

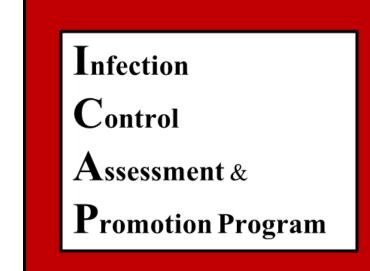
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DEPT. OF HEALTH AND HUMAN SERVICES

Frequently Identified Gaps in Antibiotic Stewardship Programs in Long-Term Care Facilities

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BACKGROUND

- The Nebraska (NE) Infection Control Assessment and Promotion Program (ICAP) is supported by the NE DHHS Healthcare-Acquired Infection Program and CDC to assess and improve infection prevention and control programs
- NE ICAP surveyed infection prevention (IP) and antimicrobial stewardship (AS) activities in NE long-term care facilities (LTCF)
- New Centers for Medicare and Medicaid Services (CMS) regulations require
 LTCF to develop antimicrobial stewardship programs that include antibiotic use
 protocols and systems to monitor antibiotic use
- The objective of the study was to evaluate the current level of AS activities and associated factors in LTCF in NE

METHODS

- NE ICAP conducted on-site surveys on IP and AS practices in 30 LTCF from October 2015 to March 2017
- The CDC Infection Prevention and Control Assessment Tool for Long-Term Care Facilities (Figure 1) was used to assess each facility's perceptions on the level of implementation of the CDC AS core elements (CE)
- CE were categorized as administrative [CE 1-3: leadership support (LS), accountability, drug expertise (DE)] and interventional (CE 4-7: action, tracking, reporting, education)
- Effects of LS, accountability, bed size (BS), hospital affiliation (HA), presence of trained infection preventionist and infection prevention activity weekly hours (IP WH)/100 beds on AS activities were evaluated
- Statistical analyses were performed using Fisher's exact, Mann-Whitney and Kruskal-Wallis tests

Figure 1. Questions on Antimicrobial Stewardship Program in the CDC Infection Prevention and Control Assessment Tool for Long-Term Care Facilities

	Elements to be assessed	Assess	ment	Notes/Areas for Improver
A.	The facility can demonstrate leadership support for efforts to improve antibiotic use (antibiotic stewardship).	O Yes	O No	Click here to enter text.
B.	The facility has identified individuals accountable for leading antibiotic stewardship activities	O Yes	O No	Click here to enter text.
C.	The facility has access to individuals with antibiotic prescribing expertise (e.g. ID trained physician or pharmacist).	O Yes	O No	Click here to enter text.
D.	The facility has written policies on antibiotic prescribing.	O Yes	O No	Click here to enter text.
E.	The facility has implemented practices in place to improve antibiotic use.	O Yes	O No	Click here to enter text.
F.	The facility has a report summarizing antibiotic use from pharmacy data created within last 6 months. ote: Report could include number of new starts, types of drugs prescribed, number of days of antibiotic treatment) from the pharmacy on a regular basis	O Yes	O No	Click here to enter text.
G.	The facility has a report summarizing antibiotic resistance (i.e., antibiogram) from the laboratory created within the past 24 months.	O Yes	O No	Click here to enter text.
H.	The facility provides clinical prescribers with feedback about their antibiotic prescribing practices. ote: If yes, facility should provide documentation of feedback reports	O Yes	O No	Click here to enter text.

Elements to be assessed	Assess	ment	Notes/Areas for Improvement
The facility has provided training on antibiotic use (stewardship) to all nursing staff within the last 12 months.	O Yes	O No	Click here to enter text.
The facility has provided training on antibiotic use (stewardship) to all clinical providers with prescribing privileges within the last 12 months.	O Yes	O No	Click here to enter text.

