A Need for a Time-Out: A Consensus Statement From the Post-Acute and Long-Term Care Medical Association (PALTmed) on the Use of Urine Polymerase Chain Reaction Testing for Urinary Tract Infections – Journal of the American Medical Directors Association

Executive Summary

- We recommend against the routine use of urine polymerase chain reaction (PCR) testing for the diagnosis of urinary tract infection (UTI)
- Evidence supporting urine PCR is often biased because of funding sources, and there is no objective evidence of patient benefit
- Urine PCR testing likely will lead to unnecessary antibiotic use, which drives antimicrobial resistance

Antibiotic stewardship programs should use the CDC's Core Elements of Antibiotic Stewardship for Nursing Homes as a framework to engage with the multidisciplinary team when making decisions on urine testing

Testing and treatment of urinary tract infections (UTIs) represent a frequent clinical challenge in post-acute and long-term care (PALTC) settings.[1] Inappropriate urine testing is often driven by concerns about missing an infection and misconceptions about the significance of nonspecific symptoms.[1,2] When ordered in the absence of clinical signs and symptoms of a UTI, these results are frequently misinterpreted as indicative of infection, leading to unnecessary antibiotic prescribing.[1,2] This practice puts patients at risk of significant harms, including Clostridium difficile infections and antibiotic resistance.[1,2] Furthermore, more than half of antibiotics prescribed in PALTC settings for UTI are considered inappropriate.[1]

Urine polymerase chain reaction (PCR) is a multiplex molecular testing method that uses pathogen-specific primers to identify a microbiological target within the urine sample. Marketed to PALTC settings as a faster and superior alternative to standard urine culture,[3] its use has risen sharply, with billing claims increasing by more than 60-fold since 2016 with the highest

growth among nursing home residents.[4] Several factors including increasing use of urine PCR testing, emerging literature on its antimicrobial and diagnostic stewardship implications,[4-7] and clinical scenarios such as the one outlined in Table 1 prompted the Infection Advisory Subcommittee of the Post-Acute and Long-Term Care Medical Association (PALTmed) to evaluate the role of urine PCR testing within current best practices.