Placing Faculty Development Front and Center in a Multisite Educational Initiative: Lessons From the I-PASS Handoff Study

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TRAINING PHYSICIANS FOR the needs of 21st-century society will require that residency programs develop enhanced curricula to teach topics such as quality improvement, patient safety, evidence-based medicine, and leading interprofessional teams.[1] In addition, the implementation of milestones will require transformational change in the assessment of residents by training programs.[2,3] To achieve these goals, frontline faculty in every training program will be called on to teach and assess skills that they may not have learned or mastered themselves.[4] Preparing faculty to meet this need will require significant faculty development that includes not only learning new content and skills but also learning how to teach, observe, and assess residents effectively.[5] These gaps in the skills of individual faculty represent an enormous faculty development challenge that many programs and institutions are not well positioned to meet on their own.[6]

An alternative way to create and deliver effective faculty development programs is for program directors and institutions to join forces to share expertise, experiences, and effort.[7] This approach has the potential to produce faculty development programs that are more robust, effective, standardized, and generalizable across a variety of institutions. Here we describe our experience developing a multi-institutional faculty development program to support the I-PASS (IIPE-PRIS Accelerating Safe Signouts) Study and offer a set of generalizable strategies to guide the creation of other large-scale, multi-institutional faculty development programs.[8] This innovative faculty development program was successfully implemented at 9 sites across North America during the study, and there have been numerous requests for the program's materials after their publication on the Association of American Medical College's MedEdPORTAL Web site in fall 2013.[9]

FACULTY DEVELOPMENT AND THE I-PASS STUDY

In 2010, the I-PASS study was launched as part of a collaborative effort among 11 academic institutions (9 data collection sites, 1 data coordinating center, and 1 curriculum pilot site) to determine the effectiveness of a package of curricular interventions, the I-PASS Handoff Bundle, in improving the quality of patient handoffs and patient safety.[8,10,11] Central to the success of the project was the need to create transformational change in the behavior of residents and institutional culture related to patient handoffs. To accomplish this, we needed the help and cooperation from a large number of faculty members at the 9 data collection sites, the vast majority of whom had never been trained in how to perform a patient handoff. It became clear that effectively training faculty would be critical to training residents and the success of the project. Given the size and scope of this effort, the I-PASS study leadership recognized that faculty development would need to be placed front and center, with a level of support and effort equivalent to that