RESULTSTable 1. Characteristics of Long-Term Care Facilities SurveyedCharacteristicsN = 30Hospital affiliation – n (%)7 (23)Presence of trained infection preventionist – n (%)18 (60)Bed size – median (range)60.5 (25 – 293)Infection prevention activity weekly hours/100 beds – median (range)6.5 (0 – 24)Number of AS core elements implemented – median (range)3 (0 – 7)Abbreviation: AS = antimicrobial stewardship

Figure 2. Frequency of Implementation of Individual Antimicrobial Stewardship Core Element in Long-Term Care Facilities Surveyed (N = 30)

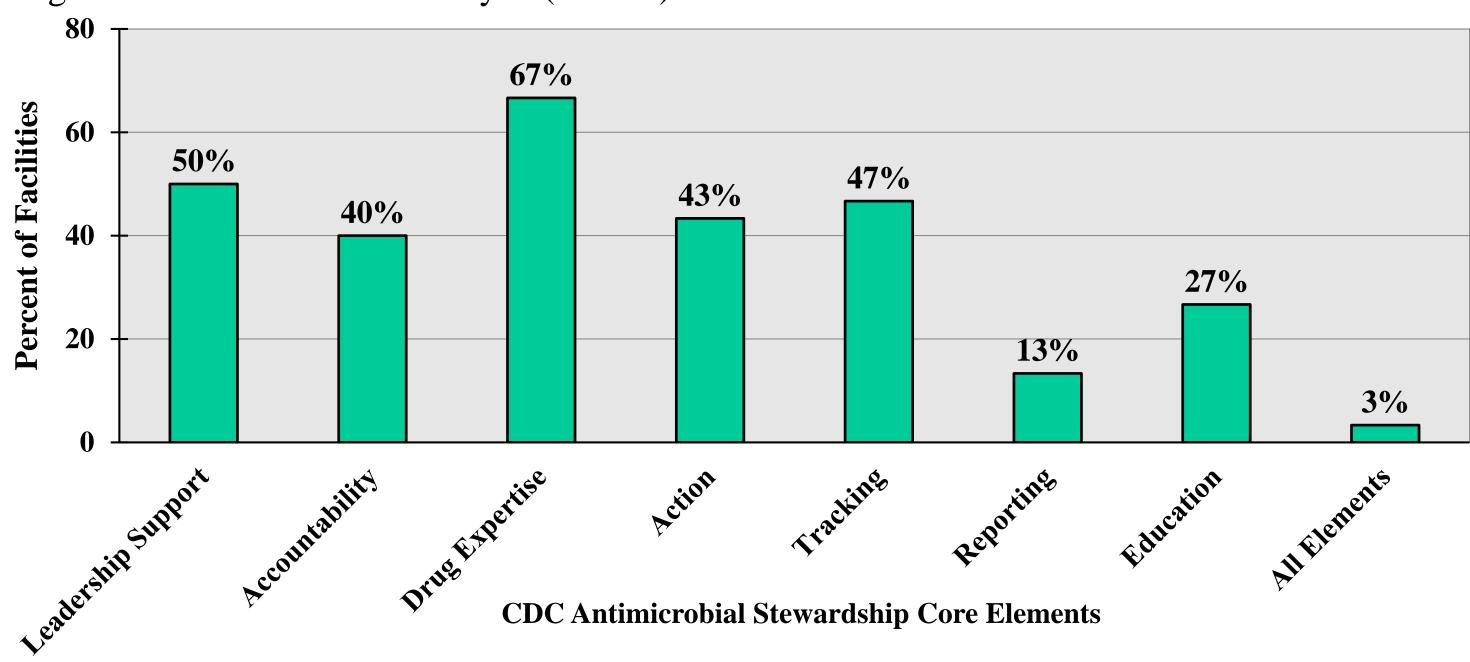
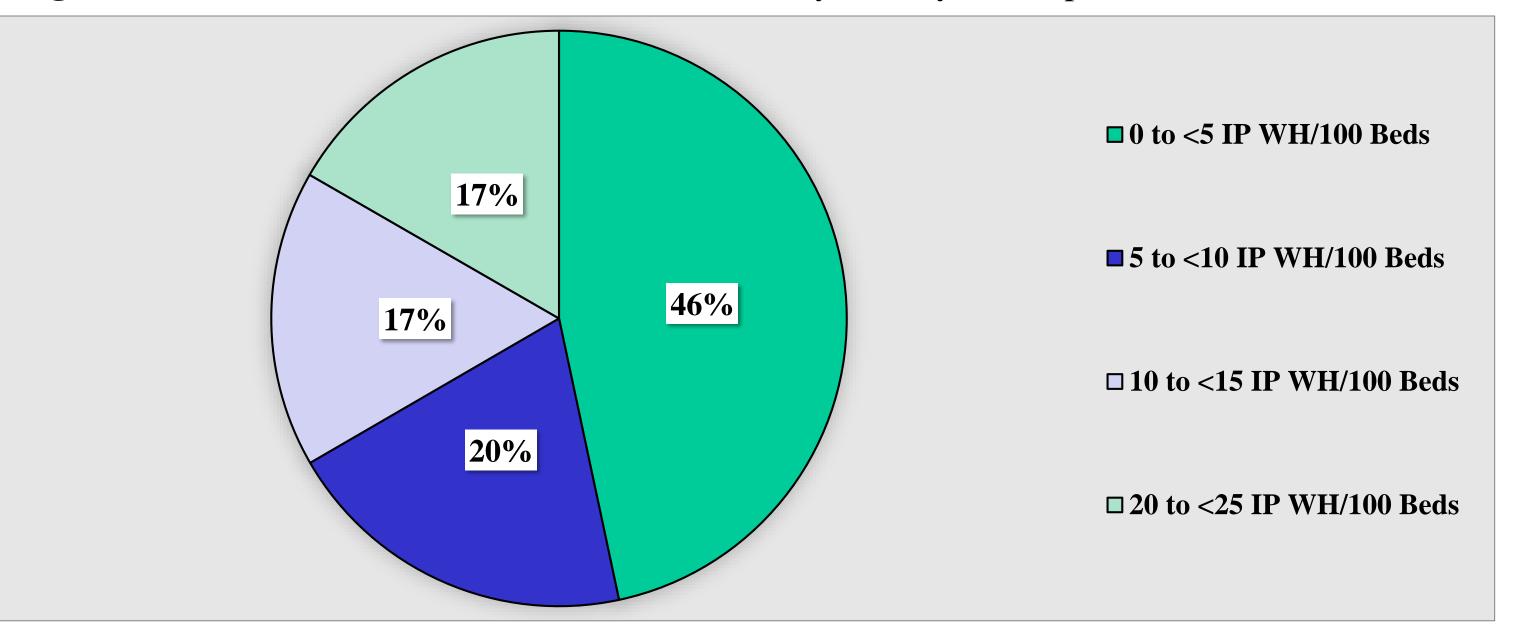


