



An Update on National Stewardship Activities 2019

CAPT Arjun Srinivasan, MD

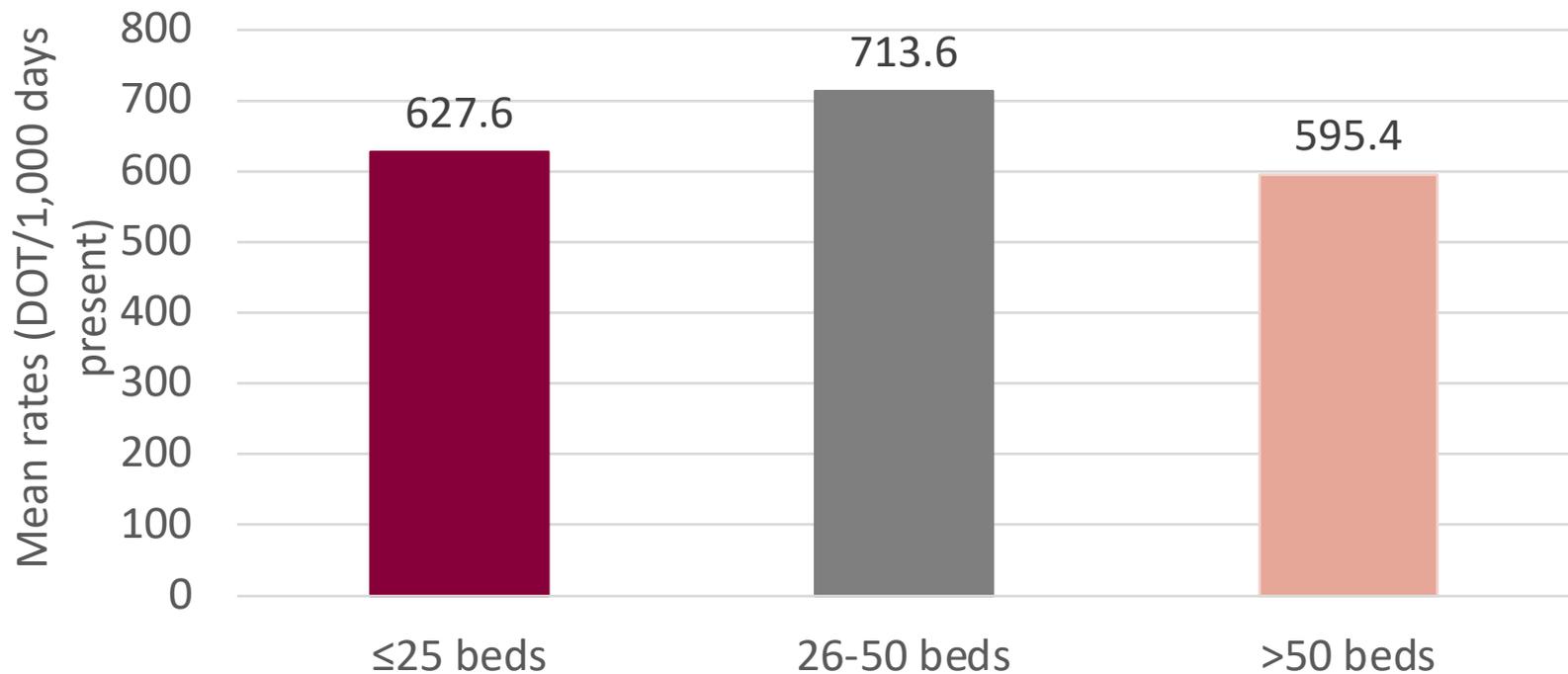
**Associate Director for Healthcare Associated Infection
Prevention Programs**

