nearly half of known CPO-colonized NIHCC patients over the past 6 years. Modest compliance with swab collection leaves room for improvement and likely results in missed instances of colonization. Although we cannot determine its effectiveness, we view our strategy as one of several key safety measures for our highly vulnerable patient population.

Funding: None
Disclosures: None
Doi:10.1017/ice.2020.570

Presentation Type:
Top Rated Posters

SPARC-ing Change—The Maryland Statewide Prevention and Reduction of *Clostridioides difficile* (SPARC) Collaborative

Clare Rock, Johns Hopkins University School of Medicine; Rebecca Perlmutter; David Blythe, MDH; Jacqueline Bork, University of Maryland; Kimberly Christine Claeys, University of Maryland, Baltimore; Sara Cosgrove, Johns Hopkins University School of Medicine; Kathryn Dzintars, The Johns Hopkins Hospital; Valeria Fabre, Johns Hopkins University; Anthony Harris, University of Maryland School of Medicine; Emily Heil, University of Maryland School of Pharmacy; Yea-Jen Hsu; Sara Keller, Johns Hopkins University; Lisa Maragakis, Johns Hopkins University School of Medicine; Aaron Michael Milstone, Johns Hopkins University; Daniel Morgan, University of Maryland School of Medicine; Richard Brooks, Centers for Disease Control and Prevention; Surbhi Leekha, University of Maryland Baltimore

Background: In 2018, the Maryland Department of Health, in collaboration with the University of Maryland and Johns Hopkins University, created the Statewide Prevention and Reduction of *Clostridioides difficile* (SPARC) collaborative to reduce *C. difficile* as specified in Healthy People 2020. **Methods:** The SPARC collaborative recruited hospitals contributing most cases to statewide *C. difficile* standardized infection ratio (SIR), according to data reported to the National Healthcare Safety Network (NHSN). SPARC developed intervention bundles around 4 domains: infection prevention, environmental cleaning, and diagnostic and antimicrobial stewardship. Each facility completed a self-assessment followed by an on-site, day-long, peer-to-peer (P2P) evaluation with 8–12 SPARC subject matter experts (SMEs) representing each domain. The SMEs met with hospital executive leadership and then led 4 domain-based group discussions with relevant hospital team leaders. To identify policy and practice gaps, SMEs visited hospital inpatient units for informal interviews with frontline staff. In a closing session, SPARC SMEs, hospital executives, and team leaders reconvened to discuss preliminary findings. This included review of covert observation data (hand hygiene, personal protective equipment compliance, environmental cleaning) obtained by SPARC team 1–2 weeks prior. Final SPARC P2P written recommendations guided development of customized interventions at each hospital. SPARC provided continuous support (follow up phone calls, educational webinars, technical support, didactic training for antimicrobial stewardship pharmacists) to enhance facility-specific implementation. For every quarter, we categorized *C. difficile* NHSN data for each Maryland hospital into "SPARC" or "non-SPARC" based on participation status. Using negative binomial mixed models, we analyzed difference-in-difference of pre- and postincidence rate ratios (IRRs) for SPARC and non-SPARC hospitals, which allowed estimation of change attributable to SPARC participation independent of other time-varying factors. **Results:** Overall, 13 of 48 (27%) hospitals in Maryland participated in the intervention. The baseline SIR for all Maryland hospitals was 0.92, and the post-SPARC SIR was 0.67. The SPARC hospitals had a greater reduction in hospital-onset *C. difficile* incidence; 8.6 and 4.3 events per 10,000 patient days for baseline and most recent quarter, respectively. For non-SPARC hospitals, these hospital-onset *C. difficile* incidences were 5.1 preintervention and 4.3 postintervention. We found a statistically significant difference-in-difference between SPARC and non-SPARC hospital *C. difficile* reduction rates (ratio of IRR, 0.63; 95% CI, 0.44–0.89; $P = .01$). **Conclusions:** The Maryland SPARC collaborative, a public health-academic partnership, was associated with a 25% reduction in the Maryland *C. difficile* SIR. Hospitals participating in SPARC demonstrated significantly reduced *C. difficile* incidences to match that of high-performing hospitals in Maryland.

