clinicians can substantially improve influenza vaccination rates among this susceptible and hard-to-reach population.

Funding: None
Disclosures: None
Doi:10.1017/ice.2020.590

Presentation Type:
Poster Presentation

A Conceptual Framework for Understanding How and Why People Take Antibiotics Without a Prescription

Larissa Grigoryan, Baylor College of Medicine; Osvaldo Alquicira, Baylor College of Medicine;
Susan Nash, Baylor College of Medicine Juanita Salinas, Baylor College of Medicine; Melanie Goebel, Baylor College of Medicine; Barbara Trautner, Baylor College of Medicine

Background: The reported prevalence of nonprescription antibiotic use in the United States varies from 5% among socioeconomically and ethnically diverse primary care patients to 66% among Latino migrant workers. Reports indicate that people obtain and take antibiotics from stores or flea markets in the United States, friends or relatives, and leftover antibiotics from previous prescriptions. This unsafe practice may lead to unnecessary and inappropriate antibiotic use and increases the risk of antibiotic resistance. As groundwork to develop an intervention to decrease nonprescription antibiotic use, we mapped reported drivers of nonprescription use to the Kilbourne conceptual framework for advancing health disparities research. **Methods:** The Kilbourne framework consists of 3 phases: (1) detection of health disparities and identification of vulnerable populations, (2) understanding why disparities exist, and (3) reducing or eliminating disparities through interventions. We focused on the first 2 phases and mapped the identified drivers of nonprescription antibiotic use onto the key domains of the Kilbourne conceptual framework: patient, healthcare system, and clinical encounter factors. We also conducted brief field research to explore anecdotal reports regarding availability of nonprescription antibiotics in our community. **Results:** We found 8 studies addressing factors related to nonprescription antibiotic use in the United States. These studies were primarily qualitative and included Spanish-speaking Hispanic and Latino immigrants. Figure 1 shows the proposed factors that may directly or indirectly predict nonprescription antibiotic use. Key potential factors are individual factors, psychosocial factors, resources, healthcare system factors, and clinical-encounter factors. For example, patients with inadequate health literacy may have poor access to care because of difficulty finding providers and choosing or navigating insurance plans; thus, they may be at risk for nonprescription use. At the same time, patients with inadequate health literacy may be at risk for using nonprescription antibiotics for a viral infection because of difficulty understanding medication labels or package inserts. The relevance of resources (availability) to nonprescription antibiotic use was supported by our research team's purchase of amoxicillin, tetracycline, and metronidazole without prescriptions from a flea market in Houston, Texas. **Conclusions:** The Kilbourne conceptual framework provides a strong, comprehensive basis for research and intervention in the challenging problem of nonprescription antibiotic use. Ongoing research will test the proposed relationships between patient, healthcare system, and clinical-encounter factors and nonprescription antibiotic use outcomes. We are conducting a survey among both indigent and insured patient populations to identify the relative importance of these factors and to validate our proposed conceptual framework of nonprescription antibiotic use.

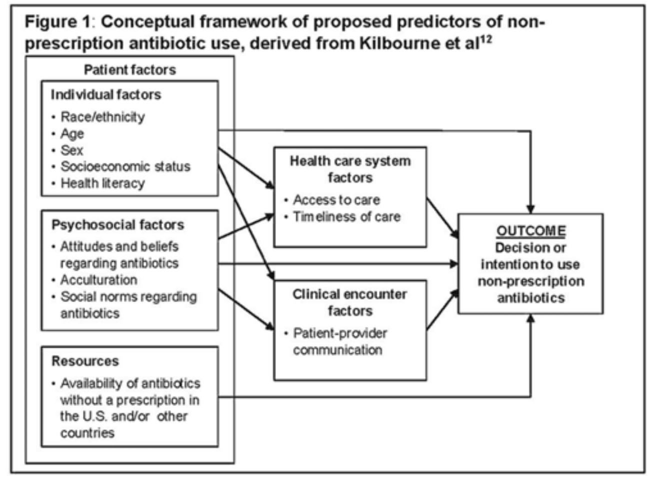

Fig. 1.

