

18 November 2024

System modelling and simulation could help change the face of youth mental health in our region

Wentworth Healthcare, the provider of the Nepean Blue Mountains Primary Health Network, is proud to be part of the Right Care, First Time, Where You Live research program that is focussed on improving the mental health of young people across Australia.

The program, delivered by the University of Sydney's Brain and Mind Centre and funded by the BHP Foundation, involves eight PHNs and their local communities nationally. It connects researchers and communities together to co-develop a local system modelling and simulation tool that can help guide investments in sustained, coordinated and digitally enhanced youth mental healthcare.

In the Nepean Blue Mountains region, which encompasses the Blue Mountains, Hawkesbury, Lithgow and Penrith local government areas, demand for youth mental health services is high. General practice data for the region indicates that 14% of patients between 4-17 years have a mental health disorder. Recent statistics also reveal that hospitalisations and deaths due to self-harm exceed the NSW state average, highlighting the urgent need for improved engagement with existing mental health services and the implementation of additional services or interventions.

Systems modelling and simulation is an evidence-based and data-led way to test strategies and forecast the impact those strategies are likely to deliver on a local population, before investing significant time and financial resources. It can help increase understanding of the combination, scale and timing of investments and strategies needed, to deliver the most benefit to a local population.

Wentworth Healthcare CEO, Lizz Reay, said that significant difficulties and hurdles exist for young people seeking mental healthcare in the region and as part of the co-design of the Nepean Blue Mountains tool, three workshops were conducted to gather input and insights from key stakeholders about mental healthcare across the region. The last of these workshops was held on Friday 8 November in Penrith.

"Young people living in our region face both geographical and social isolation, and additional stressors such as recurring natural disasters. They have been affected more than most over the past five years, with multiple disasters including drought, bushfires and five flood events on top of the pandemic," she said.

"Government funding is limited, so investing in the right mental health interventions, at the right time, to ensure we have the most impact for our young people, is vitally important," said Ms Reay.

"Traditionally system modelling and simulation tools are something scientists and researchers have used. Now thanks to the University of Sydney's Brain and Mind Centre, we as a PHN and our stakeholders in the community, will have free access to our own localised tool, lending even more credibility to our advocacy efforts in the youth mental health space," she said.



Co-Director at The University of Sydney's Brain and Mind Centre, Professor Ian Hickie said, "The community of Nepean-Blue Mountains has demonstrated that it is really willing to take on the responsibility of working collaboratively to improve the mental health and well-being of the youth who reside in their region. They are a stand-out example to other parts of the country. Rather than simply complain about a lack of resources they have been prepared to come together to achieve better outcomes and focus on building a better future."

The design and development of the local tool involved over 60 stakeholders, including local community organisations, young people with lived experience of mental health concerns, various government and health sector representatives, including the Nepean Blue Mountains Local Health District. These stakeholders will have access to the completed tool in 2025, including training on how to use it for their planning and advocacy objectives.

Ms Reay said that she believed we are starting to see a shift in healthcare, where health and wellbeing is increasingly being viewed a community, social and economic issue, rather than solely a government issue.

"To address the health needs of the future, we need more partnerships like this one, where government, education, research and corporate organisations can come together with communities and people with lived experience, to help address our future health needs," said Ms Reay.

Young person representative from Hawkesbury, Caitlin Daley, said "My hope is that this model can be used by young people to advocate for themselves and their communities, and to be able to clearly articulate the impact that service capacity and interventions can have on young people and local communities. As well as this model being able to demonstrate to funding bodies the impact additional services can have on youth mental health."

Ms Reay added that being involved in The Right Care, First Time, Where You Live program, has provided her PHN with the opportunity to showcase how they take a community-based, collaborative, scientific and data-led approach to future health planning.

"When we became a PHN almost 10 years ago, there were limited youth mental health services in the region. Through our strong advocacy and planning, we now have a headspace service in each of our four local government areas, as well a Street Uni in Penrith and Katoomba, in addition to other youth mental health services. But the road was not easy, with changes in both federal and state governments and funding priorities along the way," Ms Reay said.

"As a regional funder of health services, we need to ensure interventions have strong economic value, in addition to their social and health value. Having access to a local systems modelling and simulation tool, will enhance our ability to evaluate the relative benefits of investments into mental health services and assist our future advocacy efforts," she said.

To find out more visit:

- www.nbmphn.com.au/RightCare
- www.rightcarefirsttimewhereyoulive.com.au

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