Funding: None
Disclosure: Aaron Milstone, BD – consulting.
Doi:10.1017/ice.2020.571

Presentation Type:
Top Rated Posters

The Burden of Infection in Transfers from Nursing Homes to Hospitals

Andrew Dick, The RAND Corporation; Mark Sorbero, The RAND Corporation; E. Yoko Furuya, Columbia University Irving Medical Center; Tadeja Gracner; Mansi Agarwal, Columbia University; Patricia Stone, Columbia School of Nursing

Background: The focus on infection prevention in nursing homes is growing, but little is known about the role infections play in transfers from nursing home to hospital. Our goals were (1) to identify rates of infection-related transfers to the hospital and (2) to identify trends in these rates from 2011 to 2014. **Methods:** Using a nationally representative sample of 2,501 nursing homes (2011–2014), elderly resident data from the Minimum Data Set 3.0 were combined with CMS inpatient data (MedPAR). We classified transfers from nursing home to hospital as caused by infection (1) if infection was the primary diagnosis and present on admission (POA) or (2) if infection was indicated as the MedPAR admitting diagnosis code and POA.

Table 1.

Table 1: Percent of all-cause transfers caused by, or made with, infection

Infection Type	Transfer Classification	Year 2011	2012	2013	2014
Respiratory:	Caused By	10.4%	9.9%	9.9%	8.6%
	With	28.8%	30.1%	31.0%	29.5%
Sepsis:	Caused By	12.1%	13.8%	15.0%	16.6%
	With	14.6%	16.3%	17.6%	19.4%
UTI:	Caused By	7.7%	7.9%	7.6%	7.6%
	With	28.1%	29.3%	28.8%	28.9%
All Infections:	Caused By	31.1%	32.4%	33.0%	33.4%
	With	50.5%	52.1%	52.6%	52.6%
NH Residents (Millions)		3.75	3.80	3.86	3.92
Hospital Transfers / Patient		0.479	0.428	0.407	0.396

Note: Transfers classified as with infection include all those with an infection diagnosis present on admission and therefore include transfers that were caused by infection.

We classified all transfers, including those caused by infection, for which infection was POA in any of the 25 diagnosis codes as transfers with infection. Types of infection included respiratory, sepsis, urinary tract infection (UTI), and all (including 'other'). **Results:** Table 1 shows the number of all-cause transfers and the percentage caused by infections. From 2011 to 2014, the rate of all-cause transfers declined from 0.479 to 0.396 per patient; infections were primarily responsible for ~1 in 3 transfers each year. The rate of transfers caused by sepsis increased by 37% from 2011 to 2014, and the rate for respiratory infections fell by 18%. More than half of all transfers from nursing home to hospital in each year had an infection POA. Although the percentage of transfers caused by any kind of infection increased by >7% during the period, the number of transfers per patient dropped by 17%. **Conclusions:** A large number of elderly nursing home residents are transferred to hospitals with infection each year. Many of these transitions may be avoidable with improved infection prevention and surveillance in nursing homes. Reduced infection rates would improve health and quality of life of nursing home residents and reduce infection-related inpatient costs.

Funding: None
Disclosures: None
Doi:10.1017/ice.2020.572

Presentation Type:
Top Rated Posters

The Incidence, Characteristics, and Outcomes of Community and Hospital-Associated *S. aureus* Disease in Fulton County, Georgia

Andrew Webster, Emory University; Scott Fridkin, Emory Healthcare and Emory University;
Rahsaan Overton; Amber Britton; Susan Ray, Emory University School of Medicine and Grady Health System; David Swerdlow; Robin Hubler; Minerva Mendez

