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Antibiotic Test Results - Done Right

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Rapid treatment... or the right treatment? No pathologist should ever be in a situation where speed and accuracy are an "either/or" choice for laboratory diagnostic decisions. No patient should ever have to sacrifice their degree of certainty about a result to get it faster. But not every infectious disease testing system can offer both at once; the most accurate tests are often slower to return results. Microbiology professionals who aren't willing to compromise must turn to advanced systems that can reduce turnaround times, identify pathogens, and offer broad-ranging resistance detection. Beckman Coulter's DxM MicroScan WalkAway is one such system. We spoke to pathologist Brent Ponder of Poplar Bluff Regional Medical Center to learn about his lab's needs – and where the DxM MicroScan WalkAway fits into the picture.

Could you describe your facility?

Poplar Bluff Regional Medical Centre is a 250-bed hospital in Poplar Bluff, a town of approximately 17,000 in southeast Missouri. We serve not only the Poplar Bluff area but also surrounding counties, so our microbiology laboratory processes about 30,000 specimens per year. Although I am the hospital's sole pathologist, the other members of my laboratory are equally indispensable. David Crabtree



and Glenn Gutterman, the laboratory director and laboratory supervisor, respectively, support three technologists - Carol Baker, Terry West, and Kevin Gordon - who are largely responsible for the microbiology section.

It's clear from the cases we see every day that microbiology, as a field, needs better testing solutions. Technology that can quickly and accurately identify organisms as well as appropriate antimicrobial susceptibility is instrumental in directing appropriate therapy for the patient - not to mention reducing the number of potentially ineffective or even harmful drugs to which the patient might otherwise be exposed.

Particularly in our hospital's effort to treat sepsis aggressively and appropriately, such technology is paramount.

Where do current testing methods

The major shortfall of current standard testing methods is the length of time it takes for organism growth. If we have to wait days for enough microbial growth to identify the disease-causing pathogen, then the patient has to wait equally long for treatment – and, especially in the case of sepsis, not every patient can.

Rapid, accurate organism identification and susceptibility testing doesn't only aid the well-being of the patient, though; it can also result in the reduction of unnecessary health resource expenditure. And that's why we recently decided that we needed to revisit our microbiology needs. At the time, we were using a Beckman Coulter MicroScan WalkAway 96 plus – which we thought was a great instrument but we recognized that our laboratory needed a more advanced tool. It didn't take us long to settle on the DxM MicroScan WalkAway as our replacement system – and we haven't looked back since.

Today, our workflow is much faster – and we are particularly impressed by the reagent indicators in the DxM MicroScan WalkAway. The microbiology technologists in our lab find them much easier to read and benefit from the fact that the analyzer does not need to be opened to check reagent levels. The technologist performing the tests can simply glance at the DxM front panel to ensure that the reagents are all set to go before they leave for the day.

How does it work? The microbiology department receives specimens, plates them on appropriate media, and grows them in a CO₂ incubator. Once the culture is ready, they perform Gram staining and any other quick tests they consider appropriate, then prepare dilutions for MicroScan panels to be processed in the DxM instrument. The upgrade hasn't really changed our workflow much other than to decrease our turnaround times - we were able to keep the same protocols and timings we've always used, so the transition to the new system was a smooth one.

How can other labs follow suit? When we were ready to upgrade, we explained the benefits the DxM MicroScan WalkAway to our administrators and helped them to

To provide quick and effective treatment. pathologists need accurate pathogen identification and resistance detection.

understand the need – and they were happy to approve the purchase of a new system. If other laboratories want to go down the same upgrade path, the key is to outline the importance of such advanced systems to optimal patient care. It's also vital to ensure that you'll have ongoing assistance after making a purchasing decision – and I can attest that we have received nothing but outstanding support from the field services, technicians, and everyone else at Beckman Coulter.



- External LED indicators let users check reagent status quickly and easily
- Quick bottle release makes reagent maintenance simpler and less time-consuming
- Software provides custom options with an easy-to-use interface
- Reduced offline testing means faster time to result for more antibiotics



Saving Costs

- Fewer confirmatory and repeat tests mean less expense for both materials and labor
- Wide range of susceptibility tests on one panel eliminates the need for multiple systems
- Efficient software and hardware design streamlines workflow and allows smooth processing of routine samples



Saving Patients

- Superior accuracy in detecting antimicrobial resistance – both known and emerging
- Automated atypical result detection allows quick recognition and reporting
- Fewest clinically significant drug-bug limitations means patients have more treatment options





Protect patients against the threat of antimicrobial resistance with the reliably accurate DxM MicroScan WalkAway system*



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¹Kalorama United States Market for In Vitro Diagnostic Tests, 2017, pg. 878.

*Not available in all countries. Please contact your Beckman Coulter sales representative for more information. †References available upon request.

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