

Antibiotics	Adjusted OR	95% CI	p-value
Penicillins	Reference	-	-
Cephalosporin/clindamycin	0.93	(0.34, 2.56)	0.88
Macrolides	2.79	(1.19, 6.56)	0.02
Other antibiotics	1.09	(0.23, 5.18)	0.91

Table 1.

clarithromycin, erythromycin), or other (remaining antibiotics). A return visit was defined as a new visit to primary care, urgent care, or the emergency department with a diagnostic code for an ARI  $\leq 30$  days from the index visit. Logistic regression was used to adjust for nonantibiotic covariates and to compare treatments. Results are reported as odds ratio (OR  $\pm$  95% CI; *P* value). **Results:** Of 12,666 patients with a diagnostic code for acute pharyngitis, 2,923 (23.1%) had GAS testing performed. Of those, 582 (19.9%) were GAS-positive and 460 (15.7%) received antibiotics. The mean age was 39.0 years ( $\pm$ SD, 11.7) and 73.7% were male. Antibiotics included penicillins for 363 patients (78.9%), cephalosporins for 21 (4.6%), clindamycin for 32 (7.0%), macrolides for 47 (10.2%), and other for 17 (3.9%). Penicillin allergy was documented in 48 patients (10.5%), and these patients received cephalosporins (18.8%), clindamycin (35.4%), macrolides (41.7%), and other antibiotics (4.2%). Return visits occurred in 47 cases (10.4%). Limited chart review indicated that 6 of 10 macrolide recipients (60.0%) with return visits had recurrence or unresolved symptoms. After adjustment for calendar month and facility, odds of a return visit for treatment with a macrolide relative to penicillins was 2.79 (OR, 1.19; 95% CI,  $\pm$ 6.56; *P* = .02). The audit-feedback intervention was not associated with ARI-related return visits (OR, 0.53; 95% CI, 0.26–1.06; *P* = .07). **Conclusions:** Return visit rates were higher for GAS pharyngitis patients treated with a macrolide than for those treated with penicillins. Macrolides were the most commonly prescribed non-penicillin therapy irrespective of penicillin allergy. Further work is necessary to determine the reason for the increase in return visits.

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**Disclosures:** None

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#### Presentation Type:

Poster Presentation

#### Increasing Mupirocin Resistance Among MRSA Nasal Surveillance Isolates in the Chicago Area

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**Background:** In 2005, our healthcare system began universal admission screening for nasal colonization with MRSA and decolonization of MRSA positive patients with mupirocin. In 2010–2012, we studied the impact of nasal MRSA decolonization and concluded that it does not add benefit when contact precautions are used; plus, it resulted in increased rates of mupirocin resistance up to 9.4% in 2012. In September 2012 routine decolonization of hospitalized patients was discontinued. In the 2 years following discontinuation of mupirocin use for decolonization of MRSA carriers, the rate of mupirocin resistance gradually declined. We undertook a contemporary review of mupirocin resistance rates to ensure that the rates were stable. **Methods:** NorthShore University HealthSystem, Illinois, consists of 4 hospitals in the northern suburbs of Chicago, with 750 beds and 60,000

Figure 1. Mupirocin Resistance Rates for MRSA Admission Surveillance Isolates

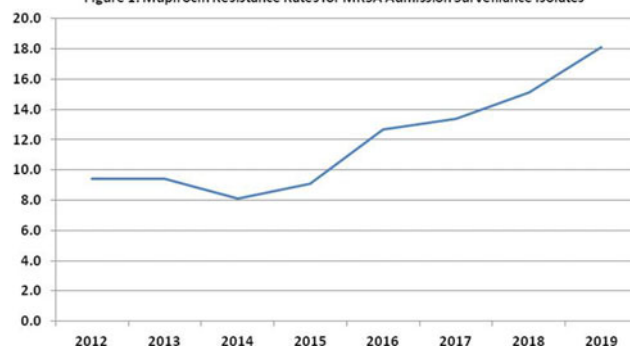


Fig. 1.

Figure 2. Number of Mupirocin Orders per Year

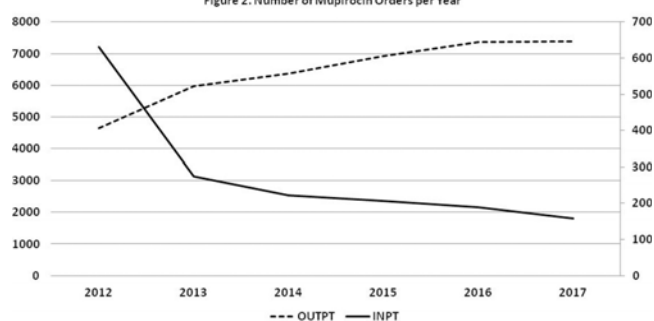


Fig. 2.

annual admissions. Admission nasal swab samples were collected from at-risk hospitalized patients based on a risk-adjusted algorithm. Nasal swabs were tested using the BD MAX MRSA assay. Positive samples were cultured onto BD BBL CHROMagar MRSA to recover the organism and were tested for the *mupA* gene, which confers high-level mupirocin resistance using an in-house PCR test. Data for mupirocin orders were provided by the pharmacy. **Results:** Mupirocin resistance rates and prescription orders are shown in Figs. 1 and 2. **Conclusions:** Mupirocin resistance rates plateaued between 2012 and 2014 and then increased from 9.1% in 2015 to 18.1% in 2019, despite discontinuation of routine decolonization of hospitalized patients. The reason for the increase is unclear; inpatient mupirocin orders were stable from 2015 to 2017.