Division of Healthcare Quality Promotion

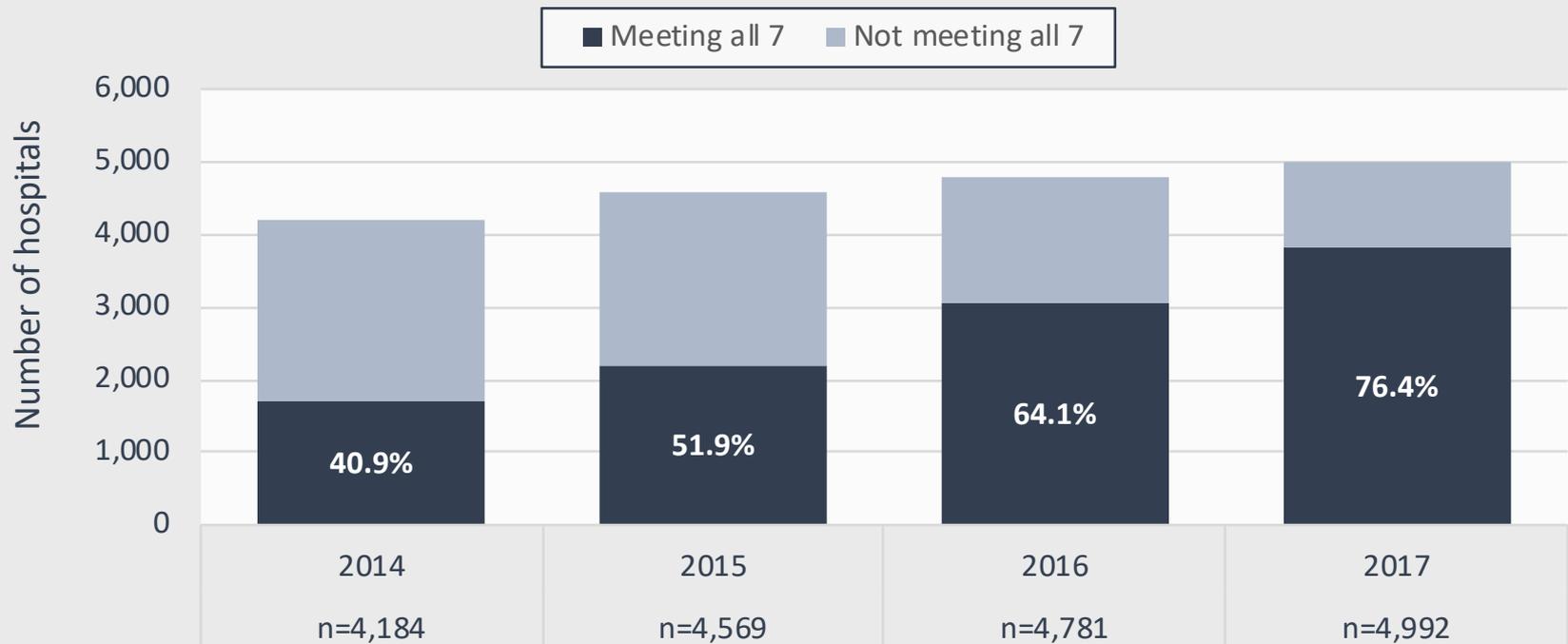
beu8@cdc.gov

Critical Access Hospitals Use Antibiotics About As Much As Larger Hospitals

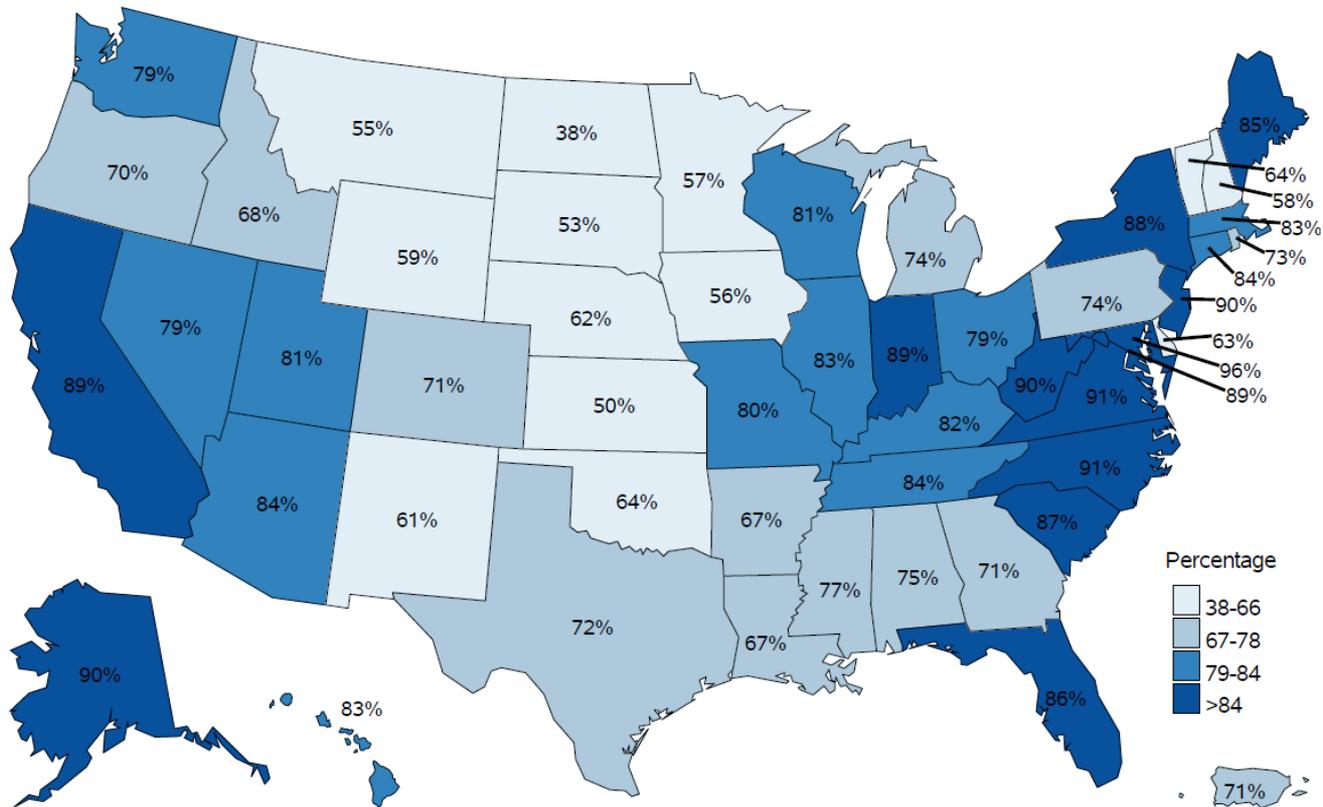
