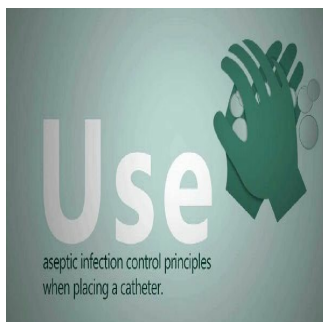# I-ACT: A Quality-Improvement Training Model

Healthcare-associated infections (HAIs) contribute to significant morbidity, mortality, and economic burden in the United States. The Centers for Disease Control and Prevention (CDC) reported that one in 25 patients acquires an infection related to care received in the hospital. These infections result in approximately $40 billion in annual excess healthcare costs and as many as 99,000 deaths. A significant body of research suggests that 70 percent of these infections may be preventable.

Catheter-associated urinary tract infection (CAUTI) is one of the most common device-associated HAIs in acute care settings, driven in large part by inappropriate use and gaps in proper maintenance of urinary catheters. An estimated 17 to 69 percent of CAUTIs are potentially avoidable with recommended infection prevention/control practices, however, which equates to avoidance of up to 380,000 infections and 9,000 CAUTI-related deaths each year.

With support from the Agency for Healthcare Research and Quality, the Health Research & Educational Trust (HRET; the research and education affiliate of the American Hospital Association) and its partners launched a project focused on implementing best practices to prevent CAUTIs in hospitals across the US. The initiative, known as "On the CUSP: Stop CAUTI" (hereinafter Stop CAUTI) has two main goals: to reduce mean CAUTI rates in participating clinical units by 25 percent, and to improve the safety culture.

A key project strategy included assembling a national panel of expert faculty to help hospitals and hospital engagement networks (HENs; large multifacility networks that use geographic-based or organisation-based memberships) implement these best practices. This core extended faculty would then support multidisciplinary teams at hospitals tasked with leading improvement efforts using infrastructure support from HRET and HENs.

Socioadaptive Elements Necessary for Meaningful Change

Faculty experts from these organisations were often well versed in the technical solutions used to prevent CAUTIs, such as urinary catheter discontinuation protocols and order sets, but not in the socioadaptive elements required for meaningful change. In some instances, the experts had experience with leading change in their own units, but not necessarily in infection prevention. Addressing socioadaptive elements, such as promoting culture change, identifying and empowering physician and nursing champions, and navigating institutional barriers to improvement, are critical for successful implementation; however, faculty experts lacked training in these methods.

The authors of the study created the Interdisciplinary Academy for Coaching and Teamwork (I-ACT), with a goal of training faculty experts in both technical and socioadaptive strategies for infection prevention using CAUTI prevention practices as a model, and evaluated its impact. The tools needed to facilitate implementation transcend any single type of infection; thus, once trained in these practices, faculty experts would be prepared to facilitate implementation of practices targeting other HAIs or preventable harms.

I-ACT Allows Participants to Interact Through Role Playing

Society representatives and the leadership of the Stop CAUTI project convened to develop a course to educate the coaches about challenging clinical scenarios related to CAUTI, the socioadaptive aspects of CAUTI prevention, and ways to overcome barriers and techniques for coaching long distance via teleconference.

The Society of Hospital Medicine's (SHM) "Mentor University" served as the foundation for the training. This model was used because of the high ratings awarded by participants and effectiveness in teaching coaching skills to hospital improvement leaders. Mentor University has trained more than 50 healthcare providers, mostly hospitalists, in providing coaching support to improvement teams across the country in such quality topics as glycaemic management, venous thromboembolism prevention, and reduction of preventable readmissions. Mentor University offers both didactic and interactive components featuring such topics as how to assess an institution's organisational culture, addressing barriers to improvement and effective coaching techniques.

The I-ACT was developed as an advanced-level course with a focus on three main components: complex clinical CAUTI challenges, socioadaptive issues amongst multidisciplinary team members, and effective coaching. The training was formulated to provide substantial opportunity for interaction amongst the participants and the ability to role-play using new techniques learned during the training. Participants were grouped so that during the interactive components of the training, each discipline (infection preventionists, hospitalists, nurses, state hospital association leads, and other professionals) was represented in group activities. The purpose of grouping participants in this way was to mimic real-world experiences of a multidisciplinary improvement team.

A pretest and post-test were administered to assess participants' comfort in addressing various challenges associated with implementation of interventions. Participants also assessed their overall satisfaction with training. Here, χ2 tests of association were used to evaluate the significance of changes in responses from the pretest to the post-test.

Quantitative and Qualitative Results

All 28 participants (100 percent) completed the pretest, and 24 of the 28 (85.7 pretest) completed the post-test. Participants were asked about their comfort level with discussing barriers to data collection on a coaching call. Less than one-half (46.4 percent) of the participants reported a comfort level of either "comfortable" or "most comfortable" on the pretest, compared with 70.8 percent on the post-test (P = .08). When asked to rate their comfort with using strategies to obtain buy-in from nonsupportive team members, the percentage responding "comfortable" or "most comfortable" increased from 32.1 percent on the pretest to 75.0 percent on the post-test (P = .002).

Participants also were more comfortable with engaging team members in a conversation about a challenging CAUTI issue on a phone call after the training; comfort level was rated as "comfortable" or "most comfortable" by 46.4 percent on the pretest, compared with 79.2 percent on the post-test (P = .02). All 24 participants who completed the post-training evaluation (100 percent) rated their satisfaction with the training as good or excellent, 99 percent felt that they would be able to apply the skills gained to their daily work, and 99 percent agreed that the training objectives had been met.

Written comments indicated that the participants valued being able to learn from experts and to meet in a face-to-face setting. When asked what could have been improved about the I-ACT, attendees commented that even more time for interaction would have been useful, and suggested expanding the training time to two days.

Conclusions

The I-ACT course was successful in training faculty to serve as improvement experts for US hospitals working on CAUTI prevention. After completing the course, participants felt that their comfort and ability to address complex improvement problems had improved. This model may be effective for use in preparing improvement project leaders and participants to tackle other healthcare-associated infections and complex quality problems.

Measuring faculty's sustainability of skills, ability to address complex clinical and socioadaptive barriers in the clinical setting, and potential impact on outcomes will be important complements to this evaluation of the I-ACT training. The next steps should also include an assessment of the impact of the training over time and feedback from participating hospitals on the effectiveness of the faculty experts. The application of the skills learned through the I-ACT training is really "where the rubber meets the road" and will require longer-term evaluation to assess effectiveness.

Image Credit: youtube.com

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