



Evaluation of Adherence to the HSE Position Statement on the Use of Dipstick Urinalysis to Assess for Evidence of UTIs

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BACKGROUND

Urinary tract infections (UTIs) represent a primary driver of global antimicrobial resistance and are a leading cause of antibiotic prescribing. Recognizing that dipstick urinalysis often precedes these clinical decisions, The Health Service Executive (HSE) published a position statement regarding the use of dipstick urinalysis to assess for evidence of UTI in adults. This guidance is predicated on the high prevalence of asymptomatic bacteriuria in older adults, which frequently results in false positives, diagnostic overshadowing, and unnecessary antimicrobial exposure.

OBJECTIVE

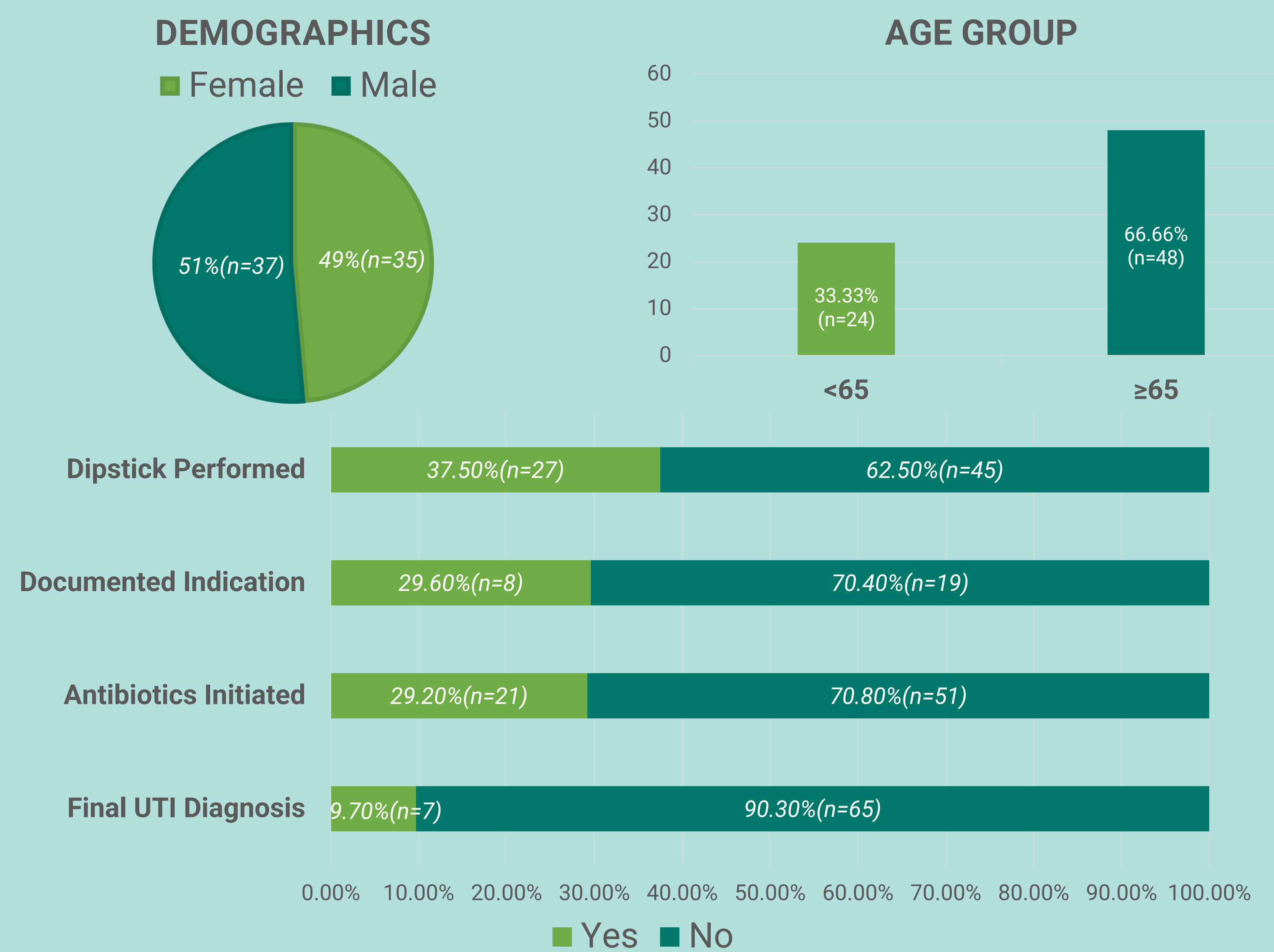
This clinical audit evaluates University Hospital Waterford’s (UHW) current compliance with these national HSE guidelines, with the aims of identifying gaps in practice.

