

# CAUTI Prevention at BIDMC

Michael Cocchi, Jean Gillis, Aleah King, Graham Snyder, Lauge Sokol-Hessner, Kathryn Zieja

## Introduction/Problem

Catheter-associated urinary tract infections (CAUTIs) are the most common hospital-acquired infection (HAI) and a source of potential harm for patients. At BIDMC, indwelling urinary catheter (IUC) use and CAUTIs remain more frequent than expected national and local benchmarks. In addition to decreasing the quality of care patients receive, CAUTIs significantly contribute to the withholding of reimbursement dollars from public and private payers (about \$3.7 million are at stake through CMS and BCBS programs) and affects BIDMC's reputation. The ICUs started to implement multiple interventions to reduce CAUTI and use of IUCs in 2015; this work spread to Farr 3, Farr 9, and Rosenberg 7 in 2016, and is continuing to spread to Farr 2 and 12 Reisman in 2018.

## Aim/Goal

- Decrease the Device Utilization Ratio (DUR, the measure of frequency of IUC use) below the NHSN median (for ICUs) or 25<sup>th</sup> percentile (for Med/Surg)
- Decrease the Standardized Infection Ratio (SIR, the adjusted measure of CAUTI) below 1

## The Team

- Health Care Quality
- Infection Control
- Urology
- Patient Care Services
- Leadership and CAUTI champions from the following units:
 

CCU	12 Reisman
CVICU	Farr 2
Finard ICU	Farr 3
MICU-A	Farr 9
MICU-B	Rosenberg 7
Neuro ICU	
SICU	
TSICU	

