

Protocol paper: Reducing catheter associated urinary tract infections in hospital, a multi-site randomised controlled study

Brett G Mitchell, Oyebola Fasugba, Victoria Gregory¹ Anne Gardner, Jane Koerner² Allen Cheng³ Peter Collignon⁴ Nicholas Graves⁵¹Avondale College, ²Australian Catholic University, ³Monash University & Alfred Health, ⁴Australian National University & ACT Pathology, ⁵QUT

Background

CAUTIs:

- Associated with increased morbidity, mortality and higher hospital costs
- 26% of patients admitted to a hospital in AUS will receive a urinary catheter and 1% will develop a CAUTI¹
- 380,000 bed days lost each year due to health care UTIs
- Increases length of stay by up to four days²
- Associated with higher risk of antimicrobial resistance (AMR)³
- Reducing bacterial colonisation around the urethral area has the potential to reduce CAUTI risk⁴

Generation of evidence using a high-quality randomised trial at Canberra Hospital (ACT) (A), Lismore Hospital (NSW) (B) and Sydney Adventist Hospital (NSW) (C) will determine the efficacy and cost-effectiveness of using saline or chlorhexidine in meatal cleaning. The outcomes will inform clinical practice and policy in Australia and internationally.

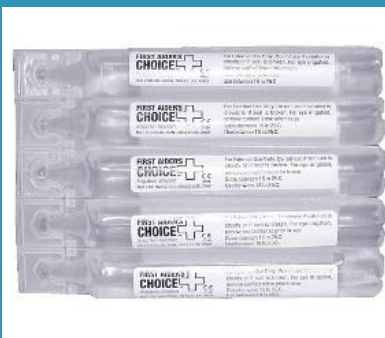


Figure 1 Control Phase Saline (left). Figure 2 Intervention Phase Chlorhexidine (right).

Key Outcome Measures

OBJECTIVE 1: Chlorhexidine Effectiveness

1. A measure of catheter associated asymptomatic bacteriuria
2. The number of CAUTIs per 100 days
3. The number of blood stream infections associated with UTI

OBJECTIVE 2: Chlorhexidine Cost-Effectiveness

1. Changes in costs relative to health benefits
2. Changes in costs associated with Quality Adjusted Life Years

Study Design

Hospital	2 months	4 months	6 months	8 months
A				
B				
C				

Study Design: Stepped wedge randomised controlled trial in 3 large hospitals in Australia over a 32 week period.

Hospitals begin with **control phase** using **saline** for urethral cleaning before catheter insertion.

Every eight weeks each hospital switches to the **intervention phase, chlorhexidine**.

1. **CANBERRA HOSPITAL ACT**
2. **LISMORE HOSPITAL NSW**
3. **SYDNEY ADVENTIST HOSPITAL NSW**

HREC and SSA granted at 3 sites + Avondale College
HREC approval

Study education days carried out at 3 sites with IPC staff.
Trial commenced 1st August 2017 for 32 weeks (until 12th March 2018).

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Lifestyle Research Centre
www.avondale.edu.au/cauti

Avondale College of Higher Education, NSW, Australia



Data Collection Procedure

Participant receives catheter

Hospital staff review wards

Medical Notes Review and
Microbiology resultsData Collected by hospital
staff

Data de-identified

Data provided to researchers

Hospital personnel collect data three days a week at each hospital during both control and intervention periods.

Patients who receive a urinary catheter are followed up during the trial period (for a period of 7 days post catheter insertion, discharge or 48 hours post catheter removal – whichever occurs first).

De-identified data submitted to Research Team weekly then monthly

brett.mitchell@avondale.edu.au

Chief Investigator, Avondale College | @1healthau

victoria.gregory@avondale.edu.au

Research Project Manager, Avondale College

