

178. Implementation of the Core Elements of Antibiotic Stewardship in Nursing Homes – National Healthcare Safety Network (NHSN), 2016–2018

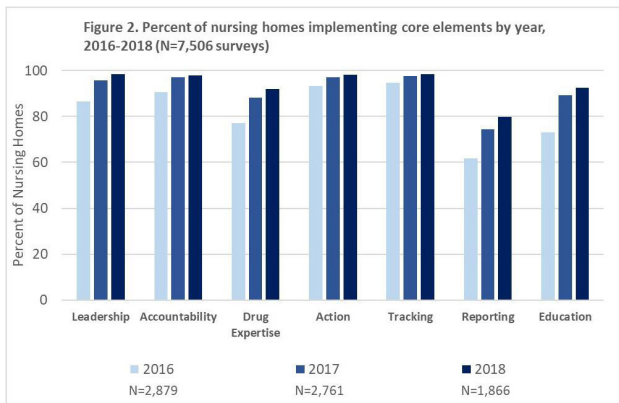
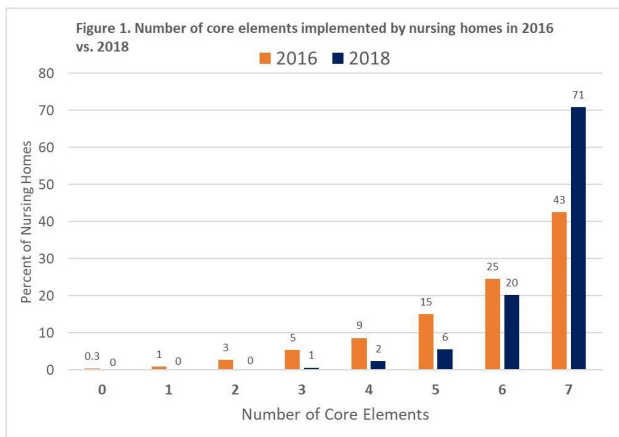
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Session: P-6. Antimicrobial Stewardship: Program Development and Implementation

Background: Since 2016, nursing homes (NHs) enrolled in the Centers for Disease Control and Prevention's NHSN Long-term Care Facility (LTCF) Component have reported on their implementation of the core elements of antibiotic stewardship. In 2016, 42% of NHs reported implementing all seven core elements. Recent regulations require antibiotic stewardship programs in NHs. The objectives of this analysis were to track national progress in implementation of the core elements and evaluate how time dedicated to infection prevention and control (IPC) is associated with the implementation of the core elements.

Methods: We used the NHSN LTCF 2016–2018 Annual Surveys to assess NH characteristics and implementation of the core elements, defined as self-reported implementation of at least one corresponding stewardship activity. We reported absolute differences in percent implementation. We used log-binomial regression models to estimate the association between weekly IPC hours and the implementation of all seven core elements, while controlling for confounding by facility characteristics.

Results: We included 7,506 surveys from 2016–2018. In 2018, 71% of NHs reported implementation of all seven core elements, a 28% increase from 2016 (Fig. 1). The greatest increases in implementation from 2016–2018 were in Education (+19%), Reporting (+18%) and Drug Expertise (+15%) (Fig. 2). Ninety-eight percent of NHs had an individual responsible for antibiotic stewardship activities (Accountability), with 30% indicating that the role was fulfilled by an infection preventionist. Furthermore, 71% of NHs reported pharmacist involvement in improving antibiotic use, an increase of 27% since 2016. NHs that reported at least 20 hours of IPC activity per week were 14% more likely to implement all seven core elements, when controlling for facility ownership and affiliation, 95% CI: (1.07, 1.20).



Conclusion: NHs reported substantial progress in antibiotic stewardship implementation from 2016–2018. Improvements in accessing drug expertise, providing education and reporting antibiotic use may reflect increased stewardship awareness and use of resources among NH providers under new regulatory requirements. NHs with at least 20 hours dedicated to IPC per week may have greater capacity to implement all core elements.

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179. Integrating Antibiotic Stewardship Core Elements into Nurse Residency Programs

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Background: Background: In the 2019 Centers for Disease Control and Prevention Core Elements of Hospital Antibiotic Stewardship (AS) Programs, 3 elements outline opportunities for nurse engagement:

- Leadership Commitment, securing resources to support AS endeavors, including quality/safety work
- Action, identifying new categories of nursing-based interventions
- Education, engaging nurses in patient education

Nurse Residency Programs (NRPs) enculturate newly licensed nurses (NLNs) into the profession and provide a platform for integrating NLNs into organizational initiatives, including AS.

Methods: Methods: To determine if NRPs were an avenue to integrate core elements, nursing leaders committed to using the NRP to engage NLNs in development of unit-based AS projects. Tenured nurses mentored NLNs on evidence-based quality improvement projects with an AS nurse serving as content expert. Over 2 years, 4 cohorts, 2 in Pediatric Intensive Care Unit (PICU) and 2 in Cardiology, applied a Lean problem-solving approach (A3) to identify and implement nurse-led AS projects.

Results: Results: Four A3s were completed; data collection varied by group (Figure 1). Year 1, PICU developed a handoff tool, and improved frequency of nurse to nurse communication regarding the indication, duration, and day of therapy for prescribed antibiotics. Year 2, PICU developed a tool to increase parent education encounters; frequency of interactions did not change. Year 1, Cardiology implemented educational initiatives; increased awareness of nurses' role in AS (Figure 2). Year 2, Cardiology piloted a handoff tool to promote AS; nurse communication increased. In total, 4 NLN projects were presented to leaders and clinical staff exposing 18 NLNs, 6 tenured nurses, and over 400 clinical nurses to AS. Each cohort expressed challenges integrating AS into established processes during debriefing.

Figure 1: Cohort Overview

Unit	Year	Project Focus	Measure	Lessons Learned
PICU	1	Nursing handoff tool to enhance communication of antibiotic indication, duration, day of therapy	Pre-post survey and audits	Increase in discussion of antibiotic indication, duration, and day of therapy during nurse to nurse report
	2	Educational tool to enhance communication about antibiotics with patients and families	Pre-post survey	No change in frequency of patient/family education, however identified need for standardization of nursing role in patient/parent education
Cardiology	1	Educational initiatives to increase AS awareness for nurses	Pre-post survey	Nurses desire to be included in AS efforts, however, need support in understanding role and impact on patient outcomes
	2	Modification to preexisting nurse handoff tool to include discussion on patient antibiotic use	Pre-post survey	Standardization of AS discussion increases nurse awareness and willingness to engage in AS efforts