

Barriers	The scope of the project required significant project management (time, effort, and expertise); the engagement of residents was variable and challenging; and while knowledge improved during the year, attitudes toward quality improvement did not.
Lessons Learned What is the single most important piece of advice for another team embarking on a similar initiative?	The success of this type of project requires early engagement of all stakeholders (faculty, program directors) and ensuring that sufficient time is available for active participation. Expectations should be realistic; goals/metrics should be carefully considered at the start. Continuous evaluation and improvement of the project are important. Recognize and manage project fatigue early.

## Orlando Health, Orlando, FL

### Hand Hygiene Compliance at Orlando Health

**Malisa Agard, MD; Martha Toms, MD; Caroline Nguyen-Min, MD; Kwabena Ayesu, MD**

**Background:** Proper hand hygiene can help reduce healthcare-acquired infections (HAIs). HAIs prolong hospital stay, increase the resistance of microorganisms to antimicrobials, and result in additional financial burden and excess deaths. The director of Infection Prevention and Control at Orlando Health showed that only 72% of individuals entering a *Clostridium difficile* isolation room wore gowns, and only 45% of them washed their hands after exiting the room. These startling numbers made the need improve the overall hand hygiene compliance rate self-evident.

**Methods:** We performed a baseline analysis of hand hygiene among internal medicine physicians and residents. We developed succinct PowerPoint presentations lasting no longer than 5 minutes to teach about hand hygiene importance and techniques that we administered to residents in the internal medicine residency program. We then reevaluated hand hygiene compliance within the internal medicine program, including attending physicians, residents, and medical students.

**Results:** Baseline results showed that 80% of hand-washing opportunities were missed; attending physicians performed proper hand hygiene 8% of the time, and residents (interns and seniors) performed proper hand hygiene 12% of the time. Postintervention, the enter room/exit room hand-washing rates improved: internal medicine attending physicians, 81%/100%; seniors, 93%/100%; interns, 100%/100%; medical students, 100%/100%; and fellows, 88%/83%. Compliance among PGY 2-3 residents (seniors) showed improvement compared to their 4% rate reported in the baseline analysis.

**Conclusion:** Hand hygiene is the single most effective measure to prevent HAIs. Our study revealed that compliance improved after education with succinct PowerPoint presentations to promote awareness and hand-washing demonstrations. Although compliance has improved, the patient must be included in the practice to optimize safety.

#### FINAL WORK PLAN – Orlando Health

Team Charter/Objectives	Our goal was to evaluate hand hygiene compliance at Orlando Health after education and demonstration of proper hand hygiene.
Project Description	Our aim was to develop an innovative and feasible approach to impact hand hygiene that would help align the GME and institutional goals (to in turn help reduce HAIs) and to reevaluate hand hygiene compliance after education and demonstration of proper technique. We collected data on the opportunities for hand washing from internal medicine residency program teams via secret selected members of the team, in this case, medical students. We approached the Infection Prevention and Control Department for secret observers to evaluate all GME programs.
Vision Statement	We will improve hand hygiene compliance to 50% compared to baseline for the internal medicine program (attending physicians, residents, and medical students) in 6 months and then distribute effective strategies to all GME programs.

Success Factors	Continued collaboration with the Infection Prevention and Control Department as well as the chief quality officer and engaging the C-suite were crucial to our success. Our intervention made residents more conscientious of hand hygiene.
Barriers	Barriers included difficulty gathering hand hygiene compliance data from all GME programs because of limited monitoring resources; discordance between the interventions occurring by Infection Control and GME; and a decline in enthusiasm to receive education and facilitate hand hygiene tools. Also, surveillance was performed by medical students on internal medicine teams.
Lessons Learned What is the single most important piece of advice for another team embarking on a similar initiative?	Form a good relationship with the Infection Prevention and Control Department so efforts are collaborative and create a big impact. Establishing champions is key to continued education and promotion of proper practice.

## Orlando Health, Orlando, FL

### Quality Improvement – A Humbling Experience Triggering Change in Resident Education Revisited

**Malisa Agard, MD; Martha Toms, MD; Caroline Nguyen-Min, MD; Kwabena Ayesu, MD**

**Background:** Quality improvement has become an essential part of all aspects of clinical medicine. After the Institute of Medicine's landmark *To Err Is Human* report in 1999, many institutions, including Orlando Health, incorporated quality improvement into their GME curriculum. We implemented the IHI Open School training modules as a core training curriculum for residents. After more than 1 year of training, a reassessment of residents' quality improvement knowledge was deemed prudent.

**Methods:** We conducted a literature survey to identify available questionnaires and created a baseline questionnaire. The questionnaire was administered to residents of internal medicine, and IHI quality improvement training was provided. A maintenance questionnaire was administered, and the posttest assessment was compared with maintenance results.

**Results:** The posttest passing rates by department after completion of the IHI quality improvement training were 64.3% for internal medicine, 52.6% for emergency medicine, 78.9% for pediatrics, 100% for Ob/Gyn, 64.7% for surgery, 100% for pathology, and 88.9% for orthopedics. The maintenance test passing rates by department were 30% for internal medicine, 33% for emergency medicine, 10% for pediatrics, 17% for Ob/Gyn, 50% for surgery, 25% for pathology, and 36% for orthopedics.

**Conclusion:** The maintenance questionnaire results forced us to reevaluate the effectiveness of our core curriculum and whether the lack of retention requires ongoing quality improvement training.

#### FINAL WORK PLAN – Orlando Health

Team Charter/Objectives	Our goals were to evaluate residents' retention of quality improvement knowledge after formal training and to evaluate the effectiveness of the quality improvement core curriculum and the possible need for continued training.
Project Description	Evaluate the retention of the knowledge obtained from the curriculum developed previously in NI III after completion of formal training by administering questionnaires/surveys provided on the IHI website to all the GME residency programs.