

### BACKGROUND

- Infection prevention (IP) and antibiotic stewardship (AS) are critical to the safe and effective delivery of patient care.
- Many Infectious disease fellowship programs do not have a formal rotation to train on IP and AS.
- We designed and implemented a one-month fellowship rotation to train infectious diseases fellows to develop key competencies in these fields.

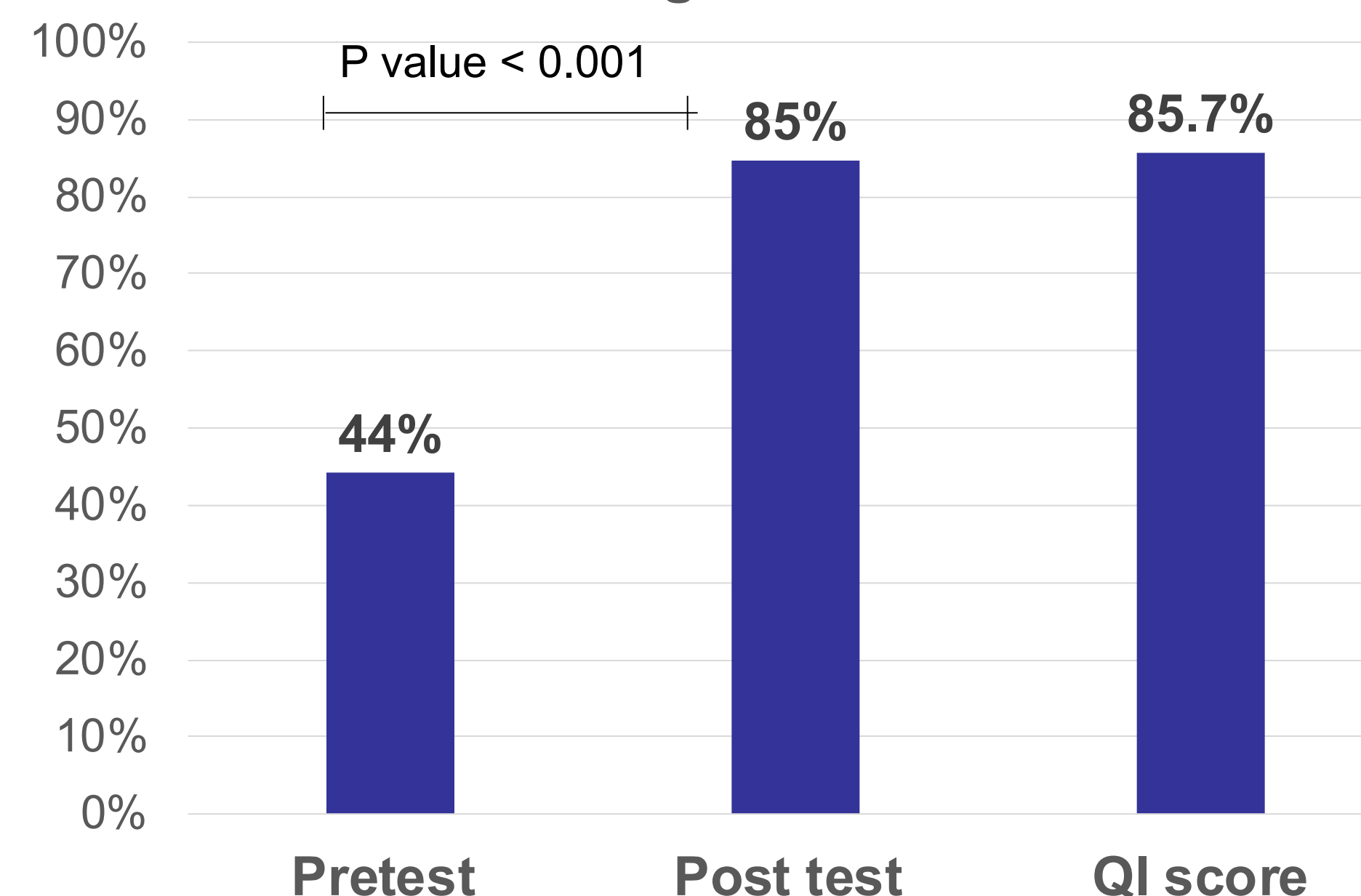
### METHODS

- We organized an IP and AS rotation for the first-year infectious disease fellows starting July 2017. This rotation was added on the existing microbiology rotation.
- This new one-month rotation included an introductory online module IP and AS, developed by the Society for Healthcare Epidemiology of America (SHEA), and several lectures by infectious diseases physicians, infection preventionists and pharmacists.
- Fellows rounded with infection preventionists (isolation, device, environmental, and endoscopy rounds) and participated in infection control subcommittees (central line-associated bloodstream infections, catheter-associated urinary tract infections, *Clostridioides difficile* colitis and surgical site infections).
- Fellows were required to present infection control data and develop a proposal for a quality improvement (QI) project using the Define, Measure, Analyze, Improve and Control (DMAIC) method.
- Knowledge was evaluated through a 25-item questionnaire administered before (pre) and after (post) rotation. Both pre and post tests were identical. Test topics are shown in Figure 1.
- QI projects were evaluated on a 0-100 scale.
- Topics included definitions, surveillance, isolation, preventive methods, outbreak investigation, policies, AS, healthcare economics, and leadership.

### RESULTS

Test Topics	Number of questions
Prevention of Hospital-Acquired Infections	4
NHSN Definitions and Measurement	3
Outbreak Investigation	1
Antimicrobial Stewardship	2
Leadership and Management	1
Quality Improvement and Data Analysis	2
Hand Hygiene	2
History of Infection Prevention	2
Transmission of Infectious Diseases	3
Sterilization and High-Level Disinfection	2
Transmission-Based Precautions	3
Total	25

#### Average Scores



### RESULTS

- Sixteen fellows have participated in the rotation (2017-2019).
- All completed the pre- and post- evaluations
- Fellows answered a mean of 11.1/25 questions correctly pre-course (SD 2.3).
- Scores improved significantly to a mean of 21.2/25 correct answers at the end of the course (SD 2.6, P<0.001, Figure 2).
- All fellows presented quality improvement proposals at the end of the rotation, with a mean score of 85.7/100 (SD 4.6).
- The fellows were highly satisfied with the course with mean evaluation score 6.2/7 (88.5%).

### Conclusion and Future Directions

- The one-month duration IP and AS rotation that provided basic training in the field at the beginning of the fellowship led to significant improvement in the fellows' knowledge, and was very well rated by the fellows.
- An additional track has been implemented during the second year to prepare interested fellows for careers in IP and/or AS.