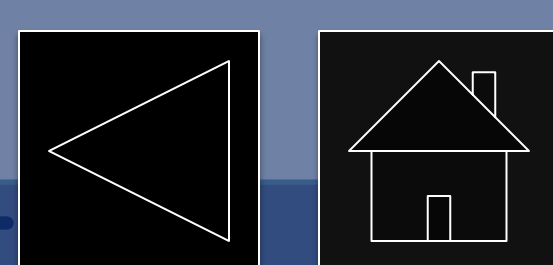
## Interventions

\* = work impacts all Med/Surg floors



*For more information, contact:*

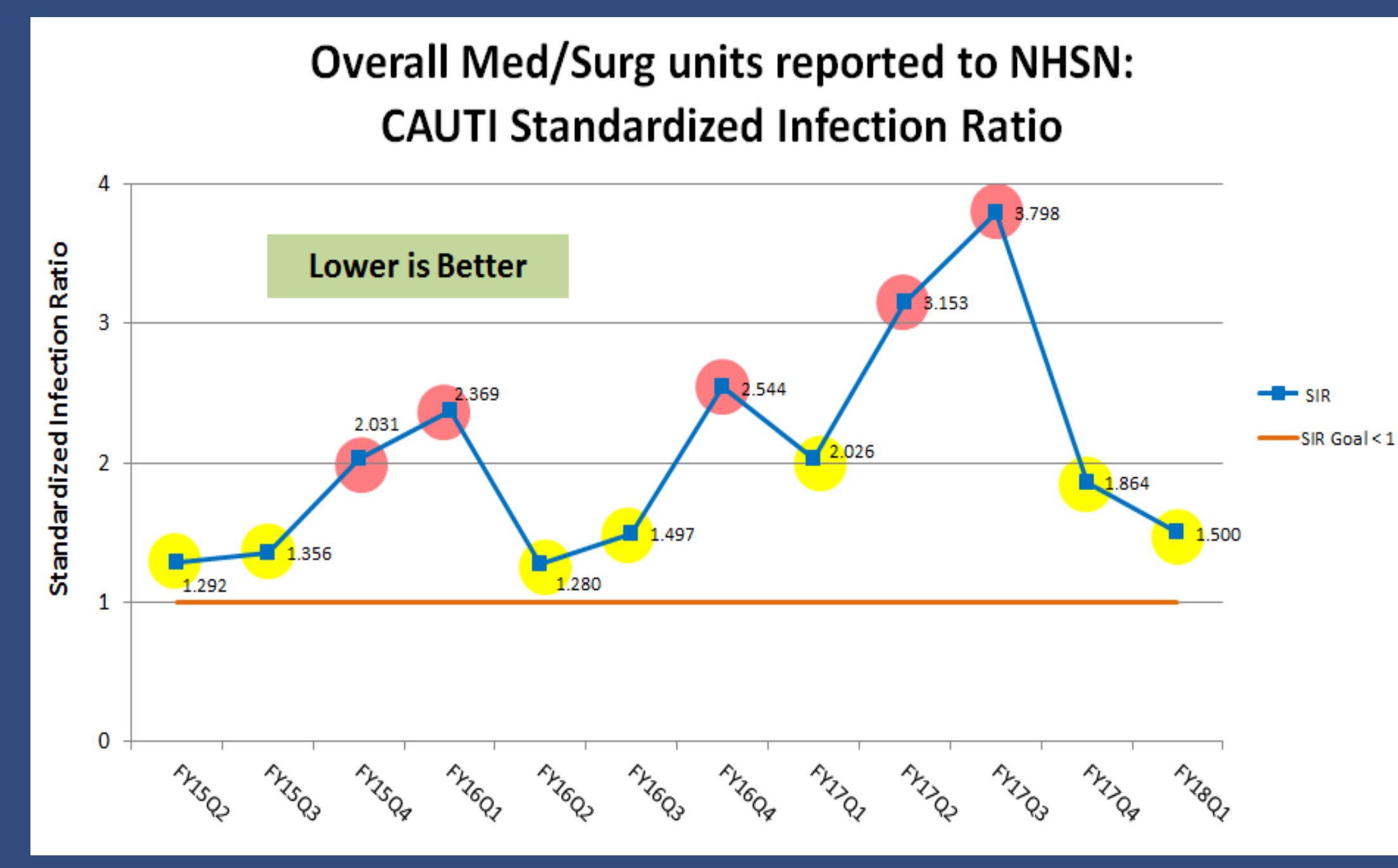
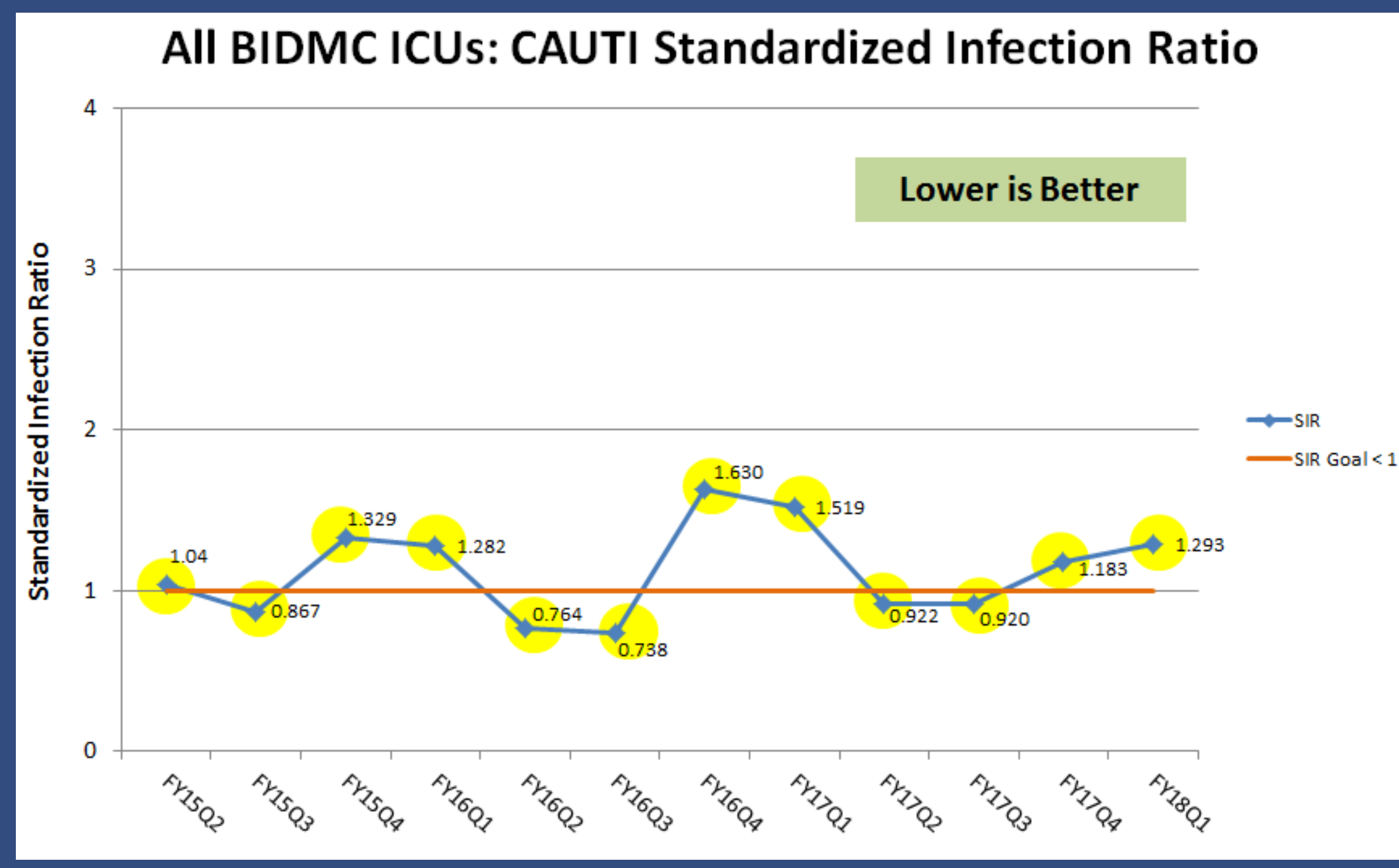
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## Results/Progress to Date



