



## Impact Brief

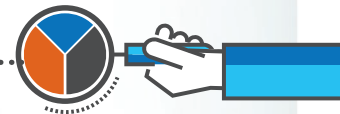
Create a Ripple

Ephraim McDowell Regional Medical Center improves adherence to optimized testing protocols for *Clostridium difficile* resulting in lower *C. difficile* rates and decreased patient time in isolation.

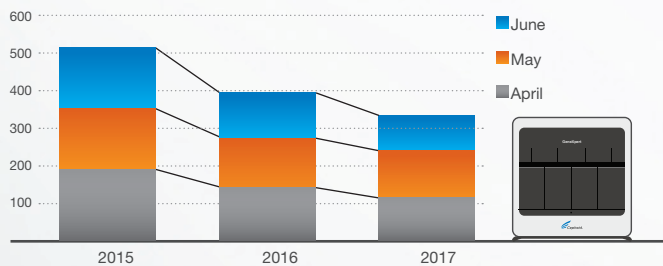
An analysis comparing results during a three month pre-intervention period with results for the same period during the two consecutive years post-intervention was completed. This analysis demonstrated the impact of improved *C. difficile* testing protocols at Ephraim McDowell Regional Medical Center (EMRMC). Optimizing control measures for appropriate selection of patients tested using Xpert® *C. difficile*/Epi resulted in:

- 36% reduction in specimens tested
- 306 fewer isolation days
- Over \$28,000 in testing and isolation costs avoided
- 85% decrease in Hospital-Onset *C. difficile* rates
- 69% decrease in Community Onset Healthcare Facility Associated (CO-HCFA) *C. difficile* rates

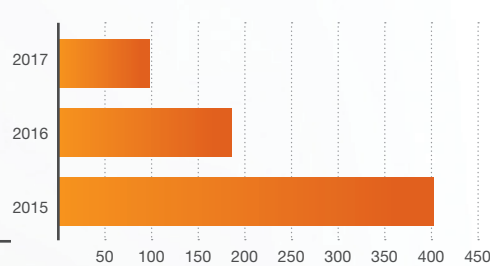
## Impact



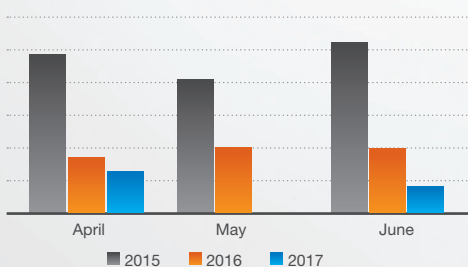
### > Total *C. difficile* Volume



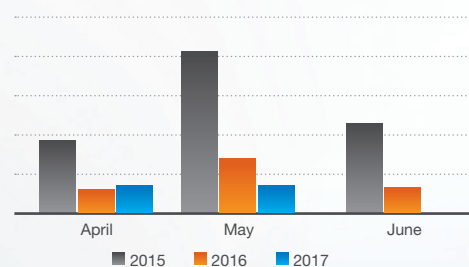
### > Days in Contact Precaution



### > Hospital-Onset *C. difficile* Rates



### > CO-HCFA *C. difficile* Rates





## ● ● ● Profile .....

The Ephraim McDowell Health System is a comprehensive, integrated health care delivery system that serves more than 119,000 residents from six counties in central Kentucky. At the core of the system is EMRMC, a non-profit, 222-bed licensed hospital located in Danville, KY. EMRMC, a JCAHO-accredited facility, has been recognized by Becker's Hospital Review as one of the 100 Great Community Hospitals in the U.S. Ephraim McDowell Health System is committed to providing a healing environment in the communities they serve, built on best people, practices, and performance.

## Summary .....

Ephraim McDowell Regional Medical Center had a problem. In spite of aggressive Infection Prevention (IP) efforts, they were struggling to control the rate of *C. difficile* infections occurring within the facility. As a long time GeneXpert® user, they began to question whether PCR was the best method to detect *C. difficile* and had concerns that other factors may be affecting their *C. difficile* rates. Before making any changes to test method, they initiated a thorough assessment of their current practices to understand the complete patient pathway and the characteristics of the patients being tested. What they found was that prior interventions were not optimized and had led to an over-reliance on diagnostic testing. This resulted in the detection of both infected and colonized patients.

## Challenge .....

- Desire to continue use of Xpert® *C. difficile*/Epi for detection of *C. difficile* despite growing pressure to implement an alternate method
- Increasing rates of *C. difficile* in spite of aggressive infection prevention efforts
- Existing protocols were not optimized leading to an over-reliance on diagnostic testing
- Significant number of patients in isolation due to a rule-out protocol for patients at high risk for *C. difficile* infection



## Vision .....

Implement enhanced protocols and provide additional education to optimize testing for *C. difficile* infection

- Utilize the hospital information system (HIS) to assist clinical staff in selecting the appropriate patients for testing
- Provide additional training to clinical staff on clinical presentation of *C. difficile* and selecting patients to test
- Decrease testing of formed stools in the laboratory
- Reduce unnecessary isolation by limiting preemptive contact precautions and diagnostic testing to include only those patients that met the clinical criteria for *C. difficile* infection

## Implementation .....



- Integrated "Ask at Order Entry" questions in the HIS to document the number of non-formed stools from each patient and prior use of laxatives
- Provided training to clinical staff including one-on-one follow-up with IP to verify appropriateness of testing
- Daily rounding by IP to review suspect *C. difficile* cases in real time
- Implementation and reinforcement of Bristol Stool Chart within the laboratory to identify appropriate samples for testing

### For *In Vitro* Diagnostic Use.

Data provided by Ephraim McDowell Regional Medical Center.

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