

## Media release

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### **HOTspots platform maps antibiotic resistance patterns across northern Australia**

A new digital surveillance platform has launched enabling healthcare professionals to map circulating antibiotic-resistant pathogens in northern Australia.

The [HOTspots platform](#), developed in the [HOT NORTH program](#), covers tropical areas in Northern Territory, Queensland and Western Australia and has information about up to 13 pathogens and their associated antibiotics.

Lead researcher, Dr Teresa Wozniak, Senior Research Fellow and APPRISE Fellow at Menzies School of Health Research, said the HOTspots program and digital platform support antibiotic stewardship activities in northern Australia, allowing clinicians to choose “the right drugs for the right bugs”.

“The HOTspots data, and now a digital platform, allow end users including doctors, nurses and Aboriginal health practitioners across regional and remote hospitals and clinics to have access to accurate local up-to-date data to make decisions at the point of care,” Dr Wozniak said.

“Without knowing the causative organism of patients with a suspected infection, clinicians can use HOTspots to see which antibiotic-resistant organisms are circulating in their region and then combine that information with clinical treatment guidelines and their expertise to manage patients more effectively.”

Dr Wozniak said persistent clusters of antibiotic-resistance organisms are converging with surveillance blind spots in regional Australia and to effectively contain this threat, we need innovative, region-specific solutions.

“The HOTspots platform allows you to compare between the three jurisdictions because we have data across all of northern Australia above the Tropic of Capricorn,” she said.

“Users can compare community health versus hospitals, between regions within one state, for example Darwin to Alice Springs. You can also compare between states, for example, Northern Territory and Far North Queensland and Far North Western Australia.

“HOTspots provides extra layers of detail and supports clinicians with the most relevant information based on up-to-date, local and readily available laboratory-based data.”

Dr Wozniak said her earlier research showed many regions in northern Australia were blind spots falling outside of national surveillance for antibiotic resistance but HOTspots can now fill those surveillance gaps for this region.

“The platform could assist treatment decisions in primary and rural healthcare, and hospitals with the potential to be scaled-up and to serve as a national surveillance and response platform,” she said.

“A big milestone for the HOTspots program was contribution of data from northern Australia to the national surveillance activities reported in *AURA 2021: Fourth Australian report on antimicrobial use and resistance in human health.*”

– ENDS

### About HOT NORTH

HOT NORTH is a five-year (2017-2021) NHMRC research program led by Menzies School of Health Research in Darwin. The program is a multidisciplinary collaboration involving eight of Australia’s leading health research organisations.

Headquartered in the Northern Territory and covering an area from the Pilbara and Kimberley in Western Australia to Cape York and the Torres Strait Islands in Queensland, HOT NORTH is a health research, translation and capacity building partnership contributing to the healthcare needs of the north.

HOT NORTH collaborating institutions are:

- Menzies School of Health Research
- Telethon Kids Institute
- James Cook University
- Doherty Institute
- South Australian Health and Medical Research Institute
- The University of Sydney
- QIMR Berghofer Medical Research Institute
- Burnet Institute

### About APPRISE

The Australian Partnership for Preparedness Research on Infectious disease Emergencies (APPRISE) Centre of Research Excellence is developing research to inform Australia’s emergency response to infectious diseases.

The APPRISE CRE is an Australia-wide network of experts involved in medical, scientific, public health and ethics research. APPRISE is funded by the National Health and Medical Research Council.

APPRISE collaborating institutions are:

- The University of Melbourne
- The University of Sydney
- University of New South Wales
- Menzies School of Health Research
- Monash University
- Deakin University
- Pathwest Laboratory Medicine WA
- Burnet Institute
- Australian Red Cross Blood Service
- University of Queensland
- University of Adelaide
- Hunter New England Population Health
- Central Queensland University.

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