
Jacqueline Graham
Jasmine Russell (Dec 2018)
Laura Beddoe
Lexie Kargiotis (Dec 2018)
Meghan O'Keefe (Dec 2018)
Michelle Montunuu
Nadine Nasser Eldin
Pembe Ilgaz
Sebastian Strzebonski (Dec 2018)
Shubhda Pokhriyal
Teresa Scicluna

YOUTH ADVISORY GROUP HEADSPACE WERRIBEE

Brianna McGregor
Clare Micallef
Connor Organ
Connor Widdicombe
Emily Boubis (Dec 2018)
Han-Mari Cronje
Hung Nguyen
Kate Barber (Dec 2018)
Kirsty Fealy
Krystelle Salazar
Luke Hartley (Dec 2018)
Madelyn Trinh
Madison Wilday
Mikayla Ramm
Mehak Sheikh
Rafi Armanto
Sarah Daw (Dec 2018)
Zaida Mansaray

YOUTH ADVISORY GROUP HEADSPACE GLENROY

Bridget Le Roy
Chloe Orlanski
Darragh Livingstone
Eric Neskakis
Evangelina Kalaitzakis
Haseeba Faizy
Ifrah Mohamed
Lia Ferraro
Matthew Salviani
Meriam Nedri
Nicholas Ford
Rebecca Singer

YOUTH ADVISORY GROUP HEADSPACE SUNSHINE

Ana Sterjovska
Betty Do
Dylan Burgess
Han Duong
Jess Cahill
Martin Vu
Rachael Cordell
Rhylee Hardiman
Sara Batleska
Shannon Dance
Song Le
Suhar Osman
Winn Ma



**SUPPORT
IN MIND**

SUPPORTING THE RESEARCH AND PROGRAMS THAT IMPROVE YOUTH MENTAL HEALTH

We would like to gratefully acknowledge the following fundraising contributions this year:

- The Ian Potter Foundation for its generous contribution of \$3 million to support Orygen's capital project.
- Gandel Philanthropy for kindly donating \$1,250,000 for research into clinical treatments to reduce drug and alcohol use in young people with mental illness.
- The William Buckland Foundation for its contribution of \$600,000 for an online youth suicide prevention program.
- The Future Generation Global Investment Company has generously committed to providing seed funding of \$307,729 to help establish the online youth suicide prevention program's key components for suicide and self-harm prevention.
- The McCusker Charitable Foundation for contributing \$250,000 to help fund training sessions in Western Australia on sports and youth mental health and trauma and youth mental health.
- A foundation requesting anonymity has again donated \$250,000 to support the mission and vision of Orygen for key organisational capacity-building initiatives.
- Hearts and Minds Investments Ltd for contributing \$250,000 for Orygen to partner with the World Economic Forum to put youth mental health on the global agenda as part of the Forum's System Initiative on Shaping the Future of Health and Healthcare.
- Support from the BB & A Miller Foundation of \$187,000 for the fellowship of Dr Gillinder Bedi and her research in early intervention for young people with mental ill-health and substance use problems. A further \$45,000 was received for an Aboriginal and Torres Strait Islander art program at headspace Werribee.
- The Morris Family Foundation committed a further \$100,000 to address the physical health needs of young people attending Orygen's clinical services.
- Perpetual and The Harry Secombe Foundation provided funding of \$67,756 for year one of a wait-list control trial of a suicide prevention training program with parents of adolescents.
- The Hats for Hope community fundraising event and major sponsor Andrews Funeral Care which supports Orygen's suicide prevention research.
- MaiTri Foundation \$50,000 for research into bipolar disorders and a further \$11,500 for wellbeing programs.
- The Jonamare Foundation provided \$50,000 in funding as part of ongoing, annual support to enable Orygen to invest in organisational capacity-building initiatives which will support key strategies of our mission and vision.
- Perpetual and the Percy Baxter Charitable Trust have generously contributed \$45,000 to Orygen's IPSed project, a three-year pilot study to get young people with mental illness back to school, a program that is being tested at Bondi headspace by Professor Eóin Killackey and Dr Jackie Curtis.

- \$36,000 from Perpetual and the William Paxton Charitable Fund for a research pilot study testing the feasibility, acceptability and potential effectiveness of an app-based brain training intervention for young people with depression.
- The Marian and E.H. Flack Trust provided \$30,000 for a pilot project to train physical education teachers across two secondary schools on early identification of mental health problems.
- \$20,000 from The Pierce Armstrong Foundation to support the Future Project, an educational program at headspace Craigieburn.
- The Matana Foundation for Young People generously contributed \$30,000 to Orygen's IPSed project, a three-year pilot study to get young people with mental illness back to school.
- The Radford Foundation for supporting our youth consultation and participation programs with a \$11,500 grant.
- The James Marcon Youth Health Foundation continued supporting Orygen by raising funds for an art therapy program run at our headspace centres.

