

occurred during the 36–72-hour window. Ultimately, 95% of documented plan changes were completed within 24 hours.

**Conclusions:** ABTOs are effective but implementation is challenging. We achieved high compliance with ABTOs without using electronic reminders. Our results suggest that ABTOs were impactful in the non-critical-care general medicine setting. Next steps include (1) development of EMR-based tools to facilitate identifying eligible patients and ABTO documentation; (2) continued spread through our health care system; and (3) analysis of ABTO impact using ABTO-unexposed patients as a control group.

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### Presentation Type:

Poster Presentation

### Implementation of Diagnostic Stewardship Algorithms by Bedside Nurses to Improve Culturing Practices: Factors Associated With Success

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**Background:** Bedside nurses have been recognized as potential antibiotic stewards; however, data on effective ways that nurses can contribute to stewardship activities in acute-care hospitals are scarce. **Methods:** A nurse-driven urine culture intervention to improve urine culture ordering practices was implemented in a medicine and a neurocritical care unit (NCCU) at The Johns Hopkins Hospital. Bedside nurses implemented an algorithm (Fig. 1) developed by the antibiotic stewardship program (ASP) to review the appropriateness of urine culture and to guide discussions with ordering providers regarding

**Figure 1:** Algorithm used by bedside nurses to guide discussions with ordering providers regarding indications for urine cultures.

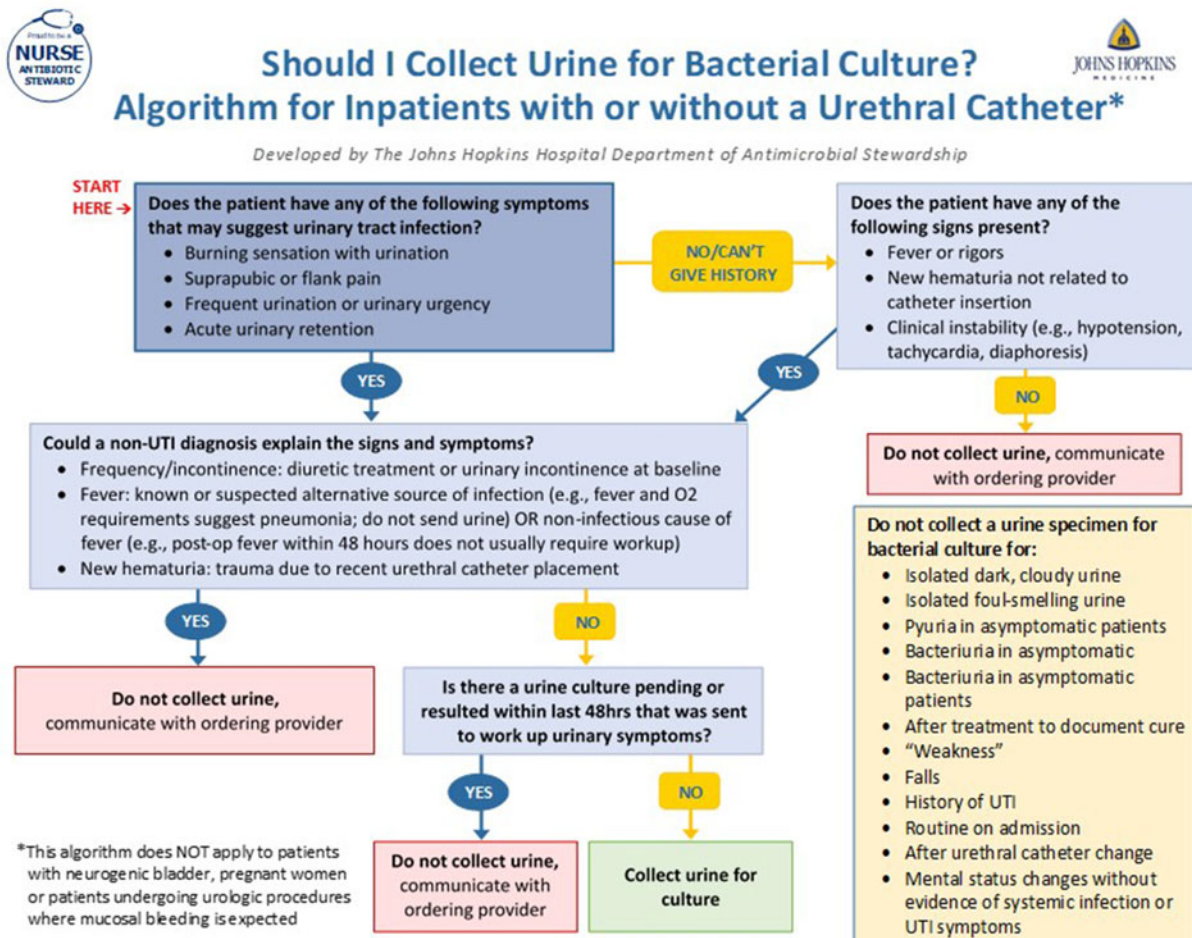
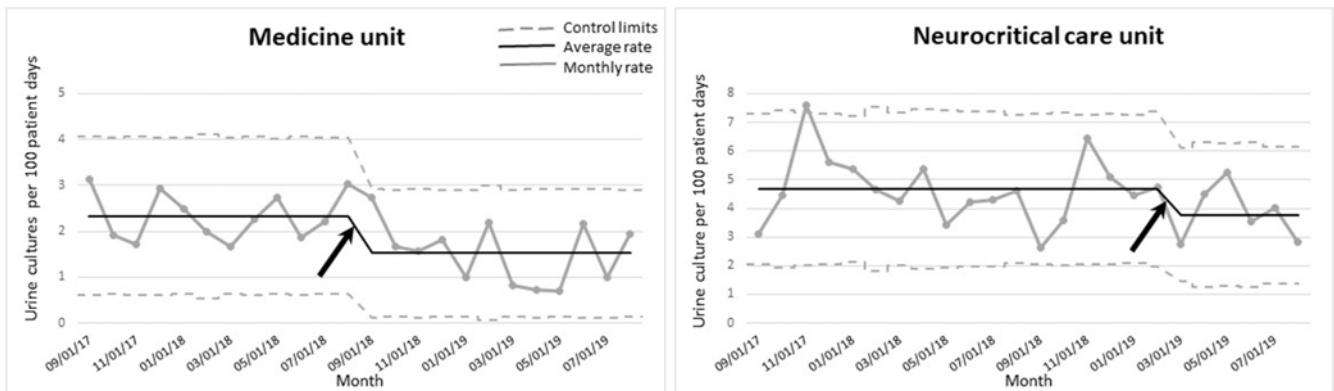


