STUDY AIMS

- **Aim 1**: Use a qualitative approach to describe the phenomena of infection prevention, surveillance and control in hospitals.

- **Aim 2**: Assess the impact of intensity of infection control processes on device associated and organism specific HAI rates in ICUs across the U.S.

- **Aim 3**: Determine the impact of state regulated mandatory reporting on infection control processes and HAI rates.

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**Background**

Healthcare associated infections (HAI) are a major source of morbidity and mortality despite the fact that they are often preventable. Most HAI are associated with an invasive device during hospitalization and disproportionately occur in elderly intensive care unit (ICU) patients. The cost of HAI to hospitals is estimated to be 25.0 to 31.5 billion dollars annually. Because of the magnitude of HAI and drug resistance problem in hospitals, many states now mandate hospitals to publicly disclose data about their performance and/or infection rates. However, the effect of mandatory reporting of HAI is unknown.

In August 2007, Columbia University School of Nursing embarked on a three-year, two-phase study “Prevention of Nosocomial Infections and Cost Effectiveness Analysis” (PNICE Study) to describe infection control department staffing and interventions implemented in ICUs across the nation. We surveyed a sample of National Healthcare Safety Network (NHSN) hospitals (n = 289, 66% response rate) and received data on 415 adult ICUs.

**Results from the PNICE Study**

We found few hospital characteristics to be associated with device associated HAI rates. We did find that the intensity of processes was varied; and only when an ICU had 95% or greater compliance with processes (e.g., Central Line Bundle Elements) did rates decrease.

However, with increased HAIs caused by methicillin resistant *Staphylococcus aureus* (MRSA) and *Clostridium difficile*, growing state mandatory reporting of HAI, and in the process of conducting the PNICE study, we have identified a number of gaps in the research that we will be trying to inform with the results of the PNICER Study.

**Phase I: Qualitative Visits**

- Summer/Fall 2010
- Qualitative in-depth interviews in 12 hospitals that participated in the PNICE study
- Interviews with multiple personnel including Infection Preventionists, Hospital Epidemiologists, hospital administrators, nurses and ancillary service personnel
- $1000 honorarium per hospital ($100 per participant)

**Phase II: National Survey and NHSN Data Collection (Fall 2012)**

- Includes a Web-based survey of eligible NHSN hospitals and joining the PNICER NHSN Group
- Collect up to 6 years of ICU specific NHSN data (2006-2011)
- Weekly lottery for 120 $100 prizes

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