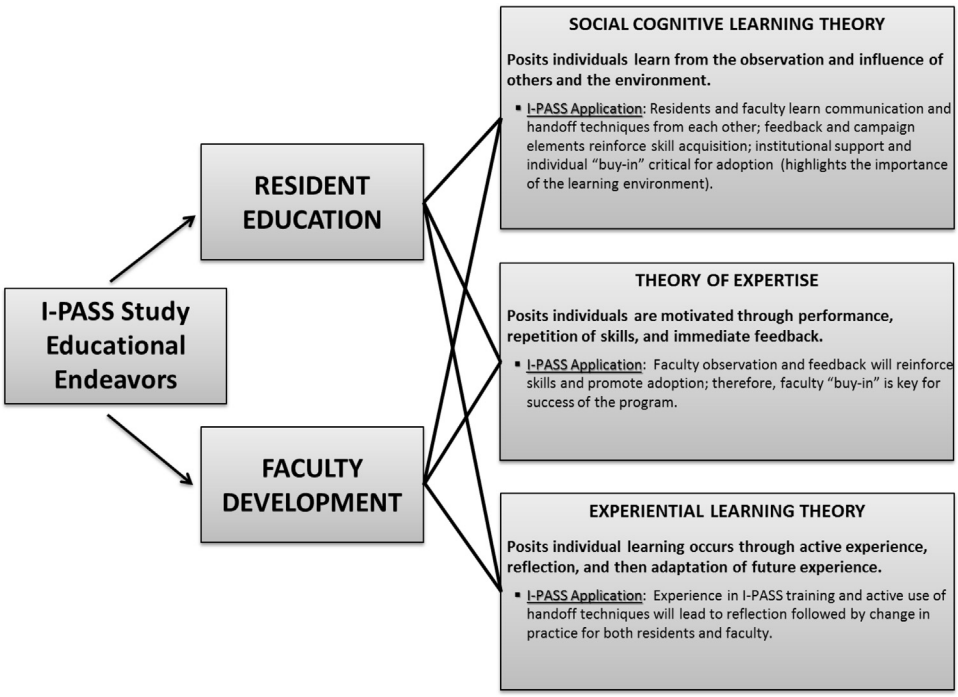

Figure. *Conceptual framework of the I-PASS Study's educational endeavors for faculty and residents.*

required to develop the curriculum. To accomplish this, the leadership formed a committee dedicated solely to developing a rigorous faculty development program.

CREATION AND IMPLEMENTATION OF THE I-PASS FACULTY DEVELOPMENT PROGRAM

In the early stages of creating the faculty development program, we recognized that faculty development and resident educational activities could not exist in isolation but instead would be inextricably linked. Faculty would be learning alongside residents, and they would undoubtedly have a powerful impact on the learning and skill development of each other. With this principle in mind, we adopted a conceptual framework that incorporated 3 key educational theories that supported this reality: 1) experiential learning theory, 2) the theory of expertise, and 3) social cognitive learning theory (Figure).[12] We also conducted a needs assessment of each site in order to better understand the culture of each institution and how to structure training for faculty. The needs assessment revealed 3 key themes: 1) most faculty members had never received formal training in the types of team communication and handoff techniques that are required to promote effective and safe patient handoffs (and constituted the core of the I-PASS curricular intervention); 2) given the other clinical, administrative, and academic demands on faculty time, training activities needed to be time efficient and carefully targeted; and 3) training needed to be hands-on and relevant to faculty experiences.

These themes, along with the 3 learning theories that constituted our conceptual framework, served as a guide for the development of all educational materials and training activities. We developed the training materials using an iterative process among committee members. The committee held conference calls once every two weeks for 12 months, with the first 6 months devoted to the development of training materials and the second 6 months to revising materials on the basis of feedback from the sites after implementation. In developing the training materials, we used principles of adult learning theory wherever possible.[13] In total, we estimate that it required between 150 and 200 hours of effort to produce the materials.

The faculty development program that we ultimately produced included 2 components: a faculty champions guide to serve as a blueprint for local faculty leaders of how to implement the I-PASS handoff program and campaign, sustain the handoff program, and facilitate handoff observations; and a faculty training module consisting of a 90-minute live, interactive workshop to efficiently teach the I-PASS handoff method to faculty and provide them an opportunity to practice evaluating resident patient handoffs via video vignettes of simulated handoffs. We also created a companion computer-based module to allow for asynchronous learning.

As part of the I-PASS study, the faculty development program was implemented in 3 waves of 2 to 4 institutions per wave separated by 4 to 6 months. In the interlude between each wave of implementation, we revised the program on the basis of feedback from the previous wave of sites. We trained 267 individual faculty at 9 sites (approximately 30 per site) during the intervention phase of the study (June 2012 to May 2013).[14] Training activities included 20 distinct workshop sessions (30 hours of live training) at the 9 sites. After completing training, faculty participants observed and assessed 888 resident patient handoff sessions.

KEY STRATEGIES FOR SUCCESSFUL IMPLEMENTATION

Reflecting on the lessons learned in this process, we identified 7 key strategies that we think are generalizable to the successful development and implementation of any complex, multisite faculty development program.

GENERATE A CONCEPTUAL FRAMEWORK

Conceptual frameworks represent "ways of thinking about a problem or a study, or ways of representing how complex things work as they do."[15] In other words, conceptual frameworks serve to highlight the complex elements and variables of a problem and their interrelatedness; to increase the richness of critical examination of a question; and to clarify the goals of an educational endeavor.[15] The adoption, a priori, of a conceptual model was critical to the success of our multi-institutional effort. It provided a shared mental model among all collaborators of what we were attempting to accomplish and a guide for the development of curricular elements.