Fig. 2.

**Figure 2:** Trends of total number of urine cultures before and after the intervention in a medicine and a neurocritical care unit. The arrow marks the start of the intervention.**Fig. 2.**

unnecessary urine cultures. Nurses received in-person training by an ASP physician champion on how to use the algorithm and education on the definition and indications for evaluation for asymptomatic bacteriuria and urinary tract infections. The ASP physician periodically visited the units to address concerns and questions. In both units, a nurse champion was identified to serve as liaison between the ASP and bedside nurses, and physician support was obtained before the intervention. The pre- and postintervention periods for the medicine unit were September 2017–August 2018 and September 2018–August 2019, respectively. For the NCCU, these periods were September 2018–February 2019 and March 2019–September 2019, respectively. Trends in urine cultures per 100 patient days (PD) were examined with statistical process charts and compared before and after the intervention using a standard incident ratio (IRR) and Poisson regression. **Results:** In total, 327 urine cultures were collected in the medicine unit and 293 in the NCCU over the study period. Although the intervention led to a significant 34% reduction in the rate of urine cultures on the medicine unit (from 2.3 to 1.5 cultures/100 PD; IRR, 0.66; 95% CI, 0.50–0.87;  $P < .01$ ), the number of urine cultures remained without a significant change in the NCCU (from 4.5 to 3.7 cultures/100 PD; IRR, 0.89; 95% CI, 0.65–1.22;  $P = .48$ ) (Fig. 2). **Conclusions:** Algorithm-based, nurse-driven review of urine culture indications reduced urine cultures on a medicine unit but not in a neurosciences ICU. Success on the medicine unit may have been driven by highly engaged nurse and physician champions and by patients being able to respond questions about symptoms. The following factors might have impacted results on NCCU: presence of conflicting protocols (eg, panculturing patients

every 48 hours per a hypothermia protocol), unit tradition (eg, obtaining cultures to assess treatment response), perception of greater risk benefit in NCCU patients, and unit dynamics (open unit with other primary services placing orders for patients). Unit and team dynamics can affect effective implementation of antimicrobial stewardship interventions by nurses.

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Poster Presentation

**Implementation of Hospital-Based *Candida auris* Surveillance Screening Among At-Risk Patients**

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**Background:** *Candida auris* is an emerging multidrug-resistant pathogen associated with outbreaks in hospitals and skilled nursing facilities (SNFs). Patients with *C. auris* can have invasive disease or asymptomatic colonization. Because *C. auris* can be difficult to treat and eradicate in the environment, the CDC

Source	Pre-Decontamination		Post-Decontamination #1		Post-Decontamination #2	
	Qualitative Result	CA Ct	Qualitative Result	CA Ct	Qualitative Result	CA Ct
Enteral feeding pump	Indeterminate	39.1	Negative	0	NP*	NP
Keyboard Mouse/Medication Scanner	Negative	0	Negative	0	NP	NP
Bedrail	Negative	0	Positive	36.7	Positive	33.1
Nebulizer	Indeterminate	38.2	Negative	0	NP	NP
Ventilator	Indeterminate	39.7	Negative	0	NP	NP
Vitals Machine	Positive	36.4	Negative	0	NP	NP
Bedside Table	Negative	0	Negative	0	NP	NP
Bedside monitor	Positive	36.7	Indeterminate	39.1	Positive	36.5

\*NP:Not performed.

**Fig. 1.**