had white blood cell counts (WBC) >12 K/uL. The remaining 82% (23/28) of patients were deemed not to have an infection. Of these 23 patient without infection, organisms isolated were 16 CoNS (70%) and seven Cutibacterium species (30%). None of these patients had a fever, one (4%) was receiving pre-pericardiocentesis antibiotics, and three (9%) had WBC >12 K/uL. 70% (16/23) of these patients were started on antibiotics after gram-stain results; all were eventually discontinued (mean antibiotic days = 2, range 1-5 days). 83% (19/23) of these patients had a concomitant negative routine fluid culture. **Conclusion:** The majority of patients with an organism isolated from PF-BCxBs had either CoNS or Cutibacterium species and were deemed not to have a clinical infection. Within the small cohort limitations, clinical utility of blood culture bottle inoculation seems highest for patients with pre-procedural concern for infection. IPC teams should be aware of the non-pathogenic skin flora frequency and potential implication on SSI surveillance.

Antimicrobial Stewardship & Healthcare Epidemiology 2024;4(Suppl. S1):s83–s84

doi:10.1017/ash.2024.219

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Diagnostic Stewardship

A One-year Hospital System Review of Plasma Next-Generation Sequencing in a Mixed Population

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Objective: To describe whether detecting plasma microbial cell-free DNA by next-generation sequencing (NGS) provided additional information compared to routine cultures or led to change in antimicrobial management. Design and setting: This is a retrospective cohort study evaluating NGS tests performed on patients who were admitted to an 11-acute care hospital health system in the greater Houston area between May 2022 and May 2023. Repeat tests on the same patient encounter were included if >7 days from previous test. Routine microbiology data was compared if test was collected within 7 days before or after NGS testing. **Results:** During the study period there were 135 unique patient encounters identified with an NGS order. Of which, 74.1% were ≥18 years of age and 46.7% were immunocompromised. A total of 143 NGS tests were ordered, with 4 not being run due to quality control issues. Out of 139 NGS tests completed, 76 (54.7%) were positive for at least one organism. When compared to routine testing, NGS alone was positive in 29 (20.9%) instances, routine testing alone was positive in 17 (12.2%) instances, both were positive in 44 (31.7%) instances, and both were negative in 49 (35.3%) instances. In the 44 instances that both NGS and routine testing were positive, 15 (34.1%) were concordant for all organisms. In total, NGS identified 92 more organisms (69 bacterial, 8 fungal, and 15 viral) compared to routine testing and routine testing identified 42 more organisms (28 bacterial, 6 fungal, 11 viral, and 1 parasite) compared to NGS. Fifty-six changes to antibiotic therapy were made within 48 hours of the NGS test resulting, with 16 of these changes being directly attributed to NGS test. Nine of these changes being escalations and seven being de-escalations. **Conclusion:** NGS may aid in determining further testing, earlier detection of pathogens, and detection of pathogens outside of routine testing resulting in direct changes to antimicrobials. However, results need to be interpreted with caution. NGS can miss pertinent pathogens and is difficult to interpret when commensal organisms are detected, both of which can lead to unnecessary testing or treatment. There is an absence of a clear algorithm for the use of NGS testing and the test comes with a high price and unclear utility. Further studies are needed to determine which patients may most benefit from NGS testing.

Antimicrobial Stewardship & Healthcare Epidemiology 2024;4(Suppl. S1):s84

doi:10.1017/ash.2024.220

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Diagnostic Stewardship

Moving Beyond the Reflex: Effect of a Clinical Decision Support Tool on Urine Culture Ordering Practices

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Background: Interventions targeting urine culture stewardship can improve diagnostic accuracy for urinary tract infections (UTI) and decrease inappropriate antibiotic treatment of asymptomatic bacteriuria. We aimed to determine if a clinical decision support (CDS) tool which provided guidance on and required documentation of the indications would decrease inappropriately ordered urine cultures in an academic healthcare

