



Fig. 2.

manufacturing leads to major challenges immunizing populations. Currently the United States expects to distribute close to 162–168 million doses of influenza vaccine to the market (CDC, October 25, 2019) to immunize the population for the 2019–2020 season. In line with international best practice, our healthcare facility mandated the seasonal influenza vaccine for all employees. We set out to introduce a novel nursing workflow to enhance our Flu Campaign utilizing our Epic Systems healthcare software. Methods: The Epic Flu Express Lane function boosts provider satisfaction and efficiency by minimizing documentation time. Nurses can document the entire flu visit on a single screen with a few clicks. *Workflow:* An employee presents at the flu station registration desk and a scheduler creates an appointment as a Flu Visit type. After a nurse opens the chart, the system determines whether a Flu Express Lane order is a fit for the visit, launching the Express Lane activity. The nurse updates all relevant information and finally drops in the administration charge associated with the appropriate diagnosis code for the vaccine, to sign into the Express Lane. *Establishment of dedicated and mobile employee flu stations:* Immunizations are provided at several stations located inside the hospital and alternate sites, including the our cafeteria. Additionally, the flu team extended immunizations off site at our administrative building and an unoccupied inpatient floor, giving hospital employees easier access. *Integration of Epic and human*

capital resource planning systems: By integrating the Epic and Mawared Human Capital systems, the flu team developed an automated workflow to capture employee compliance. A daily extract from Epic is imported to Mawared updating employee compliance status to completed. For those with incomplete status, Mawared sends an automated notification via e-mail reminding employees to complete the flu vaccination process for the season. Results: The Epic Nursing Express Lane workflow was well received, it facilitated compliance and practice efficiency for all mobile services provided. We achieved our target to provide influenza vaccination to >95% of employees in 2019 (Fig. 2). Conclusions: The electronic health record Epic Flu Express Lane workflow is an effective tool to complement practice efficiency and to facilitate a successful mobile Flu Campaign compliance in healthcare facilities.

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Epidemiologic Characteristics of ESBL-Producing ST131 *E. coli* Identified Through the Emerging Infections Program, 2017

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Characteristic	ST131 <i>E. coli</i> case-patients, % (N=52)	Non-ST131 <i>E. coli</i> case-patients, % (N=45)	p-value
Female	77%	76%	0.87
White race	87%	87%	0.59
Age ≥65	66%	58%	0.07
Culture Source			
Urine	98%	91%	0.12
Blood	2%	9%	
Location of culture collection			
Emergency room	19%	16%	0.08
Long-term acute care hospital (LTACH)	0%	0%	
LTCF	21%	4%	
Acute care hospital	8%	9%	
Outpatient clinics	52%	71%	
Epidemiological classification			
Healthcare-associated	56%	36%	0.05
Community-associated	44%	64%	
Healthcare exposures			
Acute care hospitalization in the year before culture	37%	24%	0.19
Residence in LTCF in the year before culture	29%	11%	0.03
Surgery in the year before culture	10%	18%	0.24
Admitted to LTACH in the year before culture	0%	0%	
Current chronic dialysis	0%	2%	0.28
Central venous catheter in place in 2 days before culture	6%	7%	1.00
Urinary catheter in place in 2 days before culture	15%	11%	0.54
Other indwelling device in place in 2 days prior to culture	6%	2%	0.62
Antibiotics within 30 days prior to culture	31%	40%	0.62
Underlying conditions			
Diabetes	27%	22%	0.59
Urinary tract abnormalities	37%	22%	0.12
Neurological problems	25%	22%	0.74
Chronic pulmonary disease	21%	11%	0.18
Congestive heart failure	8%	7%	1.00
Other underlying conditions*	46%	26%	0.05
Presence of any underlying condition in a case-patient	81%	60%	0.02

Fig. 1.

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Background: Extended-spectrum β -lactamase-producing (ESBL) *Escherichia coli* infection incidence is increasing in the United States. This increase may be due to the rapid expansion of ST131, which is now the predominant ESBL strain globally, often multidrug resistant, and has been shown to establish longer-term human colonization than other *E. coli* strains. We assessed potential risk factors that distinguish ST131 from other ESBL *E. coli*. **Methods:** From October 1 through December 31, 2017, 5 CDC Emerging Infections Program (EIP) sites pilot tested active, laboratory-based surveillance in selected counties in Colorado, Georgia, New Mexico, New York, and Tennessee. An *E. coli* case was defined as the first isolation from a normally sterile body site or urine in a surveillance area resident in a 30-day period resistant to ≥ 1 extended-spectrum cephalosporin antibiotic and susceptible or

intermediate to all carbapenem antibiotics tested. Epidemiologic data were collected from case patients' medical records. A convenience sample of 117 *E. coli* isolates from case patients was collected. All isolates underwent whole-genome sequencing to determine sequence type and the presence of ESBL genes. We compared ST131 *E. coli* epidemiology to other ESBL *E. coli*. **Results:** Among 117 *E. coli* isolates, 97 (83%) were ESBL producers. Of the 97 ESBL *E. coli*, 52 (54%) were ST131 (range, for 4 EIP sites submitting >10 isolates: 25%–88%; $P < .001$). Other common STs were ST38 (12%) and ST10 (5%). ST131 infections were more likely to be healthcare-associated than non-ST131 (56% vs 36%; $P = .05$) (Table 1). Among specific prior healthcare exposures, only residence in long-term care facilities (LTCFs) in the year before culture was more common among ST131 case patients (29% vs 11%; $P = .03$). Notably, 85% of ESBL *E. coli* collected from LTCF residents were ST131. ST131 *E. coli* were more common among patients with underlying medical conditions (81% vs 60%; $P = .02$). No statistically significant difference by sex, race, age, culture source, location of culture collection, and frequency of antibiotic use in the prior 30 days was observed. **Conclusions:** The prevalence of ST131 *E. coli* varies regionally. The association between ST131 and LTCFs suggests that these may be particularly important settings for ST131 acquisition. Improving infection control measures that limit ESBL transmission in these settings and preventing dissemination in facilities receiving patients from LTCFs may be necessary to contain ST131 spread.

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