

Title: Enhancing public health surveillance through programmatic implementation of a national sexually transmitted infections (STI) point-of-care testing (POCT) network

Authors: *Monaghan R¹ and King J¹, Andrewartha K², Smith K¹, Saha A¹, Tangey A^{1,3}, O'Connor S⁴, McGregor S¹, Matthews S², Shephard M², Guy R¹, Causer L¹ on behalf of the TTANGO3 and First Nations Infectious Diseases Point-of-Care Testing Programs

¹ The Kirby Institute, UNSW Sydney, New South Wales

² International Centre for Point of Care Testing, Flinders University, South Australia

³ Ngaanyatjarra Health Service, Alice Springs, Northern Territory

⁴ Townsville Public Health Unit, Townsville Hospital Health Service, Queensland Health, Townsville, Queensland

*Author identifies as Aboriginal and/or Torres Strait Islander

Context and Aim: In Australia, chlamydia(CT) and gonorrhoea(NG) diagnosis rates are highest among Aboriginal and Torres Strait Islander people in regional and remote areas. However, Aboriginal and/or Torres Strait Islander status is often unavailable in epidemiological reporting using National Notifiable Diseases Surveillance System (NNDSS) data. Since 2016, community-led molecular point-of-care testing (POCT) for sexually transmitted infections (STI) has been implemented in predominantly regional and remote settings, providing real time, highly complete demographic and spatial data. We explored the potential for POCT data to enhance national surveillance of CT and NG.

Process: Using POCT program data (2022-2023; 59 enrolled clinics), we described the completeness of Aboriginal and/or Torres Strait Islander status. We then evaluated POCT numbers (by status, age, and sex) and test positivity. We compared these POCT data with publicly available data from the NNDSS (2018-2022).

Analysis: Of the 7,660 dual CT/NG POC tests conducted, Aboriginal and/or Torres Strait Islander status was complete for 85%. Of these, 96% were Aboriginal and/or Torres Strait Islander people, 60% were aged 15-29-years, and 61% were women. CT positivity was 10.7% and NG positivity was 11.0%. In comparison, of NNDSS data, Aboriginal and Torres Strait Islander status completeness was 52% for chlamydia and 74% for gonorrhoea. In 2022, in remote and very remote areas, POC testing identified an estimated 12% (355/2874) of chlamydia notifications and 8% (325/3858) of gonorrhoea notifications recorded in the NNDSS.

Outcomes: With increasing uptake of molecular CT/NG POCT in regional and remote areas, these data will become increasingly representative of all notifications and offer a more comprehensive epidemiologic picture of STIs in regional and remote communities. This addresses the national priority of improved Aboriginal and Torres Strait Islander status data collection and will inform the development of focused strategies to increase testing as part of a comprehensive approach to STI control in partnership with communities.

Aboriginal and Torres Strait Islander approvals:

This is a review of publicly available notifications and First Nations Molecular Infectious Diseases POCT program data; individual community approval has not been sought. The First Nations POCT program governance includes oversight from the National Aboriginal and Torres Strait Islander Health Protection AHPPC Sub-Committee and First Nations POCT Leaders group.

“The First Nations Molecular Point-of-Care Testing Program (including TTANGO3) has been funded by the Australian Government Department of Health and Aged Care. The authors acknowledge the contribution to the program of many stakeholders including the National Aboriginal and Torres Strait Islander Health Protection Sub-Committee, participating Aboriginal community controlled and government health services, national, jurisdictional and local Aboriginal Community Controlled Health Organisations, State and Territory health departments, and other government services, industry and pathology providers.”