THE CHALLENGE

Confluence Health System is comprised of Central Washington Hospital, Wenatchee Valley Hospital and Wenatchee Valley Medical Center, all in Wenatchee, Wash. Established in 1940, Wenatchee Valley Medical Center is a large rural healthcare delivery system with a regional focus, with nearly 300 physicians and mid-level practitioners, providing care to area residents through clinics in 10 communities and Wenatchee Valley Hospital, a licensed 20-bed facility which serves medical, surgical and acute rehabilitation patients. Central Washington Hospital is a 190-bed facility, with family physicians, internal medicine and orthopedic outpatient clinics. The facilities began operating under a shared management structure in 2013 with the goal of operating as one combined and fully integrated organization.

As part of their dedication to improving their patients’ health by providing safe, high-quality care in a compassionate and cost-effective manner, Confluence Health’s laboratories were planning to explore molecular testing and had begun to look at their options in early 2014.

Molecular testing analyzes biological markers in a pathogenic bacteria or virus genetic code and is used to diagnose and monitor disease, detect risk and decide which therapies will work best for each patient. These tests are used in the areas of infectious disease, oncology, immune function and pharmacogenomics. Molecular testing generally provides earlier and more accurate results and the opportunity to personalize therapy and treatment based on genetics.

“Using molecular testing in the laboratory, and especially in microbiology, has been a game changer. Results that could take several days previously are now available in a few hours. The impact on patient care has been dramatic,” said Pat Martin, Intalere laboratory clinical specialist. “With this short time to results, patients are getting diagnosis and treatment much earlier in their disease process, resulting in better outcomes and earlier discharge from the facility. This in turn results in a much lower cost of care and savings for our members.”

THE SOLUTION

At the time, Cepheid was one of the more popular analyzers on the market for Clostridium difficile (C. diff) and Methicillin-resistant Staphylococcus aureus (MRSA) in particular. At the 2014 Intalere Member Conference in Las Vegas, Wendy Willey, lab director for Confluence Health, visited the Cepheid vendor exhibit to discuss what specific benefits this analyzer might provide.
Cepheid’s representative outlined the main features of the solution including ease of use, significantly reduced turnaround times, accuracy and ability to fit in any size healthcare facility. Willey was initially intrigued, but wanted more specifics concerning the applications and use of the analyzer nationwide for molecular testing. During the Intalere conference she was able to poll approximately 20 lab managers that were present from large and small lab facilities throughout the country, many of them from larger facilities in central and eastern locations of the country. These labs were unanimously using the Cepheid solution at the time, and were impressed with its benefits. “The comments from the lab managers and the contacts that I made helped our facility to ultimately make the decision to move to the Cepheid platform,” said Willey.

THE OUTCOME

Confluence Health began using Cepheid for MRSA and C. diff in January 2015. “Our turnaround times (TATs) are better and we feel that the quality of the results for C. diff are better than we previously had,” said Willey. Specifically, Confluence moved from TATs of 18 hours for MRSA to less than 3 hours with Polymerase Chain Reaction (PCR). PCR is a molecular testing tool that focuses in on a segment of DNA and copies it. PCR is used to diagnose diseases, identify bacteria and viruses and even to match possible criminal suspects to crime scenes.

In the case of C. diff, TATs were usually somewhere in the 6-hour range, but could be as long as 18 hours previously. Confluence’s worst case for this now is 3 hours with PCR. Additionally, because the Confluence lab was now getting test results back in less than three hours, it helped in terms of increased bed turnover and reduced length of stay. Also important was the ability to now use empirical versus presumptive drug administration, all of which assists with institutional savings and enhanced patient care.

For her part, Willey is not only extremely pleased with the new laboratory solution, which has brought cost savings, process and quality improvements, but also with the networking and education opportunities that led her to it. “I find the Intalere Member Conference very useful in being able to network with lab managers throughout the country and to decide as a group where we would like for Intalere to focus its energy regarding contracts with suppliers,” said Willey. "I look forward to the lab member input meetings as a means of connecting to these very knowledgeable professionals in my field."