Funding: This project was supported by grant number R01HS026901 from the Agency.
Disclosures: None
Doi:10.1017/ice.2020.591

Presentation Type:
Poster Presentation

A Decade in Trying to Increase Hand Hygiene—Finally Success

Linda Huddleston, Floyd Medical Center; Sheila Bennett, Floyd Medical Center; Christopher Hermann, Clean Hands - Safe Hands

Background: Over the past 10 years, a rural health system has tried 10 different interventions to reduce hospital-associated infections (HAIs), and only 1 intervention has led to a reduction in HAIs. Reducing HAIs is a goal of nearly all hospitals, and improper hand hygiene is widely accepted as the main cause of HAIs. Even so, improving hand hygiene compliance is a challenge. **Methods:** Our facility implemented a two-phase longitudinal study to utilize an electronic hand hygiene reminder system to reduce HAIs. In the first phase, we implemented an intervention in 2 high-risk clinical units. The second phase of the study consisted of expanding the system to 3 additional clinical areas that had a lower incidence of HAIs. The hand hygiene baseline was established at 45% for these units prior to the voice reminder being turned on. **Results:** The system gathered baseline data prior to being turned on, and our average hand hygiene compliance rate was 49%. Once the voice reminder was turned on, hand hygiene improved nearly 35% within 6 months. During the first phase, there was a statistically significant 62% reduction in the average number of HAIs (catheter associated urinary tract infections (CAUTI), central-line–acquired bloodstream infections (CLABSIs), methicillin-resistant *Staphylococcus aureus* (MRSA), multidrug-resistant organisms (MDROs), and *Clostridiodes difficile* experienced in the preliminary units, comparing 12 months prior to 12 months after turning on the voice reminder. In the second phase, hand hygiene compliance increased to >65% in the following 6 months. During the second phase, all HAIs fell by a statistically significant 60%. This was determined by comparing the HAI rates 6 months

https://doi.org/10.1017/ice.2020.592 Published online by Cambridge University Press

prior to the voice reminder being turned on to 6 months after the voice reminder was turned on. **Conclusions:** The HAI data from both phases were aggregated, and there was a statistically significant reduction in MDROs by 90%, CAUTIs by 60%, and *C. difficile* by 64%. This resulted in annual savings >$1 million in direct costs of nonreimbursed HAIs.

Funding: None
Disclosures: None
Doi:10.1017/ice.2020.592

Presentation Type:
Poster Presentation

A Descriptive Analysis of Infection Present at Time of Surgery (PATOS) in NHSN Surgical Site Infection (SSI) Data, 2015–2018

Rebecca Konnor, Centers for Disease Control and Prevention; Victoria Russo, Centers for Disease Control and Prevention; Margaret A. Dudeck, Centers for Disease Control and Prevention; Katherine Allen-Bridson, Centers for Disease Control and Prevention