### Unit specific highlights:

- FY18 Q1 is the first quarter that TSICU did not have any CAUTI
- FY18 Q1 is the first quarter that the Neuro ICU's catheter usage (DUR) is better than their goal
- During the entire fiscal year of 2017, MICU-B did not have any CAUTI
- During the entire calendar year of 2017, Finard ICU did not have any CAUTI and catheter usage (DUR) for every month was either at or better than their goal

SIR Notes: - The Med/Surg units reported to NHSN changed starting FY18. FY18 data includes 12R, 5S, 7S, 8S, FA2, FA5, FA7, RB7 to FA9. Data prior to FY18 includes 12R, 5S, 8S, FA2, FA3, FA8, FA7, FA9, RB7. - NHSN changed the baseline data used to calculate the expected number of infections for the SIR. For FY17 – FY18: NHSN uses 2015 data as baseline to calculate the expected number of infections. For FY15 – FY16: NHSN used 2013 data as baseline to calculate the expected number of infections.

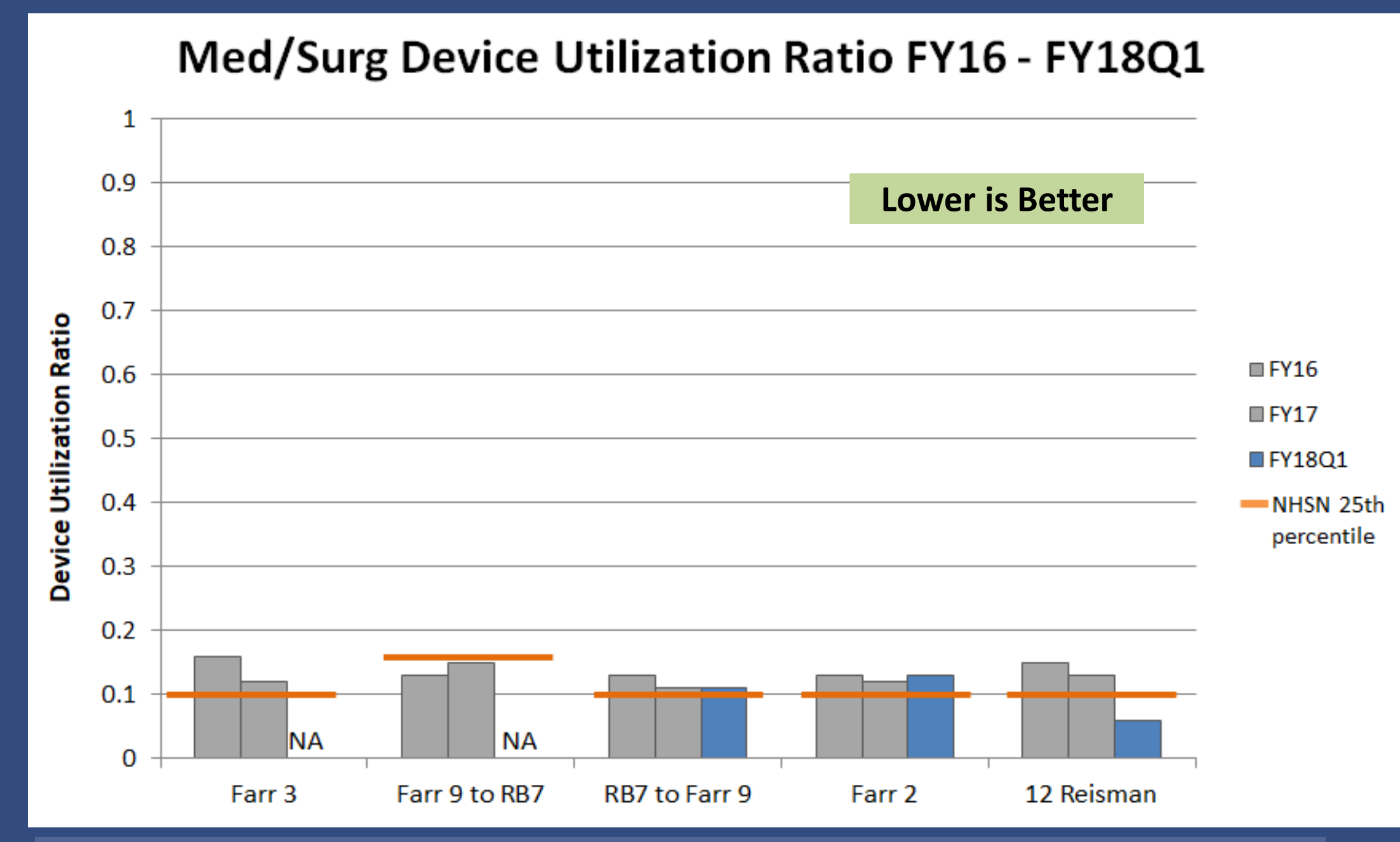
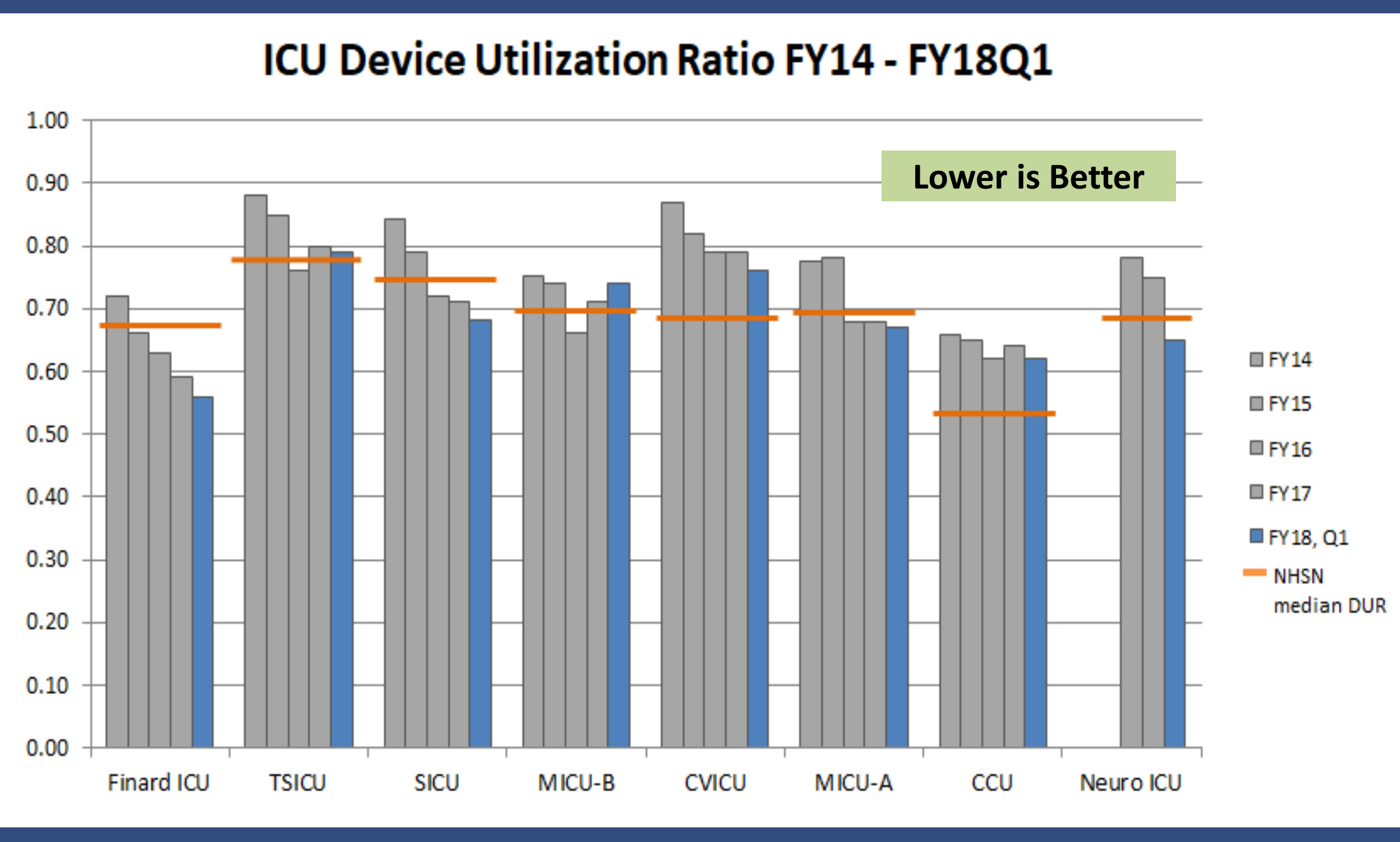
● = Better than Expected (SIR <1, p value <0.05)  
● = As Expected (SIR=1, or any SIR p value > 0.05)  
● = Worse than Expected (SIR >1, p value <0.05)

## Lessons Learned

- Multiple sustained interventions are required to impact catheter use (DUR) and CAUTI (SIR)
- Incorporating assessment of the need for an IUC into existing workflow is important and challenging

## Next Steps

- Interdisciplinary Indwelling Urinary Catheter Guideline, a consolidated reference for education and local improvement interventions, will be rolled out in FY18Q3
- PureWick female external catheter will be rolled out in FY18Q3
- Additional POE changes will be built and implemented in FY18Q3: add Post-IUC Removal Algorithm into workflows across BIDMC, simplify the straight cath order, & more
- Neuro ICU subgroup will explore different interventions in FY18Q3
- Unit leadership will continue to review each CAUTI case and identify if anything could have been done differently to prevent the CAUTI in FY18Q3 and FY18Q4
- All order sets with an IUC order in POE will be identified for possible update in FY18Q3
- Work towards establishing a CAUTI preventability model will continue in FY18Q3 and FY18Q4



DUR Note: FA3 and RB7 data are no longer reported to NHSN due to unit reclassification