SUPPORTING STATEMENT

Part B

Reductions of Infection Caused by Carbapenem Resistant Enterobacteriaceae (KPC) Producing Organisms through the Application of Recently Developed CDC/HICPAC Recommendations

January 2010

Agency for Healthcare Research and Quality (AHRQ)

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B. Collections of Information Employing Statistical Methods

1. Respondent universe and sampling methods

The data are to be collected from the management team and ICU staff within each of the three participating hospitals. In the table below we have estimated the respondent universe and expected response rate for these units and in sum. The respondent universe is based not on total ICU staff numbers, but rather on day shift clinical staff who could be expected to be involved in some way with changes to infection control procedures.

Annual Number of Responses per Hospital

Data Collection Mode	Total Responses	Hospital 1	Hospital 2	Hospital 3	Expected response rate
Pre-intervention focus groups with clinical staff	27	9	9	9	80%
Pre-intervention focus groups with managers	3	1	1	1	100%
Clinical staff survey	30	10	10	10	80%
Post-intervention focus groups with clinical staff	27	9	9	9	80%
Post-intervention focus groups with managers	3	1	1	1	100%
Total	90	30	30	30	na

2. Information Collection Procedures

Sample selection for the focus groups is not based on statistical methods; rather it is based on the identification of key informants who, by virtue of their formal roles or involvement in the implementation team, are familiar with the project that is the subject of the research.

For the clinical staff survey, the sampling procedure is similar. Our local contact will be asked to distribute the survey packets to staff working in the intervention ICUs who have first-hand knowledge of existing quality improvement efforts and infection control efforts. This will normally include unit nurses, nurse managers, nursing assistants, house staff and physicians. While the local contact will be asked to distribute a packet to all staff members who meet these criteria, the actual number reached will depend on how survey distribution interacts with vacation and sick time, etc.

No estimation procedures are employed in this project, as the universe of potential respondents is small.

The focus groups are to be conducted by the principal investigator, who is an experienced interviewer and analyst of qualitative data. All of the staff to be interviewed are either senior managers or are involved either in the implementation team or the clinical work of the implementation ICU. The co-PI, who is a senior manager at the research site(s), will designate a staff person to assist in scheduling the interviews in advance of the visit. Using consent procedures approved by the BUMC IRB, the interviewer will begin each focus group by obtaining written consent for interview participation. All staff will be informed that they have the option of not participating, and that their managers will not be informed if they choose to exercise this option. The interviewer will take notes during each focus group, and will also, with permission, audio-record as a back-up. Once the notes are complete, the audio-recordings will be erased.

The surveys will be self-administered paper questionnaires that will be pre-tested with 9 or fewer persons for readability and accessibility to the target staff population. They will be distributed to staff with postal paid return envelopes and a cover letter, asking respondents to mail them directly back to the research team.

There are no plans to impute missing data in the analysis.

3. Methods to Maximize Response Rates

Employee communications will be utilized in the implementation units to make staff aware of the research study and to encourage them to participate if/when asked. No person-specific reminders will be used, but reminder emails and posters will be used in the units to encourage participation if there is a non-response problem.

4. Tests of Procedures

The focus group and survey procedures used in this study are very similar to those used successfully by this research team in other studies of the implementation of new clinical practices. While the specific questions will be determined by the specific clinical content and impact of this innovation, the general form and administration of the questions will be very similar to that used in the past. It has been our experience that staff members are generally willing and able to participate in interviews and surveys regarding the implementation of new clinical practices in their workplaces, and that the information derived from these methods yields valid data about these experiences.

Because the content of the post-intervention focus groups and the clinical staff survey will depend on findings in the first round of interviews, final versions of these will be submitted when they are available.

5. Statistical Consultants

Simple descriptive statistics will be used to explore and characterize the results of the employee survey; thus, no statistical consultants have been employed.