Background: In 2015, the CDC NHSN introduced infection present at time of surgery (PATOS) as a required data element for reporting surgical site infections (SSIs). PATOS is the documented observation that infection was visualized during the operative procedure and at the same tissue level of subsequent SSI. PATOS SSIs are excluded from CDC calculations of SSI summary measures, the standardized infection ratios (SIRs), including the SSI SIRs used by CMS public reporting and payment programs. The characteristics of PATOS SSIs have not been assessed since its introduction, prompting interest in the review of these SSIs. This study describes PATOS SSI surveillance for 2015–2018, with specific focus on infections following colon surgery (COLO), the NHSN operative procedure category with highest reported incidence of PATOS. **Methods:** We analyzed all procedures and SSIs reported to the NHSN. Using measures of frequency, we quantified the proportion of SSI and PATOS SSI attributed to all procedures and to COLO specifically. The mid-*p* method was used for proportion comparison. Procedure and SSI data were described by year and characteristics. **Results:** Between 2015 and 2018, 12,046,033 procedures and 188,770 SSIs (2%) were reported. Of these SSIs, 22,096 (12%) were PATOS SSIs (Fig. 1). COLO accounted for 11% of all procedures reported, for a total of 1,328,852 procedures with 72,891 (5%) resulting in SSI. COLO accounted for 64% of PATOS SSIs. The proportion of SSIs reported as PATOS SSIs resulting from COLO increased from 18% in 2015 to 22% by 2018 (Fig. 2). The proportion of COLO PATOS SSIs was statistically different from the proportion of PATOS SSIs for all other procedures each year ($P < .0001$). Organ-space (OS) SSIs accounted for 76% of COLO PATOS SSIs (10,558 of 13,911), and most of these SSIs were SSI intra-abdominal infections (IABs) (91%). The proportion of COLO PATOS SSI superficial incisional primary (SIP) was statistically different from non-COLO PATOS SSI SIP ($P = .0105$) (Fig. 2). Of COLOs linked to PATOS SSIs, 53% were assigned dirty or infected wound classification. **Conclusions:** The increase in PATOS SSIs linked to COLO procedures underscores the importance of monitoring PATOS SSIs at the facility level. Focused validation of PATOS data is needed to identify reasons for this increase, which may include misapplication or misunderstanding of PATOS determinations. Validation may highlight the potential need for prevention strategies or interventions related to PATOS.

Funding: None
Disclosures: None
Doi:10.1017/ice.2020.593

Figure 1. Summary of Procedure/SSI Data for All NHSN Operative Procedures, NHSN 2015-2018

Year	Total Number of Procedures Reported to NHSN	Number of SSI Events Resulting from Procedures Reported to NHSN	Number of SSIs Reported as PATOS	Proportion of SSI Events reported as PATOS to Total Events Reported to NHSN
2015	2,772,398	44,934	4,970	11%
2016	2,964,526	45,845	5,083	11%
2017	3,124,157	47,926	5,630	12%
2018	3,184,952	50,065	6,413	13%
2015-2018	12,046,033	188,770	22,096	12%

Fig. 1.

Figure 2. Summary of Procedure/SSI Data for COLO, NHSN 2015-2018

Year	Number of COLO Procedures Reported by Year	Number of SSIs resulting from COLO Procedures	Number of non-COLO SSIs that are PATOS	Number of COLO SSIs Reported as PATOS	Proportion of All COLO SSIs that are reported as PATOS	Number (%) of non-COLO PATOS SSIs by SIP Specific Event	Number (%) of COLO PATOS SSIs by Specific Events Classification				Statistical Significance Test of the Difference in Proportion of COLO PATOS SSI-SIP vs. non-COLO PATOS SSI-SIP	Number (%) of PATOS SSIs Linked to Procedures by Procedure Surgical Wound Classification		
						SIP	SIP	DIP	IAB	OS*		CC	CO	D
2015	319,397	18,133	1,795	3,175	18%	278 (15%)	575 (18%)	401 (13%)	2,053 (65%)	146 (5%)	0.0180	983 (31%)	640 (20%)	1,552 (49%)
2016	333,869	17,968	1,876	3,207	18%	255 (14%)	505 (16%)	367 (11%)	2,137 (67%)	198 (6%)	0.0370	929 (29%)	615 (19%)	1,663 (52%)
2017	336,123	18,140	2,177	3,453	19%	287 (13%)	466 (13%)	327 (9%)	2,377 (69%)	283 (8%)	0.7391	841 (24%)	659 (19%)	1,953 (57%)
2018	339,463	18,650	2,337	4,076	22%	247 (11%)	438 (11%)	274 (7%)	2,991 (73%)	373 (9%)	0.8279	1,072 (26%)	757 (19%)	2,247 (55%)
2015-2018	**1,328,852**	**72,891**	**8,185**	**13,911**	**19%**	**1,067 (13%)**	**1,984 (14%)**	**1,369 (10%)**	**9,558 (69%)**	**1,000 (7%)**	**0.0105**	**3,825 (27%)**	**2,671 (19%)**	**7,415 (53%)**

Fig. 2.