



THINK BEFORE YOU DIP:

QIP on the diagnosis of UTIs in women over 65 and patients with a catheter

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Background

Urine dipsticks are unreliable in diagnosing urinary tract infections (UTIs) in women over the age of 65 and catheterised patients¹. Asymptomatic bacteriuria (ASB) is common in older women, with rates of up to 70% in those residing in long-term care facilities². In addition, all patients with a long-term catheter will have bacteria in their urine¹.

ASB is not associated with increased morbidity in patients (except for pregnant women and those undergoing urological procedures). Treating ASB with antibiotics poses many risks, including: selection for multi-drug resistant bacteria, Clostridium difficile and antibiotic side effects³.

According to the Scottish Antimicrobial Prescribing Group (SAPG), the diagnosis of UTIs in women over 65 and catheterised patients should be made on the presence of **signs** and **symptoms** only⁴.

Aim

To reduce the number of inappropriate antibiotic prescriptions for UTIs to 0, in women >65 and catheterised patients in the assessment units of Dumfries and Galloway Royal Infirmary by June 2023.

Methods

Data was collected from CAU (Combined Assessment Unit) and SAU (Surgical Assessment Unit) over 14-day periods.

Inappropriate urine dipsticks carried out on admission on women over 65 and long-term catheterised patients were recorded.

Urine dipsticks performed for purposes other than screening for UTIs were excluded.

Data was collected at baseline and subsequently after each PDSA cycle.

PDSA cycle 1: Education

A formal teaching session was delivered to FY1s, registrars, an infection control panel and grand rounds.

PDSA cycle 2: Visual aids

We developed a logo, alongside posters, reminder tags for dipstick bottles and labels for staff workstations.



Throughout the project, education for nursing and auxiliary staff was also carried out on the wards.



Results	Baseline	After PDSA 1	After PDSA 2
# of Dipsticks in women >65	29	26	14
# of Dipsticks in catheterised patients	15	3	3
# of Inappropriate antibiotic prescriptions	3	3	4
% of Dipsticks requested by doctors	>57%	>69%	>18%

Overall, there was a **decrease** in inappropriate urine dipsticks by **61%**.

Conclusions

Urine dipsticks were carried out inappropriately in women over 65 and catheterised patients. On occasion, this led to antibiotics being prescribed for ASB, which is not in keeping with current guidelines.

Next Steps

We have created an educational video, which will be disseminated to staff. We will be updating the local clinical handbook and conducting teaching sessions for rotational staff members, whilst raising awareness of the SAPG app. We hope to extend this project to inpatients wards, as well as the Galloway Community Hospital and local care facilities.

References: 1. Overview: Urinary tract infection (lower): Antimicrobial prescribing: Guidance. NICE. Available at: <https://www.nice.org.uk/guidance/ng109> 2. Osiemo, D., Schroeder et al. (2021). Treatment of Asymptomatic Bacteriuria after Implementation of an Inpatient Urine Culture Algorithm in the Electronic Medical Record. *Pharmacy*, 9(3) doi:<https://doi.org/10.3390/pharmacy9030138>. 3. Banks, A., Moore, E.K et al. (2018). Trends in mortality following Clostridium difficile infection in Scotland, 2010–2016: a retrospective cohort and case–control study. *Journal of Hospital Infection*, 100(2), doi:<https://doi.org/10.1016/j.jhin.2018.07.023>. 4. Scottish Antimicrobial Prescribing Group. *Urinary tract infections (UTIs)*. Available at: <https://www.sapg.scot/guidance-qi-tools/infection-specific-guidance/urinary-tract-infections-utis/>