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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Poster Presentation

Characteristics of Cases With Polymicrobial Bloodstream Infections Involving *Candida* in Multisite Surveillance, 2017

Alexia Zhang, Oregon Health Authority; Joelle Nadle, California Emerging Infections Program; Devra Barter; Helen Johnston, Colorado Department of Public Health and Environment; Brenda Tesini, University of Rochester; Rebekah Blakney; Lewis Perry; Andrew Revis, Georgia Emerging Infections Program; Monica Farley, Division of Infectious Diseases, Emory University; Kaytlynn Marceaux, Maryland EIP, Johns Hopkins School of Public Health, Baltimore, MD; Brittany Pattee, Minnesota Department of Health; Sarah Shrum, New Mexico Department of Health; Erin C. Phipps; William Schaffner, Vanderbilt University School of Medicine; Caroline Graber, Vanderbilt University School of Medicine, Nashville, TN; Brendan R Jackson, National Center for Emerging and Zoonotic Infectious Diseases, US centers for Disease Control and Prevention, Atlanta; Meghan Lyman, US Centers for Diseases Control and Prevention

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

Presentation Type:
Poster Presentation

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

Cheri Grigg, Centers for Disease Control and Prevention; Allan Nkwata, Centers for Disease Control and Prevention; Cindy Gross, CACI, Inc.; Tara Millson, CACI; Krista Powell, Centers for Disease Control and Prevention; Shelley Magill, Centers for Disease Control and Prevention

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: VAE incidence rates per 1,000 ventilator days in LTCH locations, 2016-2018

Year	Location	No. Locations[1]	No. VAEs	No. vent days	Pooled mean	Percentile[2]		
						10%	50%	90%
2016	Critical Care	89 (86)	252	102,144	2.467	0	0	9.56
	Ward	597 (508)	1,817	1,087,080	1.671	0	0	6.38
2017	Critical Care	89 (84)	268	102,329	2.619	0	0	9.62
	Ward	571 (484)	1,464	1,044,161	1.402	0	0	5.37
2018	Critical Care	81 (77)	206	97,643	2.110	0	0	8.48
	Ward	546 (459)[3]	1,283	942,132	1.362	0	0	4.95

[1]No. of locations reporting >50 ventilator days/year shown in parentheses.
[2]Percentile distributions shown for locations with ≥20 units reporting >50 ventilator days per year.
[3] The VAE Outcome Measure was removed from the CMS LTCH QRP on October 1, 2018.

complications (IVAC), and possible ventilator-associated pneumonia (PVAP). Furthermore, we calculated pooled mean VAE rates per 1,000 ventilator days, and we determined the rate distributions for locations with ≥20 units reporting >50 ventilator days per year. **Results:** Overall, 493 LTCHs reported 22,359 location months of VAE data from ward and critical care locations. In total, 5,290 VAEs were reported, of which 3,871 (73%) were VAC, 961 (18%) were IVAC, and 458 (9%) were PVAP. Also, 42% (2,241) of VAEs occurred in female patients, and 1,305 (25%) occurred in patients who died during their hospitalization. The median time from LTCH admission to VAE onset was 18 days (IQR, 9–37), and from initiation of mechanical ventilation to VAE onset was 22 days (IQR, 10–43). Pathogens were identified from 454 PVAPs, with *Pseudomonas aeruginosa* (43% of PVAPs) and *Staphylococcus aureus* (26%) being the most common organisms. Annual pooled mean incidence rates in critical care locations ranged from 2.11 to 2.62 VAEs per 1,000 ventilator days, whereas rates in ward locations ranged from 1.36 to 1.67 VAEs per 1,000 ventilator days (Table 1). **Conclusions:** During a period of required reporting, pooled mean LTCH VAE rates remained low. Most VAEs in LTCHs were reported as VACs. Additional work is needed to understand the clinical events associated with LTCH VAE, including whether most VAEs truly represent non–infection-related events or reflect limited evaluation to identify infection-related complications. This distinction might influence the identification of appropriate interventions to reduce LTCH VAE rates.
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Characteristics of Pediatric Ventilator-Associated Events Reported to the National Healthcare Safety Network, 2019

Cheri Grigg, Centers for Disease Control and Prevention; Allan Nkwata, Centers for Disease Control and Prevention; Cindy Gross, CACI, Inc.; Shelley Magill, Centers for Disease Control and Prevention

Background: Mechanical ventilation is a life-saving measure for patients with respiratory failure; however, these patients are at high risk for complications and poor outcomes. Surveillance for ventilator-associated events (VAEs) via the CDC NHSN began in 2013 in adult patient care locations in hospitals. Pediatric ventilator-associated event (PedVAE) surveillance began in January 2019. The PedVAE definition is based on increases in mean airway pressure (MAP) or fraction of inspired oxygen (FiO_2). We summarized the first 9 months of PedVAE data reported to the NHSN. **Methods:** Neonatal and pediatric locations of US acute-care hospitals, long-term acute-care hospitals, and inpatient rehabilitation facilities were eligible to participate in PedVAE surveillance as of January 1, 2019. When submitting PedVAEs to the NHSN, facilities may also optionally report information about antimicrobials, pathogens, and clinical events associated with PedVAEs. We analyzed PedVAE data from January through September 2019 submitted by facilities participating in surveillance according to the NHSN protocol. We calculated pooled mean incidence rates (no. events per 1,000 ventilator days) for neonatal and pediatric intensive care units (NICUs and PICUs), and we describe characteristics of PedVAEs. **Results:** Overall, 205 PedVAEs were reported: 111 events from 147 NICUs in 140 facilities and 94 events from 117 PICUs in 85 facilities. The pooled mean incidence was 1.61 events per 1,000 ventilator days in level 2 and 3 NICUs, 1.09 events per 1,000 ventilator days in level III NICUs, and 1.25 events per 1,000 ventilator days in PICUs. Of 205 PedVAEs, 133 (65%) met only the MAP criterion, 65 (32%) met only the FiO_2 criterion, and 7 (3%) met both. Optional data on antimicrobials, pathogens, and clinical events were reported for 74 of 205 PedVAEs (36%). Among these 74 events, antimicrobial administration was common (50 of 74, 68%). By contrast, a minority had a pathogen reported (21 of 74, 28%). Of 74 PedVAEs, 60 were associated with a clinical event (80%), although only 15 (20%) were reported to be associated with a clinical infection. Of 74 PedVAEs, 4 (5%) were associated with mechanical ventilation weaning. **Conclusions:** PedVAE incidence rates are low in NICUs and PICUs. Most PedVAEs appear to be associated with clinical events. Although a minority of PedVAEs were associated with infections or pathogens, antimicrobial administration was reported for >60%. Further evaluation of the clinical correlates of PedVAEs can inform development of effective prevention and antimicrobial stewardship in mechanically ventilated children.
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CHG Skin Application in Non-ICU Patients with Central Venous Catheters: Impact on CLABSI, MRSA Bacteremia, and LabID Rates

Carey Dombecki, Michigan Medicine; Jennifer Sweeney, Michigan Medicine; Jackie White, Michigan Medicine; Amanda Valyko, Michigan Medicine; Terri Stillwell, Michigan Medicine; John Mills, Michigan Medicine; Laraine Washer, Michigan Medicine

Background: Prevention of central-line–associated bloodstream infections (CLABSIs) and methicillin-resistant *Staphylococcus aureus* (MRSA) infections requires a multifaceted approach including