cefoxitin, or methicillin has declined consistently over the past 10 years. Continued efforts in infection prevention and antimicrobial stewardship are vital to sustaining this decline.

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Poster Presentation

Changing the Culture of Ordering Urine Cultures

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Background: Inappropriate ordering of urine cultures and the resulting unnecessary use of antibiotics can lead to complications of antimicrobial therapy including resistance, adverse effects (eg, disruption of microbiome and *C. difficile* infection), and increased healthcare costs, as well as the erroneous determination of CAUTI in patients with Foley catheters. A retrospective analysis of patients with CAUTI revealed frequent ordering of urine cultures for conditions and symptoms not supported by current IDSA guidelines. As a result, we created an action plan to reverse the trend of inappropriate urine culture ordering. **Methods:** Our urine culture reduction campaign was developed with input from the infectious disease service, antibiotic stewardship team (AST), infection prevention, pharmacy, and the microbiology service. The following educational efforts were included: (1) distribution of outpatient pocket cards with communication to providers about appropriate ordering of urine cultures; (2) creation of an evidence-based order set for urinalysis and urine cultures distributed electronically as emails and screensavers on computer stations and in person via didactic sessions with physicians and nursing staff; (3) a practice pointer for staff nurses that included recommended changes to urine culture ordering and encouraged open dialogue with physicians regarding the appropriateness of urine cultures; (4) didactic and personal communications to counter long-standing myths, such as "Urine cultures always for change in mental status"; (5) a peer-review process to evaluate and justify deviations from the testing algorithm.
Results: The first and second months after the introduction of the campaign, the microbiology laboratory reported 23% and 37% reductions in urine cultures ordered, respectively. During the same period, a 48% reduction in CAUTIs was reported for the entire health system. **Conclusions:** Reducing the number of inappropriate urine cultures is achievable with intense communication utilizing a multifaceted approach. With continued educational activities, we expect to sustain and even improve our successful reduction of inappropriate urine culture orders, ultimately improving patient outcomes.

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Characteristics of *Candida auris* Patients at a Tertiary-Care Hospital, 2017–2019, Nairobi, Kenya

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Background: *Candida auris* is of global concern due to its increasing frequency in intensive care units (ICUs), reported resistance to antifungal agents, propensity to cause outbreaks, and persistence in clinical environments. We investigated an increase in *C. auris* cases in an ICU in Kenya to determine the source of transmission and to control the spread of the disease. **Methods:** To identify cases, we reviewed laboratory records of patients with blood cultures yielding *C. auris* and organisms for which it is commonly misidentified by Vitek 2 v 8.01 software (ie, *C. haemulonii, C. duobushaemulonii and C. famata*) during January 2018–May 2019. We retrospectively reviewed medical charts of *C. auris* patients to extract information on demographics, underlying conditions, hospital procedures, treatments, and outcomes. We also enhanced infection control efforts by implementing contact precautions, equipment, and environmental disinfection, and hand hygiene training and compliance observations. **Results:** We identified 32 *C. auris* patients (Fig. 1). Median patient age was 55 years (IQR, 43–65), and 57% were male. Length of hospitalization before *C. auris* isolation was 30 days (IQR, 14–36). All had been admitted to the ICU. The most common reasons for admission were sepsis (50%), pneumonia (34%), surgery (25%), and stroke or other neurologic diagnosis (25%). Underlying comorbidities included hypertension (38%), diabetes mellitus (25%), and malignancy (29%). Two patients had HIV. Moreover, 61% of cultures yielded multidrug-resistant bacteria. Also, 33% of the patients had been admitted to this hospital in the preceding 3 months; 21% had been admitted to a hospital outside of Kenya; and 10% had been admitted to another hospital in Kenya in the previous year. Almost all (97%) had a central venous catheter, 45% had an acute dialysis catheter, 66% had an endotracheal tube, and 34% had a tracheostomy, with 69% receiving mechanical ventilation before *C. auris* isolation. Most (94%) had urinary catheters, 84% had nasogastric tubes, 91% had received total parenteral nutrition, and 75% had received blood products. All patients received broad-spectrum antibiotics and 49% received an antifungal before *C. auris* isolation. All-cause in-hospital mortality was 64% for the 28 patients whose outcomes were available. Following implementation of a hand

Figure 1: Epidemic curve of *Candida auris* cases at a tertiary care hospital during 2017-2019, Nairobi, Kenya

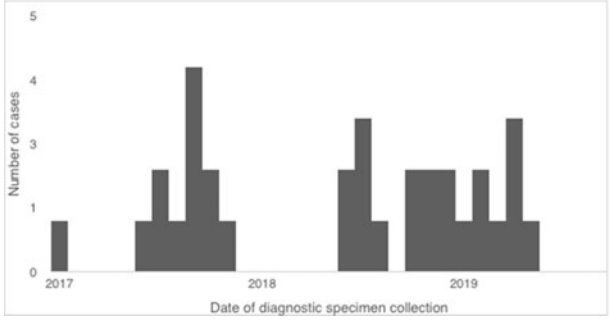

Fig. 1.

hygiene campaign and improved equipment and environmental disinfection, no further cases were identified. **Conclusions:** We identified *C. auris* bloodstream infections associated with high all-cause mortality in a Kenyan hospital ICU. All patients had treatments and procedures suggesting severe underlying illness. Enhanced infection control contained the outbreak.
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Characteristics of Cases With Polymicrobial Bloodstream Infections Involving *Candida* in Multisite Surveillance, 2017