METHODS

A retrospective clinical audit was conducted involving a comprehensive review of patient charts for all adults admitted to the acute setting over a three-day period. The final dataset comprised 72 patients. Data points included the performance of urine dipsticks within 48 hours of admission, the subsequent submission of Mid-Stream Urine (MSU) samples for laboratory culture, the presence of documented clinical symptoms of urinary tract infection, and the initiation of antibiotic therapy.

A subsequent statistical analysis, including Chi-square and logistic regression, was performed on the collected dataset.

RESULTS



Of the 72 admissions evaluated, 37.5% (n=27) underwent urine dipstick testing, yet only 29.6% (n=8) had a documented clinical indication. Consequently, 70.4% of the urine dipstick tests performed were outside the scope of the HSE guidelines. Antibiotics were initiated for 29.2% of patients (n=21). A final UTI diagnosis was confirmed in 9.7% (n=7) of cases.

Logistic regression analysis revealed strong evidence against an association between a patient’s symptomatic profile and the decision to perform a dipstick (p<0.001).

Chi-square tests indicated that there was no significant association between urine dipstick, MSU / MSU findings and UTI diagnosis in this dataset (p=1.0).

DISCUSSION/CONCLUSION

The findings demonstrate a distinct lack of correlation between a patient’s symptomatic profile and the clinical decision to perform urinalysis, suggesting that urine dipstick testing at UHW is frequently conducted as a reflexive clinical practice rather than a targeted diagnostic tool. Such procedural habituation often leads to the identification of asymptomatic bacteriuria, which may be misinterpreted as an active infection. Consequently, this practice risks triggering unnecessary cascading interventions, including further invasive testing and misallocated resources, which deviates from evidence-based HSE guidelines.

Furthermore, this trend carries significant implications for antimicrobial stewardship, as unwarranted antimicrobial exposure directly contributes to the acceleration of multi-drug resistance, avoidable adverse drug effects, and increased healthcare costs. These findings highlight a critical need for targeted interventions, including clinician education to reinforce HSE guidance and potential system-level changes, such as restricting dipstick use in asymptomatic patients. By ensuring diagnostics are utilized effectively, healthcare providers can better protect patient safety and preserve the efficacy of existing treatments.

REFERENCES

- Position statements on the use of dipstick urinalysis to assess for evidence of urinary tract infection (UTI) in adults. HSE https://assets.hse.ie/media/documents/Position_statements_on_dipstick_urinalysis_for_evidence_of_urinary_tract_infec_pnCLVor.pdf Accessed April 2026
- Clinical Practice Guideline for the Management of Asymptomatic Bacteriuria: 2019 Update by the Infectious Diseases Society of America. <https://www.idsociety.org/practice-guideline/asymptomatic-bacteriuria> Accessed April 2026
- Diagnosis of urinary tract infections: quick reference tools for primary care. UK Health Security Agency / NHS England. <https://www.gov.uk/government/publications/urinary-tract-infection-diagnosis> Accessed April 2026
- Management of suspected bacterial lower urinary tract infection in adult women, SIGN guidelines 160. September 2020. https://www.sign.ac.uk/media/1766/sign-160-uti-0-1_web-version.pdf Accessed April 2026

See the HSE guidelines here:

