Development of a data collection tool characterizing state focus on the prevention of healthcare-associated infection (HAI) in nursing homes (NH)

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Introduction

- Infections represent the leading cause of morbidity and mortality among the vulnerable elderly population residing in U.S. nursing homes (NH)
- 1.6 to 3.8 million infections occur in U.S. NH annually, resulting in approximately 388,000 deaths
- NH infections cost $38–$137 million for antimicrobial therapy and $637 million–$2 billion for hospitalizations
- Morbidity, mortality and the financial burden associated with healthcare-associated infections (HAI) in NH is likely to increase as the population of NH residents is expected to grow from the current 1.7 million to approximately 5.3 million in 2030
- State Departments of Health (DOH) intend to reduce HAI incidence in NH considering that an estimated 55–70% of HAI are avoidable in other settings, but efforts to decrease HAI incidence are inconsistent between states
- Systematically characterizing ways that state DOH attempt to reduce HAI in NH is important to measure and then interpret the effects of these activities

Tool Description

- 17 tool items in 4 sections: consumer-directed information, provider or surveyor-directed information and activities, state HAI reduction plans and HAI mandatory reporting laws
- Items have prompts for qualitative data and to record dates of implementation, where applicable
- Testing for agreement yielded Kappa: 45 – 73

Population Studied

DOH of fifty U.S. states and the District of Columbia

Study Design

- To assure content validity, tool items and development were discussed with leading experts in the field
- Tool development was informed by review of 20 state DOH websites to determine the types and breadth of information, activities and policies that characterize state focus on HAI in NH
- Sites linked to state DOH websites (e.g., Centers for Disease Control and Prevention) were also examined to ensure capture of all relevant data
- A protocol clarifying the procedure of data collection and operational definitions of relevant terms was developed in parallel
- Two independent researchers piloted the tool to establish reliability
- In the absence of agreement, definitions and interpretations of tool items were discussed with a third, independent reviewer and some items were revised for clarity
- Two rounds of pilot testing with a total of 5 states were performed

Tool Application Results

- States Supplying Infection Prevention Materials/Training for NH Providers
- States with NH Collaboratives*
- States Providing Training to NH Surveyors

Conclusions and Implications

- This data collection tool allows for comparison of state health policy activities through consistent data collection and ensures meaningful characterization of state focus on HAI reduction in NH
- Tool use demonstrates high variability in state activities and policies focused on NH and reducing HAI incidence in NH
- Understanding ways in which state DOH attempt to reduce HAI in NH can inform work of health policy researchers, infection preventionists, geriatricians and other NH healthcare workers

*Note: Data was obtained by calling state HAI coordinators when state laws and forms were particularly difficult to discern

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