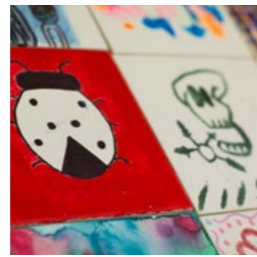
We would also like to thank the following organisations for their donations between \$1,000-\$10,000; including:

- James N. Kirby Foundation
- Brasher Family Foundation
- Maxine Cooper
- Chrysalis Foundation
- David Penington

ART PROGRAMS THRIVE THROUGH JAMES MARCON YOUTH HEALTH FOUNDATION'S SUPPORT

NinjaART is a group art program that was developed by headspace Werribee in consultation with young people and generously supported by the fundraising efforts of The James Marcon Youth Health Foundation. Many of the young people who attend NinjaART experience significant challenges in their lives, from mental health issues to bullying and social isolation, family dysfunction, disability, disengagement from schooling and employment, and significant financial disadvantage.

Members of headspace Werribee's NinjaArt program, Mikayla (top) and Allison (bottom).



VINTAGE EVENT SUPPORTS SUICIDE PREVENTION



A group of passionate and motivated supporters of the work that Orygen does in suicide prevention held its annual fundraising event, Hats for Hope. The event is held each year at Myer's Mural Hall and features a stunning fashion parade featuring a private collection of vintage Christian Dior hats. The event raised more than \$75,000 that will go to Associate Professor Jo Robinson's suicide prevention work.

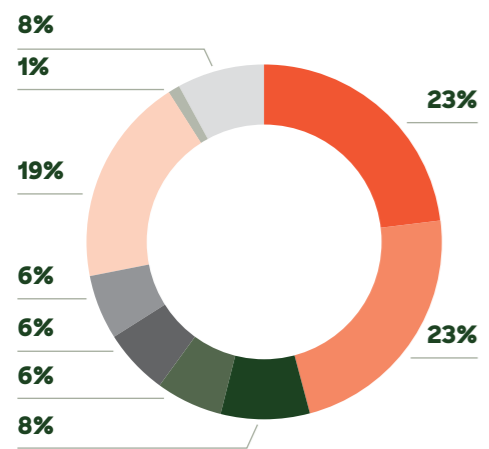
One of many vintage Christian Dior hats on show at Hats for Hope.

FINANCIAL STATEMENTS

STATEMENT OF COMPREHENSIVE INCOME FOR YEAR ENDED 30 JUNE 2019

	2019	2018
	\$'000	\$'000
REVENUE FROM ORDINARY ACTIVITIES	32,220	25,798
EXPENDITURE		
CONSULTANCY	3,242	1,703
DEPRECIATION	928	425
OCCUPANCY	1,712	1,098
SALARIES	20,106	15,914
MEDICAL SUPPLIES, TESTS AND PRACTITIONER PAYMENTS	1,658	1,841
OTHER EXPENDITURE	3,683	2,620
TOTAL EXPENDITURE	31,329	23,601
SURPLUS/(DEFICIT) FOR THE PERIOD	891	2,197

SOURCES OF REVENUE (YEAR ENDED 30 JUNE 2019)



	\$'000	% of Total
COMMONWEALTH GRANTS	7,456	23%
PRIMARY HEALTH CARE	7,543	23%
COLONIAL FOUNDATION	2,704	8%
CLINICAL SERVICE PROVISION INCOME	1,778	6%
RESEARCH GRANTS (INTERNATIONAL)	2,004	6%
FUNDRAISING & DONATIONS	2,050	6%
INFRASTRUCTURE & REIMBURSEMENT INCOME	5,965	19%
TRAINING INCOME & SALE OF RESOURCES	308	1%
OTHER	2,412	8%
TOTAL	32,220	100%

STATEMENT OF FINANCIAL POSITION FOR YEAR ENDED 30 JUNE 2019

	2019	2018
	\$'000	\$'000
CURRENT ASSETS		
CASH AT BANK	25,054	18,446
TERM DEPOSITS	78	78
TRADE AND OTHER RECEIVABLES	3,674	6,448
PREPAYMENTS	158	112
TOTAL CURRENT ASSETS	28,964	25,084
NON-CURRENT ASSETS		
PROPERTY, PLANT & EQUIPMENT	3,231	969
TOTAL NON-CURRENT ASSETS	3,231	969
TOTAL ASSETS	32,195	26,053
CURRENT LIABILITIES		
TRADE AND OTHER PAYABLES	9,760	10,701
INCOME IN ADVANCE	2,331	2,885
EMPLOYEE PROVISIONS	598	526
TOTAL CURRENT LIABILITIES	12,689	14,112
NON-CURRENT LIABILITIES		
OTHER LIABILITIES	6,811	267
EMPLOYEE PROVISIONS	417	287
TOTAL NON-CURRENT LIABILITIES	7,228	554
TOTAL LIABILITIES	19,917	14,666
NET ASSETS	12,278	11,387
EQUITY		
RETAINED SURPLUS/(DEFICIT)	4,018	3,682
UNEXPENDED FUNDS RESERVE*	8,260	7,705
TOTAL EQUITY	12,278	11,387

*Includes project funds received, but committed to expenditure in future financial years.