Mean Rates of Total Antibiotic Use



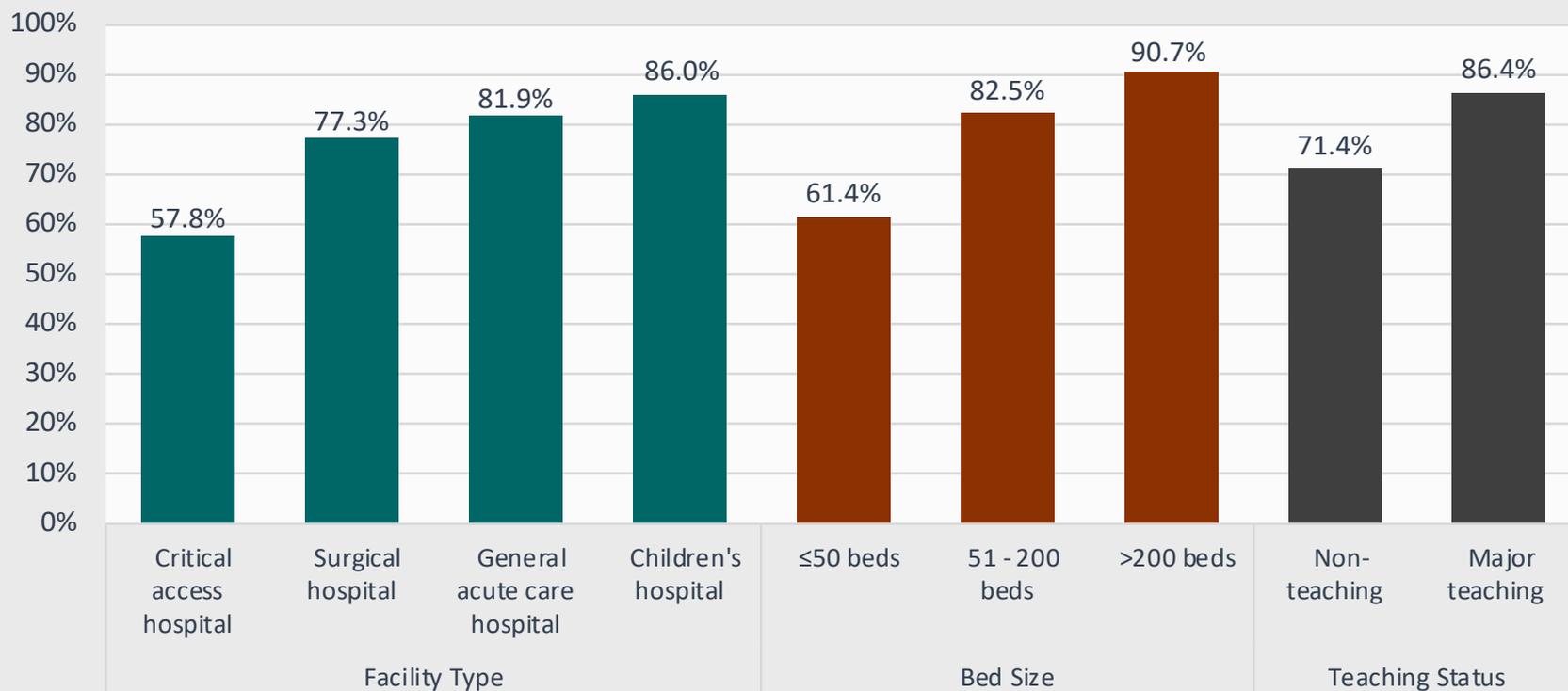
NHSN Annual Hospital Surveys 2014-2017: Number and percentage of hospitals meeting all 7 Core Elements