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Background: Candidemia is associated with high morbidity and mortality. Although risk factors for candidemia and other bloodstream infections (BSIs) overlap, little is known about patient characteristics and the outcomes of polymicrobial infections. We used data from the CDC Emerging Infections Program (EIP) candidemia surveillance to describe polymicrobial candidemia infections and to assess clinical differences compared with *Candida*-only BSIs. Methods: During January 2017–December 2017 active, population-based candidemia surveillance was conducted in 45 counties in 9 states covering ~6% of the US population through the CDC EIP. A case was defined as a blood culture with *Candida* spp in a surveillance-area resident; a blood culture >30 days from the initial culture was considered a second case. Demographic and clinical characteristics were abstracted from medical records by trained EIP staff. We examined characteristics of polymicrobial cases, in which *Candida* and ≥1 non-*Candida* organism were isolated from a blood specimen on the same day, and compared these to *Candida*-only cases using logistic regression or *t* tests using SAS v 9.4 software. Results: Of the 1,221 candidemia cases identified during 2017, 215 (10.2%) were polymicrobial. Among polymicrobial cases, 50 (23%) involved ≥3 organisms. The most common non-*Candida* organisms were *Staphylococcus epidermidis* (n = 30, 14%), *Enterococcus faecalis* (n = 26, 12%), *Enterococcus faecium* (n = 17, 8%), and *Staphylococcus aureus, Klebsiella pneumoniae,* and *Stenotrophomonas maltophilia* (n = 15 each, 7%). Patients with polymicrobial cases were significantly younger than those with *Candida*-only cases (54.3 vs 60.7 years; $P < .0004$). Healthcare exposures commonly associated with candidemia like total parenteral nutrition (relative risk [RR], 0.82; 95% CI, 0.60–1.13) and surgery (RR, 0.99; 95% CI, 0.77–1.29) were similar between the 2 groups. Polymicrobial cases had shorter median time from admission to positive culture (1 vs 4 days, $P < .001$), were more commonly associated with injection drug use (RR, 1.95; 95% CI, 1.46–2.61), and were more likely to be community onset-healthcare associated (RR, 1.91; 95% CI, 1.50–2.44). Polymicrobial cases were associated with shorter hospitalization (14 vs 17 days; $P = .031$), less ICU care (RR, 0.7; 95% CI, 0.51–0.83), and lower mortality (RR, 0.7; 95% CI, 0.50–0.92). Conclusions: One in 10 candidemia cases were polymicrobial, with nearly one-quarter of those involving ≥3 organisms. Lower mortality among polymicrobial cases is surprising but may reflect the younger age and lower severity of infection of this population. Greater injection drug use, central venous catheter use, and long-term care exposures among polymicrobial cases suggest that injection or catheter practices play a role in these infections and may guide prevention opportunities.
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Table 1: Select demographic and clinical characteristics among Polymicrobial and *Candida*-only cases, EIP Sites; 2017

	Polymicrobial (N=215) n (%)	*Candida*-only (N=1006) n (%)	RR (95% CI) or p-value
Median age, years (interquartile range [IQR])	54.3 (37.2-67.3)	60.7 (46.2-71.1)	<0.004
Healthcare onset[1]	79 (36.7)	560 (55.7)	0.53 (0.41-0.68)
Healthcare-associated, community onset[2]	118 (54.9)	356 (35.4)	1.91 (1.50-2.44)
Community-associated[3]	18 (8.4)	90 (9.0)	0.94 (0.60-1.46)
Stay at a long-term care facility	85 (18.4)	285 (13.1)	1.4 (1.13-1.71)
Injection drug use	40 (18.6)	88 (8.8)	1.95 (1.46-2.61)
Central venous catheter	157 (72.0)	661 (65.7)	1.33 (1.01-1.76)
Any Intensive care unit (ICU) admission	100 (56.5)	598 (59.4)	0.65 (0.51-0.83)
ICU admission prior to specimen date	51 (23.7)	416 (41.6)	0.49 (0.37-0.67)
ICU admission after specimen date	90 (41.9)	547 (54.4)	0.66 (0.52-0.84)
Any surgery	72 (33.5)	338 (33.6)	0.99 (0.77-1.29)
Abdominal Surgery	29 (13.5)	168 (16.7)	0.81 (0.56-1.16)
Total Parenteral Nutrition	40 (18.6)	226 (22.5)	0.82 (0.60-1.13)
Median days from admission to specimen date, days (IQR)	1 (0-7)	4 (0-16)	<0.0001
Median overall length of stay, days (IQR)	14 (8-28)	17 (7-35)	0.031
Death at discharge	43 (20.0)	285 (28.3)	0.68 (0.50-0.92)

[1]Index blood culture obtained after three days of admission
[2]Index blood culture obtained within first three days of admission with recent healthcare exposure
[3]Index blood culture obtained within first three days of admission without recent healthcare exposure

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Poster Presentation

Characteristics of Long-Term Care Hospital Ventilator-Associated Events, National Healthcare Safety Network, 2016–2018

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Background: Ventilator-associated event (VAE) reporting to the CDC NHSN began in 2013. VAE reporting from long-term care hospitals (LTCHs) to the NHSN was required from January 2016 through September 2018 as part of the CMS LTCH Quality Reporting Program (QRP). We describe the incidence and characteristics of LTCH VAEs during the required reporting period. **Methods:** We analyzed VAE data reported to the NHSN from January 2016 through December 2018, from the LTCH ward and critical care locations participating in surveillance according to the NHSN protocol. We have described characteristics of VAE, and we determined the distribution of VAE types: ventilator-associated conditions (VAC), infection-related ventilator-associated