Caring for the Ages
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From Bedside Observation to Guidance

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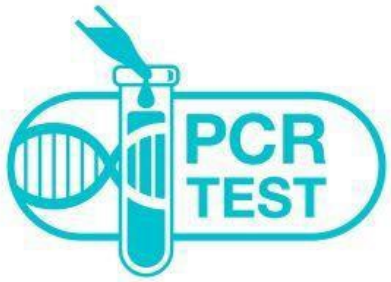

Doc, can you take a look at this? A routine inquiry in 2022 from a nurse practitioner, Jonathan Wilson, led to my first encounter with a urine test report utilizing polymerase-chain reaction (PCR) instead of urine culture. PCR was familiar to me as a test for identifying respiratory viruses, but not for urinary tract infections (UTI).

Rather than accepting this new test without question, we made the effort to learn more. This is a common journey for many clinicians in post-acute and long-term care (PALTC) settings where evidence-based recommendations and guidelines relevant to our patients are not always available. The more I learned, the more I wanted to share it with my colleagues.

Trust Your Colleagues

Knowing how astute and conscientious Jonathan is and knowing that he trusted me as the group's medical director to provide guidance, I needed to understand the benefits and risks of this new diagnostic test. We relied on each other to reconcile what our senses were telling us about UTIs and this new lab report that popped into his inbox. The new test was not a routine diagnostic procedure.

Question Assumptions

I contacted local practitioners and medical directors that very week. The new test was being used after a nursing home chain's corporate decision to switch to a new laboratory. The lab specialized in molecular diagnostic testing for UTI instead of the standard method of urine culture. The new results were printed out on reports that were subtly different from urine culture reports.

Some clinicians were not aware that a new laboratory and new testing had been implemented in their care community. Some assumed, without evidence, that the new test carried little risk and would provide more accurate results. Some believed the new testing protocol was being driven by insurance coverage, which was also incorrect. Our assumptions had to be questioned and investigated.

Do the Research

The effects of appropriate testing on management and treatment are especially impactful in PALTC. PCR for UTI testing is not approved by the Food and Drug Administration for diagnosis of urinary tract infections.[1] The prevalence of asymptomatic bacteriuria is estimated to be as high as 50% for residents of long-term care facilities.[2]

Studies have shown that up to 75% of antibiotics prescribed in nursing homes may be unnecessary or inappropriate.[3]

Being good stewards of diagnostic testing is especially crucial for the vulnerable patients in this setting. Yet, in reading the literature, I found no evidence to support using the new test in lieu of the standard urine culture.

Reach Out to Experts, Colleagues

Fortunately, I am surrounded by a community of colleagues with good sense and experts who are willing to help. I asked practitioners from PALTmed and within my local chapter: How often are you seeing this new test being used? I asked our regional Quality Improvement Organization: Does PCR testing lead to better outcomes in residents? The University of Colorado I KNOW CARE Network, which bridges PALTC researchers with community providers, put me in touch with an infectious disease specialist with an interest in long-term care and I asked: What is the evidence for using this new test? My colleagues and I reached out to our local departments of health and the Nursing Home Division of the Centers for Disease Control and Prevention to ask: What are the implications of using this new test for patients in PALTC?

Conversations confirmed what I was learning from my reading: *The standard of care for diagnosis and treatment of urinary tract infections remains the urine culture*.

Address Stakeholder Concerns

In facilities that have contracted with laboratories specializing in molecular diagnostics, clinicians frequently face barriers to accessing standard urine culture testing. First, knowledge and awareness are foundational. For some, the main literature available a couple of years ago was promotional materials from laboratory companies. Formal guidance was lacking. Second, the current state of testing for UTI is not perfect. Fear of citations and fear of missing a diagnosis lead to hesitation in following established guidance.

New laboratories with new tests and improved responsiveness are an attractive alternative. It can take just moments of pressure to obtain a quick and accurate diagnosis to start questioning decades of research and data on UTI. Current nursing home regulations, however, call on us to follow current guidelines, including those from PALTmed.[4]

Share Education Widely

PCR testing for suspected UTI may identify organisms of questionable clinical significance. Genetic resistance markers reported with PCR testing do not necessarily predict antimicrobial sensitivity and resistance. The standard of care for diagnosis and treatment of urinary tract infections remains the urine

culture. Practitioners and medical directors need to be aware of this before considering the adoption of a new test.

Organized efforts to share the education involved collaboration and inspiration among multiple colleagues, including myself. The following resources created in the last 3 years regarding diagnostic testing for UTI in PALTC settings may be useful to you:

Association and Public Health Resources and Publications

- Comparison of testing methods for urinary tract infections in nursing homes: Colorado Department of Public Health and Environment summary and wall poster
- Urine Polymerase Chain Reaction Testing Guidance Document: PALTmed-Washington and Washington State Department of Health
- Choosing Wisely Guide | PALTmed: PALTmed #20: Don't utilize molecular testing to replace urine culture for diagnosing and determining treatment for urinary tract infection
- Palat ST, Biehle L, Adler L. Rapid Molecular Testing for UTIs: A Diagnostic Stewardship Perspective. J Am Med Dir Assoc. 2024; 25(9)105031. https://doi.org/10.1016/j.jamda.2024.105031
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Stay Curious

Jonathan trusted his intuition to follow up on a new lab report that he had never seen before. I learned to stay curious in the face of assumptions. Relying on colleagues, doing our research, and getting the word out helps us all learn about new diagnostic tests and current standards. The curiosity and trust in our teammates serve as the springboard for education and advocacy that benefit our patients.

References

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