2017 NHSN Annual Hospital Survey: Core Element Uptake

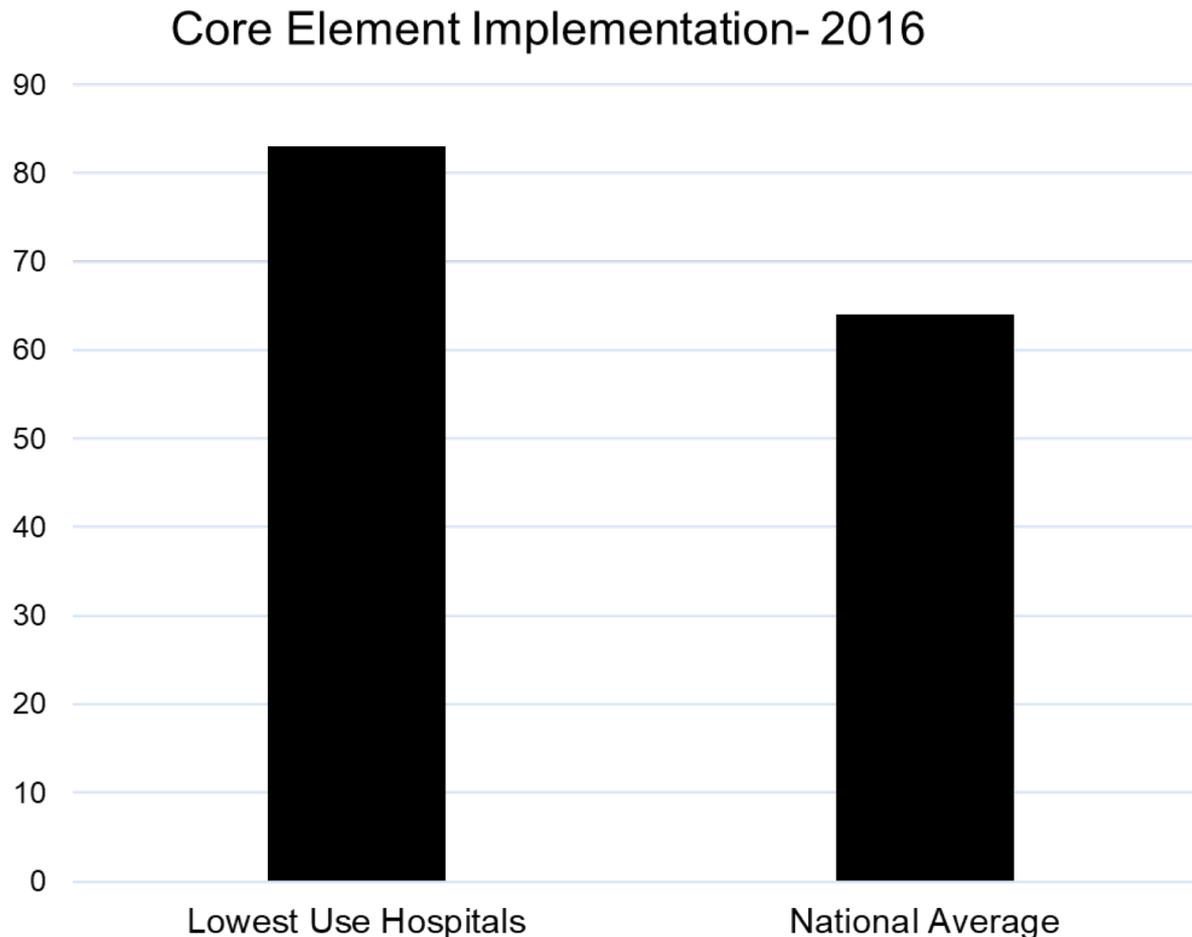


Percentage of U.S. acute care hospitals reporting uptake of all 7 CDC Core Elements, 2017 NHSN Annual Hospital Survey, by facility demographic



Follow The Bright Spots

- What can we learn from the top performers?
- All of them do prior authorization and/or post prescription review.



Medicare Beneficiary Quality Improvement Project (MBQIP)

