RESEARCH NARRATIVE

Problem to be addressed: We aim to assess current medicine housestaff knowledge, attitudes and perceived behaviors related to hand hygiene (HH) and contact isolation precautions, and hope to address deficit areas using a tailored peer-to-peer online educational module.

Literature Review: Healthcare-associated infections affect 5% to 10% of all hospitalized patients, and are the most common causes of preventable morbidity and mortality (1). Though current evidence strongly supports the role of HH and use of contact isolation precautions when indicated in limiting spread of pathogens and hospital-acquired infections (2), compliance among healthcare professionals is low (3) and there are limited data on effective interventions targeted at house-staff. Prior studies that have examined transmission-based isolation precautions in the context of housestaff knowledge and behaviors have largely looked at compliance with standard precautions in the setting of procedures (4,5). On preliminary literature review, no current studies have examined housestaff knowledge and behaviors in non-procedural settings. To further illustrate this knowledge gap, some studies have for example suggested a strong role played by behavior role models in enhancing HH and contact isolation precautions adherence (6), highlighting a potential area for intervention that would be uniquely suited to housestaff training, but this overlap remains largely under-explored in current literature.

We present a research proposal that aims to assess housestaff knowledge, attitudes and behaviors of HH and contact isolation precautions on general medicine wards and intensive care units, as well as the impact on these variables of online educational modules. Based on findings of this study, we intend to explore some preliminary strategies to enhance HH and contact isolation precautions compliance including identifying areas for more targeted interventions.}

Study Hypothesis: We hypothesize that the medicine housestaff knowledge, attitudes and perceived behaviors of hand hygiene (HH) and contact isolation precautions will improve after the tailored online educational module

Population: Residents within the MGH Department of Medicine

Description of intervention or study design: This is a cross-sectional electronic survey design which will be administered at two time points as outlined below. This will be interspersed with a brief online module. Any resident who rotates through the MGH housestaff medicine services is eligible to participate in the study. The survey is voluntary and anonymous and will be emailed to subjects through their Partners email addresses via REDCap in late September 2016 with a reminder sent again 1 week after and the survey will close 1 week later. Consent is inferred by the subjects voluntary participation. Following deployment of the survey, a quality improvement project, which meets all criteria to be considered a Clinical Quality Improvement/Measurement activity, will be initiated on all 9 inpatient Bigelow services prior to survey dissemination. As part of this quality improvement project, a co-investigator will observe behaviors related to hand hygiene and contact isolation precautions adherence in the routine care of the patients during morning rounds and score using the checklist. Observed participants’ identities will be kept anonymous and observer’s role as co-investigator in this study will not be known to participants. Based on observation data, compliance areas with the most significant deficits noted will be highlighted in a brief 3-minute online educational module which would include videos and photos with actors demonstrating these behaviors. In mid-November 2016, this module will be disseminated via online link. One month later, a post-module survey will be disseminated, with the same survey questions as the pre-module survey but with questions in a different order with few additional feedback requested, to the medicine housestaff. The survey will close in late December 2016, one-week after dissemination of post-survey.

Description of comparison group (if relevant): N/A

Outcome variable to be used to determine efficacy of the intervention (if relevant): - Primary outcome: Housestaff knowledge, attitudes, and behaviors related to hand hygiene and contact based precautions  - Secondary outcome: rate of nosocomial infections within the housestaff medicine services

Power analysis to determine feasibility (when relevant): N/A

Timeline:

- Late September 2016: Send first online survey (pre)
- Mid-November 2016: Disseminate online educational module
- Mid-December 2016: Send 2nd online survey (post)
- December - January 2017: Analyze survey data
- End of January, 2017: Present findings at Partners CPIP Conference

IRB Status of Project: The protocol has been submitted for IRB.

BUDGET

Line item budget and budget narrative: All funds will go towards renumerating participants of the study.

- We plan to renumerate participants with $5 gift card to MGH Coffee Central for completion of pre-survey, and another $5 for completion of post-survey, so total $10 per participants.
- All medicine residents will be eligible to participate so anticipate an N of around 120.
- Estimated Total Budget: $1200

Disclosure of other funding sources: This grant would be sole source of funding.

LETTERS OF SUPPORTS
PD Name: Dr Jatin Vyas  Letter of Support Received? yes
Mentor Name: Dr Erica Shenoy  Letter of Support Received? yes

OTHER

COE Involvement: I have not participated in any Center of Expertise events as yet, but certainly look forward to doing so in the future

Previous COE Funding: N/A. I have not received prior funding from Centers of Expertise