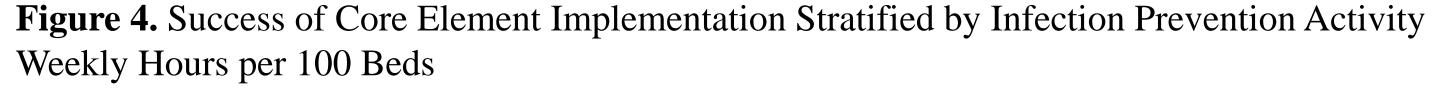
Table 2. Effect of Leadership Support and Accountability on Implementation of the Remaining Antimicrobial Stewardship Core Elements

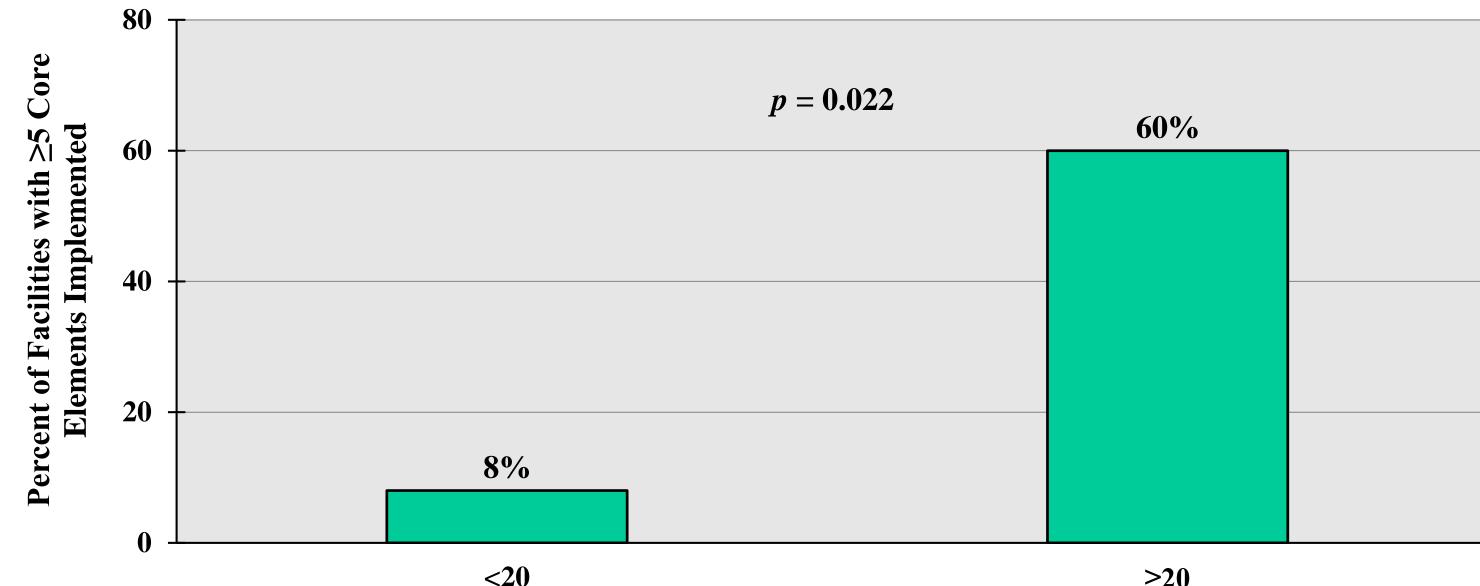
Factors	Implemented? (n)	Median No. of Remaining Core Elements Implemented	<i>p</i> -value	
Leadership Support	Yes (15) No (15)	3.0 2.0	0.029	
Accountability	Yes (12) No (18)	3.0 2.0	0.035	

Figure 3. Distribution of Infection Prevention Activity Weekly Hours per 100 Beds (N = 30)



Abbreviation: IP WH = infection prevention activity weekly hours





Infection Prevention Activity Weekly Hours per 100 Beds

DISCUSSION

- The majority of surveyed LTCF employ trained infection preventionist but time dedicated for IP activity was highly variable (Table 1)
- Implementation of all CDC AS core elements was infrequent, with DE and reporting being the most and least commonly implemented, respectively (Figure 2)
- LTCF with LS or accountability implemented significantly more of the remaining CE compared to those without LS or accountability (Table 2)
- A significantly higher percentage of facilities with ≥20 IP WH/100 beds
 implemented ≥5 CE compared to those with <20 IP WH/100 beds (Figure 4)
- Presence of LS, accountability and \geq 20 IP WH/100 beds led to a higher percentage of facilities implementing \geq 2 interventional CE (100% vs. 30%, p = 0.041)

CONCLUSIONS

- Implementation of all 7 AS core elements in Nebraska LTCF was found to be uncommon
- Presence of leadership support, accountability, and ≥20 IP WH/100 beds are significant factors predicting implementation of more AS core elements
- LTCF leadership would benefit from specific guidance on time dedication and support for infection control and antimicrobial stewardship activities

DISCLOSURE

The authors of this study have nothing to disclose pertaining to the content of this poster.

REFERENCES

- Medicare and Medicaid Programs, Reform of Requirements of Long-Term Care Facilities, 42 CFR § 483 (2016).
- 2. CDC. Infection prevention and control assessment tool for long-term care facilities, version 1.3.1, September 2016. Available at https://www.cdc.gov/infectioncontrol/pdf/icar/ltcf.pdf. Accessed August 4, 2017.