- A quality improvement activity within the Medicare Rural Hospital Flexibility Grant Program (Flex)
- Reporting common, rural-relevant CMS measures across patient safety/inpatient, patient engagement, care transitions, and outpatient care
- Measuring outcomes and demonstrating improvements
- Sharing best practices



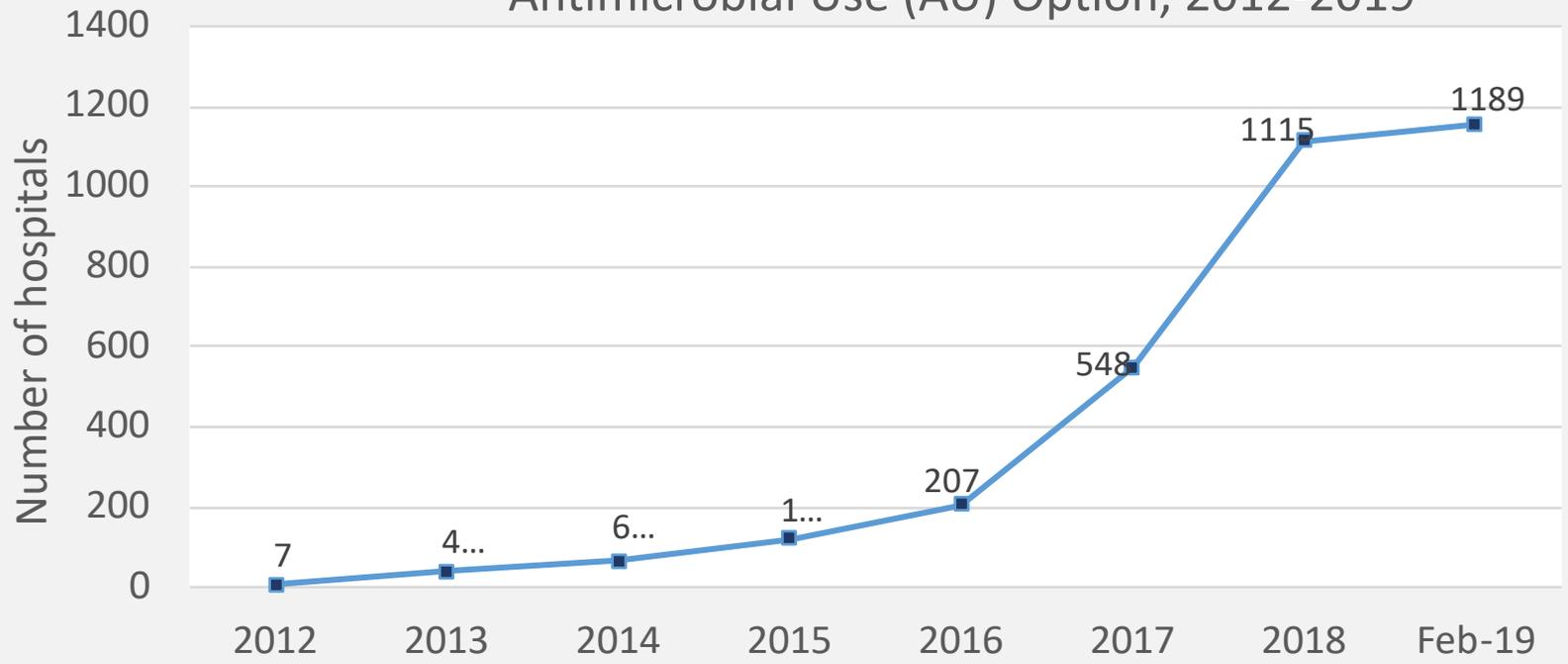
New MBQIP Core Measure – Antibiotic Stewardship