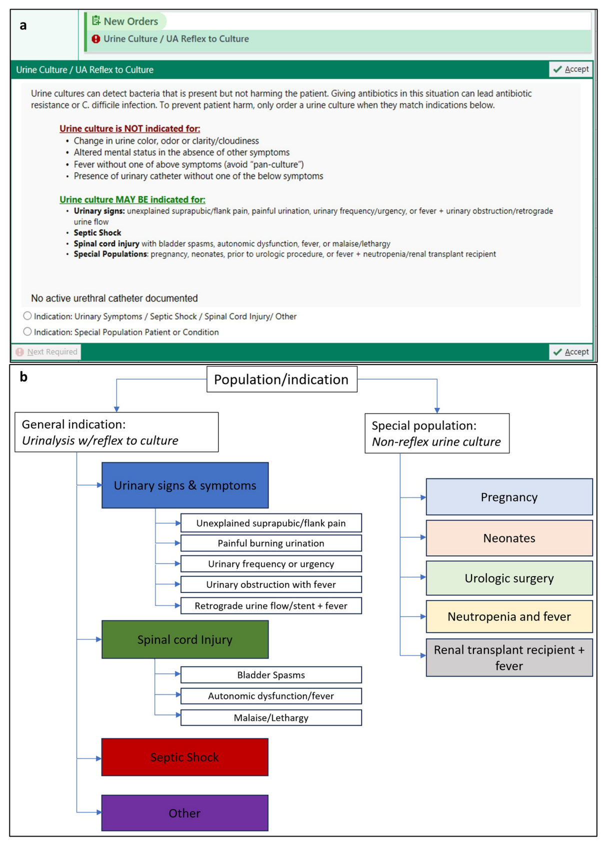

Figure 1| An overview of the clinical decision support (CDS) tool. (**a**) Screenshot of the CDS tool for urinary testing (**b**) Flow diagram for urine test orders with associated testing indications. Providers first determine if their patient meets "special population" criteria (right side of flow diagram). If so, then a non-reflex urine culture is recommended. If not, the provider must select an indication to order a urinalysis with reflex to culture (left side of flow diagram). The threshold for performing a reflex culture on the urine sample is ≥20 white blood cells per high-power field on urine microscopy.

Figure 2| Medians and change in order rates pre-/post- intervention per 1000-patient-days for urinalysis (UA) with reflex to culture, non-reflex urine cultures, and total urine cultures

Urine Test	Pre-intervention Median/1000 patient-days (IQR)	Post-Intervention Median/1000 patient-days (IQR)	P-value*	Change in rate/1000 patient-days with intervention#	P-value#
UA with reflex to culture	36.7 (31.0, 39.7)	35.4 (32.8, 37.0)	0.25	-1.9	0.76
Non-reflex urine cultures	8.5 (8.1, 9.1)	4.9 (4.7, 5.1)	< 0.001	-4.8	<0.001
Total urine cultures	20.0 (18.9, 20.7)	14.4 (14.0, 14.6)	< 0.001	-5.0	<0.001

IQR: interquartile range. *Wilcoxon 2-sample test was used to test differences in medians between pre- and post- intervention urine test order rates. # Change in rates before and intervention and p-values were calculated using autoregressive interrupted time series analyses.

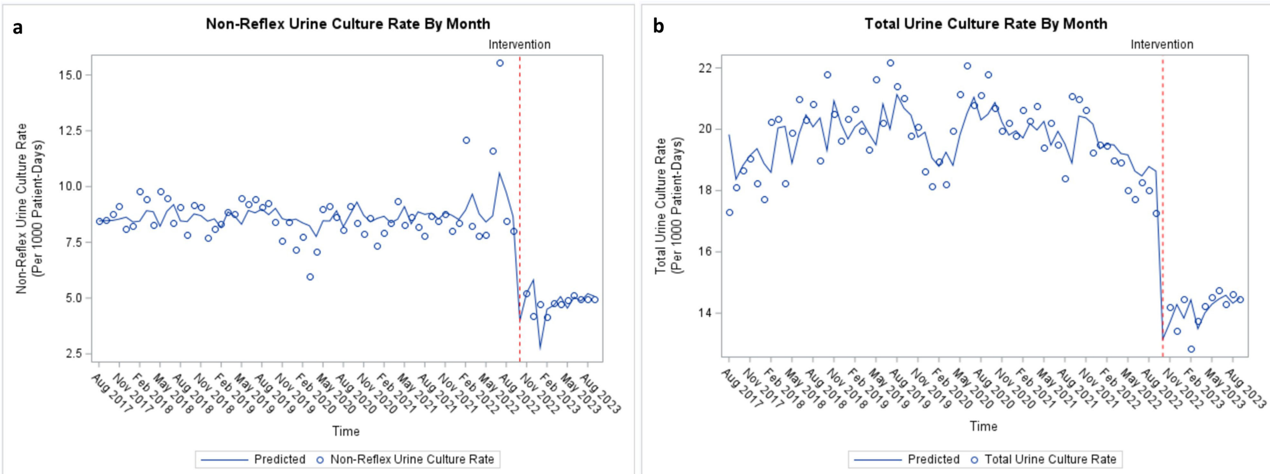

Figure 3| Monthly rate of (**a**) non-reflex urine cultures and (**b**) total urine cultures ordered per 1,000 patient-days before and after intervention (red dashed line). Data points represent monthly urine culture rates. Blue lines depict autoregressive interrupted time series models.

