# Diagnosing UTIs - Why Ordering the Right Test is So Important Yet Complicated

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**Julie McDowell:**

There are several methods for workup of urinary tract infections or UTIs. And utilizing the appropriate tests on the appropriate patients can allow for prompt and appropriate treatment and symptom relief, as well as reduce unnecessary testing and unnecessary treatment with antimicrobials, explains Dr. Stacy Beal in this podcast.

Dr. Beal, a pathologist at University of Florida Health in Gainesville and member of the CAP'S Quality Practices Committee, has helped to develop a new CAP testing module focused on UTIs. Dr. Beal, can you start off by telling us a little bit about what prompted your interest in testing volumes for urinary tract infections?

**Dr. Stacy Beal:**

Absolutely. Well, first of all thank you for having me. The reason that I became interested in looking at our UTI testing, is because I would go into the micro lab and find the techs just absolutely surrounded by stacks and stacks of urine culture plates, and they were just drowning in these. So we really started to wonder, are all of these necessary?

We also had been hearing from our hospital Infection Prevention and Control group who we worked very closely with, and they were telling us about the CAUTI rates getting very high, and they had looked into these patients who had these infections and realized that maybe all of these aren't actually accurate and not really reflecting our true infections.

And then one final thing that prompted this investigation is that we found that our reflex criteria from urinalysis to urine culture was not really evidence-based. We just had some things built in our system that had been there for many years and really hadn't paid much attention to them. So that's what really prompted us to look into this a little bit more closely.

**Julie McDowell:**

How widespread is misapplied UTI testing?

**Dr. Stacy Beal:**

It's really hard to tell, because we're not sitting around calculating exactly which ones are misapplied or not. But I'll tell you that urine testing via either urinalysis, urine culture or a combination of the two, is extremely widespread. It seems that almost everybody who comes to the hospital or shows up to a doctor's office for various reasons, will have one or more of those tests done. So I believe that at least a good portion of those tests are not utilized correctly. And just based on the numbers, being such a common test, it probably adds up to quite a large bit.

**Julie McDowell:**

If a lab would like to implement some of the strategies you discussed to improve UTI's lab test utilization, where should they start?

**Dr. Stacy Beal:**

Well, the first step in any quality improvement process really, is to talk to people. So first, they should collaborate with various groups such as primary care, including both adults and pediatric hospitalists and outpatient medicine. OB gyn would be another great group, and similarly, urology. And just see what their practices are. Ask them, what do you do when you have a patient that comes in with this or that? What guidelines do you follow? And realize that there will always be exceptions to any rule or guideline.

That's why physicians and other providers went to school for so long, is because we use judgment when we see patients and work up various diseases. And some patients just don't fit into the guidelines, don't fit into the standard set of rules. And various physicians will have their own way of doing things, and we have to respect that.

But in general, we want to talk to various people and get an idea of what's going on out there. Another really good group I talked to, as I alluded to earlier, is the Infection Prevention and Control Department, because they keep very detailed records of urinary tract infections, so they're another good group to talk to.

**Julie McDowell:**

What kind of impact might someone see if they implement strategies to improve UTI lab testing?

**Dr. Stacy Beal:**

I think probably the biggest thing is an increased proportion of ordered placed via a reflexive algorithm, from urinalysis with or without microscopy, to urine culture. And it's really not just about decreasing overall lab testing volumes, but improving the amount of testing that's done appropriately. So if we can maybe increase the amount of urine microscopy or urinalysis, and lower the number of actual culture plates that we're doing, then that might be an improvement that we could see.

You'll also hopefully see that your techs are a little bit happier and not bogged down by unnecessary work, and not surrounded by so many plates. And the infection prevention team will ideally have a more clear set of data to work with, which this could lead to better and more accurate ratings for the hospital.

**Julie McDowell:**

Finally, Dr. Beal, where can interested pathologists find more information about this resource?

**Dr. Stacy Beal:**

Well, I'll certainly refer everybody to our new test ordering program written by the CAP Quality Practices Committee. And I also encourage folks to check out society guidelines, realizing that these are not perfect and don't uniformly fit every patient, but they're certainly a good starting point.

I certainly suggest reaching out to a team of collaborators from other disciplines. And then there's some really great resources out there on the internet, such as UpToDate, is one that I particularly like.

**Julie McDowell:**

Thank you, Dr. Beal. For more information about this new testing module, please visit cap.org and search for Test Ordering Program. Once on the Test Ordering Program page, scroll down for the Urinary Tract Infection module.

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