Starting in 2018, Critical Access Hospitals (CAHs) participating in MBQIP will be required to fully implement a Hospital Antibiotic Stewardship Program (AMS) following the CDC's 7 Core Elements by August 31, 2022.

Critical Access Hospitals need to:

- Enroll in NHSN and complete the annual facility survey.
- Make progress towards implementing the core elements.

Number of acute care hospitals ever-reporting* to NHSN's Antimicrobial Use (AU) Option, 2012-2019



*Reporting at least one month of data

(Some) Priorities for Hospital Stewardship Work at CDC

- How can we better support the implementation of specific interventions that are likely to improve antibiotic use?
 - Stewardship at hospital discharge for patients with CAP to optimize duration of therapy?
 - Opt-out protocol for de-escalation in patients with possible ventilator associated pneumonia?
- How can we better use antibiotic use data to inform actions?
- How can we improve the hospital core elements?

What's Next For The Hospital Core Elements

- A lot has changed since 2014.
- We need to update the Hospital Core Elements to reflect:
 - Growth in use measurement
 - New data on interventions

Broad interventions

- **Antibiotic "Time outs"**. Antibiotics are often started empirically in hospitalized patients while diagnostic information is being obtained. However, providers often do not revisit the selection of the antibiotic after more clinical and laboratory data (including culture results) become available. (53-56) An antibiotic "time out" prompts a reassessment of the continuing need and choice of antibiotics when the clinical picture is clearer and more diagnostic information is available. All clinicians should perform a review of antibiotics 48 hours after antibiotics are initiated to answer these key questions:
 - Does this patient have an infection that will respond to antibiotics?
 - If so, is the patient on the right antibiotic(s), dose, and route of administration?
 - Can a more targeted antibiotic be used to treat the infection (de-escalate)?
 - How long should the patient receive the antibiotic(s)?
- **Prior authorization**- Some facilities restrict the use of certain antibiotics based on the spectrum of activity, cost, or associated toxicities (57) to ensure that use is reviewed with an antibiotic expert before therapy is initiated. This intervention requires the availability of expertise in antibiotic use and infectious diseases and authorization needs to be completed in a timely manner.
- **Prospective audit and feedback**- External reviews of antibiotic therapy by an expert in antibiotic use have been highly effective in optimizing antibiotics in critically ill patients and in cases where broad spectrum or multiple antibiotics are being used.(25, 58, 59) Prospective audit and feedback is different from an antibiotic "time out" because the audits are conducted by staff other than the treating team. Audit and feedback requires the availability of expertise and some smaller facilities have shown success by engaging external experts to advise on case reviews.(33)

Impact of a Prescriber-driven Antibiotic Time-out on Antibiotic Use in Hospitalized Patients

Clin Infect Dis. 2018 Dec 4. doi: 10.1093/cid/ciy852. [Epub ahead of print]

- **A multicenter quasi-experimental study of a provider-driven antibiotic "time-out" in 3470 antibiotic courses showed no difference in antibiotic use before and after implementation, but did show a decrease in inappropriate therapy (45% vs 31%, $P < .05$). Single time-outs without input from antibiotic stewardship teams are insufficient to optimize prescribing.**

How Can We Collaborate?

- Tele-stewardship is a growing and important part of stewardship work in the United States.
- It may well hold the ultimate answer to making sure that every hospital has a maximally effective stewardship program.
- It provides an un-matched ability to share experiences.
 - Like what you are doing today.
- I have already learned a lot from what you all are doing and look forward to hearing more.
- What could we do to help?