# Continuous monitoring of Intensive Care Unit (ICU) and Cardiac Care Unit (CCU) patients' vancomycin levels in interstitial fluid: a pilot characterization study of a new device

ACTRN12625000208404

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| **Status** | RECRUITING |
| **Sponsor** | Nutromics Operations Pty Ltd |
| **Enrollment** | 100 participants |

## Plain Language Summary

Vancomycin is a critical antibiotic used to treat severe infections in people who are critically ill in intensive care. Getting the dose right is essential — too low and the infection isn't controlled; too high and it can damage the kidneys. Currently, blood tests are taken at regular intervals to monitor drug levels, which can be uncomfortable and inconvenient.

This pilot study is testing a wearable sensor device (Nutromics) that continuously measures vancomycin levels through the fluid just under the skin (interstitial fluid), rather than through blood draws. Up to 100 ICU patients receiving vancomycin will wear the device throughout their treatment course. Researchers will compare the device's readings with standard blood test results to see how accurate it is.

You may be eligible if you are an adult (aged 18–80) admitted to an ICU, have been prescribed intravenous vancomycin, and have a central or arterial catheter in place. People with skin conditions, allergies to metals or adhesives, or those who are pregnant are not eligible.

## Key Eligibility Criteria

### Inclusion (4)

- •Age 18-80 years
- •Hospitalised adults admitted to intensive care unit when they are enrolled are enrolled in the study
- •Prescribed vancomycin treatment for intravenous administration
- •A central or arterial catheter, and / or a large-bore cannula.

### Exclusion (4)

- •Participants who are currently receiving or have received any investigational drug/device within the last 10 days.
- •History of allergic reactions to metals, plastics and adhesives which, in the opinion of the Study Investigators, would increase the risk of having allergic reactions associated with Device.
- •Dermatological (or other) condition, or fragile skin which, in the opinion of the Investigators would prevent the application of the Nutromics Sensor Device
- •Participants are pregnant, lactating, planning to become pregnant, breastfeed, or donate ova.

## Locations (1 total)

VIC, Australia