A full copy of the Orygen Special Purpose Statutory Financial Report for the year ended 30 June 2019, is available on the ACNC website www.acnc.gov.au

GOVERNANCE

BOARD MEMBERS

ALAN BEANLAND BSc, FAICD CHAIRMAN

Alan Beanland has extensive international experience across four continents in roles as a director, senior executive, consultant and business developer within the information technology and finance sectors. He has advised major Australian and Asian groups on their international business expansion activities and is the current chair of the Colonial Foundation.

ANDRE CARSTENS BComs (Hons), FCA, MAICD

Andre Carstens is a chartered accountant (fellow) and member of the Australian Institute of Company Directors. He has extensive leadership experience, having held CEO/CFO positions with multi-national businesses including Spotless Group, Colonial First State Group, Aviva Australia and the Gribbles Group. Mr Carstens is currently CEO of the Colonial Foundation.

JANE HARVEY BCom, MBA, FCA, FAICD

Jane Harvey is a former partner of PricewaterhouseCoopers and has been a director of the Royal Melbourne Hospital, the Alfred Hospital, the Royal Flying

Doctor Service and Medibank Private Limited. She is on the boards of the Colonial Foundation, Bupa ANZ, IOOF Holdings Limited, DUET Finance Ltd and UGL Limited.

PROFESSOR CHRISTINE KILPATRICK AO MBBS, MBA, MD, FRACP, FRACMA, FAICD, FAHMS, DMedSci (Hons)

Christine Kilpatrick commenced as chief executive of Melbourne Health in May 2017. Previous appointments include chief executive, The Royal Children's Hospital; executive director Medical Services, Melbourne Health; and executive director Royal Melbourne Hospital, Melbourne Health. Before these appointments, she was a neurologist who specialised in epilepsy.

LYNETTE ALLISON BEd

Former leader of the Australian Democrats Lynette Allison is on the boards of several health-related not-for-profit organisations. She chaired the Senate Mental Health Inquiry (2005-06) which led to a Council of Australian Governments agreement and an additional \$4 billion spent on mental health.

PROFESSOR MARILYS GUILLEMIN PhD, MEd, DipEd, BAppSc

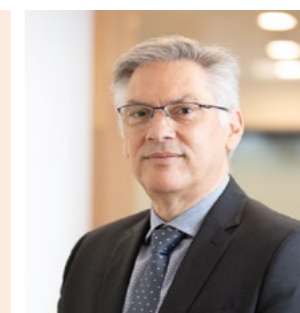
Associate Dean (Learning and Teaching) at the University of Melbourne's Faculty of Medicine Dentistry and Health Sciences Professor Marilys Guillemin is a sociologist. Her research has spanned sociology of health, illness and technology; innovative research methodologies; research practice; narrative ethics; and ethical practice in research and healthcare.

PROFESSOR PATRICK MCGORRY AO MD, PhD, FRCP, FRANZCP

Professor Patrick McGorry is executive director of Orygen, professor of youth mental health at the University of Melbourne, and a founding director of the National Youth Mental Health Foundation (headspace). He is a global researcher in early psychosis and youth mental health and has been involved in research and clinical care for homeless people, refugees and asylum seekers.



ALAN
BEANLAND



ANDRE
CARSTENS



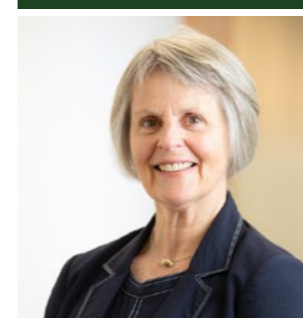
JANE
HARVEY



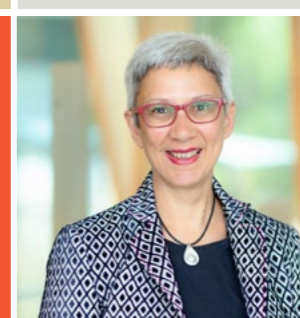
PROFESSOR
CHRISTINE
KILPATRICK



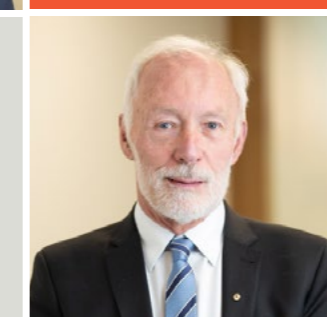
PROFESSOR
MARILYS
GUILLEMIN



LYNETTE
ALLISON



PROFESSOR
PATRICK
MCGORRY



PUBLICATIONS

JUNE 2018 - JULY 2019

JOURNAL ARTICLES

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