DISCOVER — ENGAGE — IMPACT

EASING THE BURDEN

UQ researchers are applying a formula that measures the global burden of mental disorders – and it can be applied anywhere to compare any medical condition.

How do you measure the burden of disease – for the economy, for society, and for the individual? Finding the answer becomes even more complicated if that disease is 'all in your head', like depression or a substance use disorder.

Psychiatrist Professor Harvey Whiteford and his team from the Queensland Centre for Mental Health Research, UQ's School of Public Health has been working on finding the answer to this more complicated question for more than 30 years.

His research has yielded some answers, which is good news at a time when the burden from mental health problems is becoming more and more pressing.

"My team's research is two-fold," Professor Whiteford says.

"One is epidemiology and the burden of disease, where we try to look at the size of the problem in the population, and then there's the policy and services research where we try to find the best service system to reduce that burden."

With a background as a practising psychiatrist, government policy specialist in mental health, and adviser to the World Bank on mental and substance abuse disorders for lower- and middle-income countries, Professor Whiteford is well placed to lead a team of researchers in this field. In fact, his team has just contributed to a report on the distribution and burden of common mental disorders for World Health Day as requested by the World Health Organization.

"The report estimates that the total number of people living with depression was 322 million in 2015 – equivalent to 4.4 per cent of the world's population – and that mental and substance use disorders are the leading cause of disability globally. This major finding suggests that governments worldwide need to change the priority settings for health planning."

– Professor Whiteford

Professor Whiteford's team is not working alone. As part of the Global Burden of Disease project funded by the Bill & Melinda Gates Foundation, they are collaborating with scores of researchers, clinicians, epidemiologists, economists and statisticians from every continent in the world; in particular, the University of Washington Seattle where the Institute of Health Metrics and Evaluation, with core funding from the Gates Foundation, is located.

But the modelling for all mental and substance use disorders for every country in the world – 196 of them – is done at UQ, where the team also receives funding from the National Health Medical Research Council, Queensland Health and other sources, including the Commonwealth Government.

The formula for success

So, what is the formula that can measure the global burden from mental disorders, and can be applied anywhere in the world for comparison with any medical condition?

"The burden is measured by using a single metric to count the years of life lost through premature mortality and the years lived with disability," says Professor Whiteford.

"This is measured for all major diseases, injuries and risk factors and that way there's a common metric to compare cancer with heart disease, with dementia, with depression and so on.

"That's the big breakthrough we have worked on now for the past ten years – comparing the impact of different disorders is hard to do with separate ways of measuring them, but with a single metric the comparison is possible.

"Otherwise, how do you compare the loss of health in 100 people with asthma from that in 100 people with depression?"

Professor Whiteford's research methodology has developed over many years. He segments his research, and then reassembles it. He can look at a city like Brisbane, a whole country like Australia, or even the vastness of the world, and add in cultural factors, the way in which socioeconomic factors influence the population, the way traditions are upheld, how women and children are treated, whether violence is endemic, and more.

"All of those things make a major difference in many countries and you have to factor all that into causes and interventions. So, it's a much bigger, more complex world than treating patients one at a time is," he says.

"I think that if you take a public health perspective, you're thinking about the entire population; you have to think divergently about risk factors, people who aren't in

treatment, what is likely to increase the population prevalence of a disorder, or decrease it – and so that's a different way of thinking than if you're a clinician seeing one patient at a time."

Mental illness is documented to cost countless billions across the globe, but even then, not all the costs are evident.

Hidden costs need to be factored into the equation to more accurately understand the real impact of mental illness, and some of Professor Whiteford's research has revealed that billions of dollars of replacement value rests in the hands of carers supporting Australians with mental illness.

The driving force behind Professor Whiteford's work is to tackle the increasing need to get the burden down.

"Despite the burden being high and more resources being put into mental health of late, we still don't have good prevention. Many people with mental disorders don't seek treatment and most of those who do don't get evidence-based treatment, so there's a long way to go to getting a health system that responds.

"It's a worldwide problem, but one that affects lower- to middle-income countries more severely."

And, according to the World Bank, which uses per-capita income as a descriptor, most of the world's population is made up of low- and middle-income countries. For those countries, mental illness is still very stigmatised, health professionals who can treat mental health problems are in short supply, and resources as a proportion of the health budget are very low – far too low to address the burden from mental disorders in those countries.

The Australian story

"We can compare Australia, a relatively high-income country, to other parts of the world by our population treatment rates – whether there are any barriers to mental health treatment – and although there are often criticisms of mental health services in Australia (and we certainly have a long way to go), there's no doubt that we are doing better here than most countries," Professor Whiteford says.

"Despite some pessimism, we do have effective interventions: psychological interventions such as cognitive behaviour therapy, medications for the more serious disorders and, increasingly, some preventative strategies as well. The main challenge in Australia isn't having interventions that work, but getting those interventions to the people who need them at the right time.

"We've been able to decrease stigma to some extent, we've been able to get more people with a disorder into treatment, and we have more clinicians, who are better trained in mental health than they used to be. We can build a better system of care from this base."

Prevention is better than cure

Professor Whiteford says that his team's work has been receiving more recognition recently with the knowledge that more mental health problems start in childhood and adolescence, but may not manifest until adulthood.

The research has taught him that intervention needs to start much earlier if the focus is to be on primary prevention.

"We need to be spending more effort in childhood than waiting until the problem becomes diagnosable in late teenage years or early adulthood and trying to intervene then. By then, often the condition has been going for some time and we've missed out on early intervention prevention."

Improvement in services is slow and sometimes things even go backward. The burden of mental disorders is still high. And such a mammoth task – trying to track the global burden of mental disorders – can cause frustration.

But Professor Whiteford never loses track of the fact that his team's research is really about people with a mental disorder.

"Without them, none of this would be necessary. It's easy to get caught up in the political and policy battles and the bureaucratic complexities, but one of the reasons I've always treated patients in my career is to remind myself that this is what it's all about.

"Whether the patient is in Africa, Washington DC or Brisbane, it's that constant reminder of why I do what I do at a public health level and it helps keep me focused on the main game."

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(Image credit: gettyimages/ KatarzynaBialasiewicz. Words: Esther Haskell)

The story so far:

2007: A team of UQ researchers begins work on calculating the global burden of mental and substance use disorders.

2012: The National Health and Medical Research Council awards Professor Whiteford's team funding to develop a Centre of Research Excellence in Evidence-based Mental Health Planning. The Centre aims to reduce the burden of mental disorders.

2013: First report on the global burden of mental and substance use disorders published in *The Lancet* (http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(13)61611-6/abstract).

2014 onwards: The Commonwealth Department of Health engages Professor Whiteford's team to develop the National Planning Framework for Australia's mental health services.

2017: Most recent Global Burden of Disease reports published in *The Lancet* (http://www.thelancet.com/journals/lancet/issue/vol390no10100/PIIS0140-6736(17)X0041-X).

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