Background: Due to reliance on hospital discharge data for case identification, the burden of noninvasive and community-acquired *S. aureus* disease is often underestimated. To determine the full burden of *S. aureus* infections, we utilized population-based surveillance in a large urban county. **Methods:** The Georgia Emerging Infections Program (GA EIP) conducted CDC-funded, population-based surveillance by finding cases of *S. aureus* infections in 8 counties around Atlanta in 2017. Cases were residents with *S. aureus* isolated from either a normally sterile site in a 30-day period (invasive cases) or another site in a 14-day period (noninvasive cases). Medical records (all invasive and 1:4 sample of noninvasive cases) among Fulton County residents were abstracted for clinical, treatment, and outcome data. Cases treated were mapped to standard therapeutic site codes. Noninvasive specimens were reviewed and attributed to an invasive case if both occurred within 2 weeks. Incidence rates were calculated using 2017 census population and using a weight-adjusted cohort to account for sampling. **Results:** In total, 1,186 noninvasive (1:4 sample) and 529 invasive cases of *S. aureus* in Fulton county were reviewed. Only 35 of 1,186 (2.9%) noninvasive cases were temporally linked to invasive cases, resulting in 5,133 cases after extrapolation (529 invasive, 4,604 noninvasive). All invasive cases and 3,776 of 4,604 noninvasive cases (82%) were treated (4,305 total). Treatment was highest in skin (90%) and abscess (97%), lowest in urine (62%) and sputum (60%), and consisted of antibacterial agents alone (65%) or in addition to drainage procedures (35%). Overall, 41% of all cases were hospitalized, 12% required ICU admission, and 2.7% died, almost exclusively with bloodstream and pulmonary infections. Attribution of noninvasive infection was most often outside healthcare settings (87%); only 341 (7.9%) were hospital-onset cases; however, 34% of cases had had healthcare exposure in the preceding year, most often inpatient hospitalization (75%) or recent surgery (35%). Estimated county-wide incidence was 414 per 100,000 (130 for MRSA and 284 for MSSA), invasive infection was 50 per 100,000. Among treated cases, 57% were SSTI, and the proportion of cases caused by MRSA was ~33% but varied slightly by therapeutic site (Fig. 1). **Conclusions:** The incidence of treated *S. aureus* infection in our large urban county is estimated to be 414 per 100,000 persons, which exceeds previously estimated rates based on hospital discharge data. Only 12% of treated infections were invasive, and

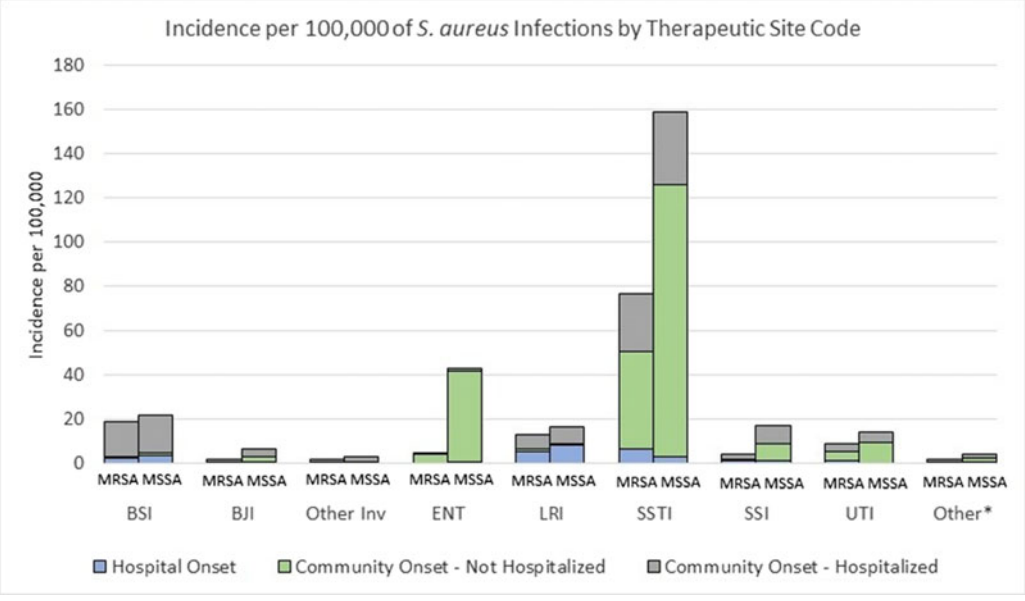

Fig. 1.