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#### Increasing Voluntary Public Health Reporting to the NHSN Antimicrobial Use Option

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**Background:** The CDC NHSN launched the Antimicrobial Use Option in 2011. The Antimicrobial Use Option allows users to

Participation in the Antimicrobial Use (AU) Option as of November 2019

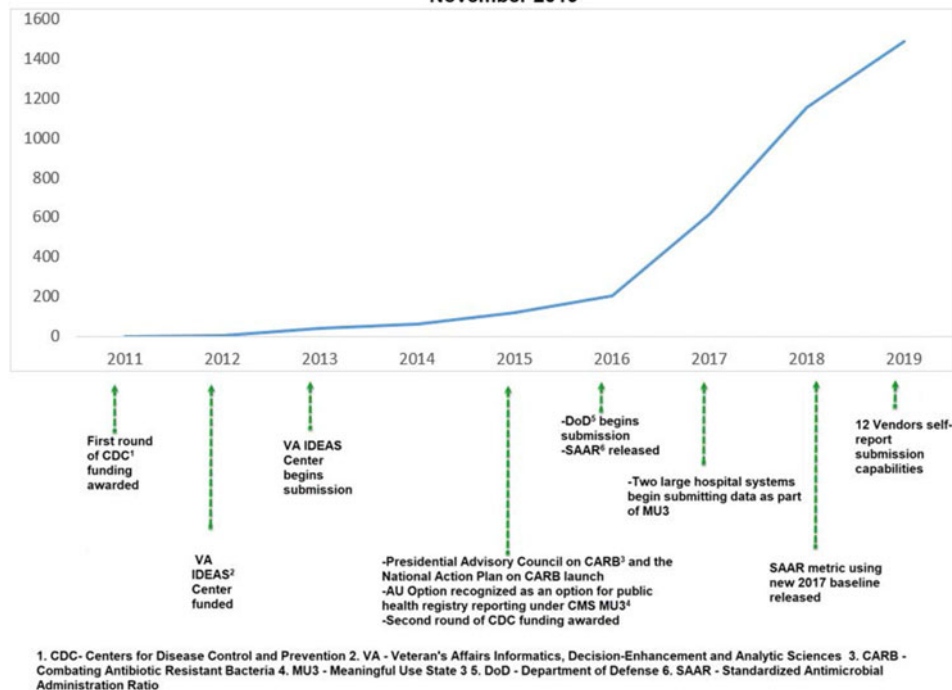


Fig. 1.

implement risk-adjusted antimicrobial use benchmarking within- and between- facilities using the standardized antimicrobial administration ratio (SAAR) and to evaluate use over time. The SAAR can be used for public health surveillance and to guide an organization's stewardship or quality improvement efforts. **Methods:** Antimicrobial Use Option enrollment grew through partner engagement, targeted education, and development of data benchmarking. We analyze enrollment over time and discuss key drivers of participation. **Results:** Initial 2011 Antimicrobial Use Option enrollment efforts awarded grant **Funding:** to 4 health departments. These health departments partnered with hospitals, which encouraged vendors to build infrastructure for electronic antimicrobial use reporting. CDC supported vendors through outreach and education. In 2012, with CDC support, Veterans' Affairs (VA) Informatics, Decision-Enhancement, and Analytic Sciences Center and partners began implementation of Antimicrobial Use Option reporting and validation of submitted data. These early efforts led to enrollment of 64 facilities by 2014 (Fig. 1). As awareness of the antimicrobial use option grew, we focused on facility engagement and development of benchmark metrics. A second round of grant **Funding:** in 2015 supported submission to the Antimicrobial Use Option from additional facilities by **Funding:** a vendor, a healthcare system, and an antimicrobial stewardship network. In 2015, CMS recognized the Antimicrobial Use Option as a choice for public health registry reporting under Meaningful Use Stage 3, resulting in an increase in participating hospitals. Antimicrobial Use Option enrollment increased in 2015 ( $n = 120$ ), coinciding with national prioritization of antimicrobial stewardship. In 2016, the SAAR, was released in NHSN. We leveraged the SAAR to encourage participation from additional facilities and began quarterly calls to encourage continued participation from existing users. In 2016, the Department of Defense began submitting data to the Antimicrobial Use Option, resulting in 207 facilities enrolled in 2016, which grew to 616 in 2017. As of November 2019, 12 vendors self-report submission capabilities

and 1,470 facilities, of ~6,800 active NHSN participants, are enrolled in the Antimicrobial Use Option. Two states have passed requirements regulating Antimicrobial Use Option reporting with Tennessee's requirement going into effect in 2021. **Conclusions:** The Antimicrobial Use Option offers evidence that collaboration with partners, and leveraging of benchmarking metrics available to a national surveillance system can lead to increased voluntary participation in surveillance of high-priority public health data. Moving forward, we will continue expanding analytic capabilities and partner engagement.

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#### India Antimicrobial Stewardship and Resistance (INTEREST): A Needs Assessment Survey

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**Background:** The emergence and spread of antimicrobial resistance is a major problem in India with significant knowledge on whether this is a systems-based, prescriber and patient characteristic based or diagnostic technologies-based issue. **Methods:** An electronic survey was sent to select distribution list of intensive care units (ICU) and hospital inpatient (medicine ward) providers from India. Survey questions included antimicrobial clinical practice data, access to electronic medical records, microbiological diagnostic techniques, and access to microbiology data. The survey focused on antimicrobial prescription trends and their association with