Background: Asymptomatic bacteriuria (ASB) is commonly treated despite recommendations against this practice. Our aim was to evaluate provider knowledge and behavior regarding unnecessary testing and treatment of ASB and assess the impact of an educational intervention.

METHODS: A multiple choice, case-based survey was performed to assess internal medicine resident knowledge of ASB and indications for obtaining urine cultures. Retrospective chart review was performed to identify a one-month pre-intervention patient cohort from two medicine wards. The two-month intervention was “real time” audit and feedback for providers who ordered urine cultures. Exclusion criteria were pregnancy, kidney transplant, nephrotic syndrome, ureteral stent, and invasive urological procedures. Urinary tract infection (UTI) was defined as bacteriuria with urinary symptoms or SIRS with no other identifiable infection source in a patient who is unable to communicate. ASB was defined as bacteriuria without these conditions.

RESULTS: The survey was completed by 50% of the internal medicine residents; 70% would send urine cultures without an appropriate indication, and 40% would treat ASB. The pre-intervention cohort included 162 cultures in April 2015. During the intervention phase in January and February 2016, there were 186 urine cultures. We observed a significant improvement in appropriate urine cultures and a decrease in detection of ASB: however rates of treatment of ASB were similar (Table 1). There was a 43% reduction in urine cultures per month during the intervention phase.

Conclusion: Compatible with the survey results, the pre-intervention cohort demonstrated frequent inappropriate urine culture testing and inappropriate antibiotic use for ASB. During our intervention, we observed an estimated 43% reduction in the number of urine cultures per month and a significant reduction in the detection of ASB. However, there was no change in the percentage of patients with ASB who were treated highlighting the importance of decreasing unnecessary urine culture testing.

INTRODUCTION
- The Choosing Wisely Campaign’s joint initiative with the Infectious Disease Society of America highlighted the inappropriate treatment of asymptomatic bacteriuria as a major contributor to antibiotic overuse.
- Our goal was to decrease the number of unnecessary urine cultures ordered, stop the treatment of asymptomatic bacteriuria, and decrease unnecessary antibiotic use at Mount Sinai Hospital.

METHODS
- Study design: Retrospective review of urine cultures ordered and treatment provided during the pre-intervention and post-intervention time period as well as a real-time audit and feedback during the intervention period.
- Inclusion criteria: All patients ≥18 years old on two medical wards during the study time period.
- Exclusion Criteria: Pregnancy, history of kidney transplantation, or genitourinary procedure within the last month.
- Data Collection: Presence of fever, altered mental status, urinary symptoms, Foley catheter, white blood cell count, urine culture and urinalysis results, indications for sending urine culture, length of stay, antibiotics administered and ordering provider during the pre-intervention, intervention and post-intervention time periods.

RESULTS
- 50% of internal medicine residents at MSH completed the survey
- 70% would send urine cultures without an indication.
- 40% would treat ASB
- 162 urine cultures were sent during the one month pre-intervention period. During the two month intervention, there were 93 urine cultures sent per month.
- 43% reduction in urine cultures sent per month during the intervention phase.
- There was a significant improvement in appropriate sending of urine cultures and a decrease in detection of ASB.
- Rate of treatment of ASB was similar (Table 1).

CONCLUSIONS
- Compatible with the survey results, the pre-intervention cohort demonstrated frequent inappropriate urine testing and inappropriate antibiotic use for ASB.
- Our intervention led to a significant decrease in urine cultures ordered per month and a significant reduction in the detection of ASB.
- While there was no change in the percentage of patients treated for ASB, the reduction in patients tested led to less inappropriate treatment. This highlights the importance of decreasing unnecessary urine culture testing when not indicated.