

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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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

Table 1: Select demographic and clinical characteristics among Polymicrobial and *Candida*-only cases, EIP Sites, 2017

	Polymicrobial (N=215) n (%)	<i>Candida</i> -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)	<.0004
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 (39.5)	285 (28.3)	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 (46.5)	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)	<.00001
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)

¹Index blood culture obtained after three days of admission

²Index blood culture obtained within first three days of admission with recent healthcare exposure

³Index blood culture obtained within first three days of admission without recent healthcare exposure