**Aim 1**
Describe the incidence of HAI in NHs across the nation and associated state level characteristics, facility level characteristics and resident care processes.

**Aim 2**
Identify NHs that have persistently high and low HAI rates and the relationship between the HAI rate, state and facility level characteristics and resident care processes.

**Aim 3**
Use a descriptive exploratory approach to describe the phenomenon of infection control in NHs.

**Aim 4**
Determine the comparative effectiveness of current infection control structures and processes in preventing HAIs in elderly residents.

**Aim 5**
Determine the cost-effectiveness of efficacious infection control processes in NHs.

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**Research Team**

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Background

Approximately 1.6 million Americans live in 16,000 nursing homes (NHs) across the nation, and 90% of those NH residents are considered “frail elderly.” It is expected that the population of individuals residing in NHs will increase in number and diversity in the coming years. It has been estimated that between 1.6 and 3.8 million infections occur in U.S. NHs each year. Healthcare associated infections (HAI) are a major source of morbidity and mortality among NH residents and HAI in NHs are increasingly associated with multi-drug resistant organisms (MDROs). Thus, prevention and management of HAI in NH settings is vitally important, especially considering that 15% of U.S. NHs receive deficiency citations for infection control each year. Some states have recently regulated mandatory reporting of HAI in NHs or have implemented statewide learning collaboratives, however, the effectiveness of these initiatives is not known. There is a need for research addressing the efficacy of infection control structures and processes in preventing HAIs in NHs.

Previous Studies

Columbia University School of Nursing has examined relationships between infection control structures and processes and HAI rates in elderly Medicare patients admitted to intensive care units (ICUs) in hospitals. Additional studies have been undertaken to examine the impact of mandatory public reporting of HAI rates on infection control processes and HAI rates in hospitals and to estimate the costs attributable to those infections. In partnership with NH research experts, the P-NICE-NH study will build upon this previous work to address gaps in the current understanding of best practices related to HAI prevention in NHs. It will provide much needed evidence on how best to eliminate HAIs in NHs and will inform future practice guidelines.

Qualitative Data Collection Phase
January—June, 2013

- Qualitative in-depth interviews with 7 personnel at 12 nursing homes around the country will be conducted
- Multiple personnel at each institution, who are knowledgeable about infection prevention and reflect a range of expertise, will be interviewed
- $700 honorarium per nursing home ($100 per participant)

Survey Data Collection Phase
July—December, 2013

- Surveys will be mailed to 3,000 eligible nursing homes
- Data about structure of infection control programs, organizational support, and processes of care will be collected
- Respondents will receive a $20 gift card

Columbia University’s Human Subject Institutional Review Board has approved this study.