network that already uses conditional (e.g. reflex) urine testing. **Methods:** In October 2022, four hospitals within one academic healthcare network transitioned to a new electronic health record (EHR). We developed an embedded CDS tool that provided guidance on ordering either a urinalysis (UA) with reflex to urine culture or a non-reflex urine culture (e.g. for pregnant patients) based on the indication for testing (Figure 1). We compared median monthly UA with reflex culture and non-reflex urine culture order rates pre- (8/2017–9/2022) and post- (10/2022–9/2023) intervention using the Wilcoxon rank-sum test. We used interrupted time-series analyses allowing a one-month time window for the intervention effect to assess changes in monthly UA with reflex culture, non-reflex urine culture, and total urine culture order rates associated with the intervention. Using SAS 9.4, we generated Durbin-Watson statistics to assess for autocorrelation and adjusted for this using a stepwise autoregressive model. **Result:** The median monthly UA with reflex culture order rates per 1000 patient-days were similar pre- and post- intervention at 36.7 (interquartile range [IQR]: 31.0–39.7) and 35.4 (IQR: 32.8–37.0), respectively (Figure 2). Non-reflex and total urine culture rates per 1000 patient-days decreased from 8.5 (IQR: 8.1–9.1) to 4.9 (IQR: 4.7–5.1) and from 20.0 (IQR: 18.9–20.7) to 14.4 (IQR: 14.0–14.6) post-intervention, respectively. Interrupted time-series analyses revealed that the intervention was associated with a decrease in the monthly non-reflex urine culture by 4.8 cultures/1000 patient-days ($p< 0.001$) and in the total urine culture monthly order rates by 5.0 cultures/ 1000 patient-days ($p < 0 .001$) [Figures 3a and b]. The UA with reflex order rate did not significantly change with the intervention (not pictured). **Conclusion:** In an academic healthcare network that already employed conditional urine testing, the implementation of an EHR-based diagnostic stewardship tool led to additional decreases in both non-reflex and total urine cultures ordered.

Antimicrobial Stewardship & Healthcare Epidemiology 2024;4(Suppl. S1):s84–s85

doi:10.1017/ash.2024.221

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Diagnostic Stewardship

Inpatient Hospice Impact on Blood Culture Practices Near the Time of Death, Tertiary Center, Northern California, 2019–2023

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Introduction: Many central line-associated bloodstream infections are identified in patients nearing the end of life. Stanford Health Care recently introduced the General Inpatient Hospice program. This program offers inpatient hospice care for patients who, due to uncontrolled symptoms, cannot be discharged to a hospice facility or receive home hospice care. We investigated whether this program would impact blood cultures practices near the time of death. **Methods:** We performed a retrospective cohort study at Stanford Health Care using records of blood culture events from May 2019 to October 2023. We defined a blood culture near-death as those collected within 2 days before the date of death. We performed an interrupted time series linear regression before and after the implementation of the General Inpatient Hospice program on July 1, 2022 to assess blood culture intensity near-death. Blood culture intensity was defined as the proportion of cultures collected near-death in relation to the total number of blood cultures. Additionally, we calculated blood culture positivity rate, which was defined as the proportion of positive blood cultures among all those collected during our study period. **Results:** Out of 220,269 blood cultures from 24,955 unique patients, a total of 6,147 cultures (9%) were obtained near the time of death. Among these subjects, the median age was 65 years (range 20–102), with 43% identifying as being of White race-ethnicity and 57% as male. Of these cultures, 3044 were positive (49.5%), with Escherichia coli (618, 24%), Klebsiella pneumoniae (341, 13%), and Staphylococcus aureus (166, 10%) being the most common organisms. After the implementation of the General Inpatient Hospice program, the median enrollment was 12 patients (range 3–18) and the median mortality rate was 2.3% (range 2–3%). The blood culture intensity near death decreased by 0.81%, a change that was not statistically significant (95% CI -2.4% to 0.8%, p=.32; Figure 1). Subsequently, the blood