BUILD A DIVERSE TEAM OF EXPERTS AND COMMUNICATE REGULARLY

We focused on assembling a team of individuals with skill sets that matched the goals and conceptual model of the project, which included experts in large-scale faculty development projects, curriculum development, assessment, program administration, simulation training, and health services research. Two study members were purposefully selected to co-chair the committee, one more senior and another more junior, to promote mentorship and leadership development within the group. Communication was facilitated by using Web conferencing technology for meetings and an online file hosting service to allow easy access, sharing, and editing of materials. Web conferencing was a vital element because it allowed documents to be shared, viewed, and edited in real time during conference calls.

IDENTIFY KEY SITE CHAMPIONS

To engage faculty and encourage the transformational change required to implement I-PASS, we focused on identifying a few faculty champions, or early adopters of change, at each of the 9 sites. Berwick[16] described early adopters as those individuals who naturally experiment with change, are often testing several innovations at once, have the risk tolerance to try new things, and most importantly are watched by others. For our purposes, faculty champions served as ambassadors at each site by modeling I-PASS handoff practices and leading the training, observation, and assessment of residents.

CREATE AN EXTENSIVE MANUAL

One of the 2 major products of our faculty development program was a detailed I-PASS faculty champions guide. Given the complexity of our project, this written guide was essential to ensuring standardization and providing clarity and cross-institutional memory. We strongly recommend that any group attempting a similarly complex educational intervention not skip this step.

ASSIMILATE ADULT LEARNING THEORY AND SIMULATION IN EDUCATION AND TRAINING ACTIVITIES

Consistent with our conceptual model, we incorporated principles of adult learning theory wherever possible.[13] For example, in the training module we "established a sense of urgency" for faculty to help improve patient handoffs by citing literature from patient safety and regulatory agencies.[17,18] To encourage individual faculty to change their own handoff practices, we highlighted shortcomings in patient handoffs that they may have experienced in their own practice. Finally, we used handoff video simulations to provide multiple opportunities for relevant, task-centered, hands-on learning.

PROVIDE FLEXIBLE, MULTIMODAL DELIVERY OPTIONS

Given the multitude of responsibilities and time demands that faculty in academic medicine face, we designed the training materials to be flexible, time efficient, and feasible in light of their other responsibilities. For example, we designed the 90-minute live training module in a way that allowed it to be split into two 45-minute sessions, and the computer-based module added additional flexibility for individual faculty who could not attend live sessions.

INCENTIVIZE FACULTY

We used positive incentives to encourage individual faculty members to participate in this project. For example, we provided individual faculty members with CME credit and an attestation statement highlighting their role in the I-PASS study that could be added to their curriculum vitae. Perhaps most importantly, the American Board of Pediatrics (ABP) approved I-PASS for part 4 Maintenance of Certification (MOC) credit.[19] Individual faculty were eligible to receive 25 points toward their part 4 MOC requirements provided they completed the following: 1) attended I-PASS faculty training activities; 2) participated in monthly site MOC team meetings and Plan–Do–Study–Act (PDSA) activities to improve resident utilization of the I-PASS handoff process; and 3) completed 12 observations of residents giving patient handoffs and provided timely feedback.[19] As of January 2014, 50 faculty members from the 9 sites received MOC credit from the ABP for this program. In our opinion, MOC credit was a major motivating factor for faculty and a critical reason the I-PASS project so successful.

FACULTY DEVELOPMENT: A CRITICAL LINK FOR SUCCESS

It is a time of transformational change in graduate medical education, and faculty will be called on to teach and evaluate skills they may never have been taught themselves. A key link to navigating these changes successfully will be well-trained and proficient faculty who are able to educate, assess, and mentor residents effectively. Therefore, it is imperative

that faculty development programs be front and center as part of graduate medical education receiving attention equivalent to new curricula and assessment methods. The I-PASS faculty development program serves as an example of how to create and implement a comprehensive faculty development program across multiple institutions with hundreds of faculty members. The lessons learned inform a set of key strategies that can be applied to a broad range of similar large-scale faculty development projects in the future.

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