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A BLUEPRINT FOR TRAINING

Here's how a team of training "architects" applied the corporate-based process of quality function deployment to develop training modules for the continuing education of nurses.

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Most architects want to know the needs, interests, and preferences of their clients before designing their homes. Site, time, and cost are also important factors. The architect draws the plans, gets the reaction of the client, and makes adjustments. Designing a training module is similar.

The training designers and end-users of the training should have input into the content, materials, and mode of presentation. All parties should be involved from the start. This is especially important in continuing education for medical practitioners. They need accurate, clearly presented information about new knowledge, technology, regulations, and procedures.

Typically, in the continuing education of nurses, a nurse educator or supervisor updates staff members through lectures. But that can be costly and time consuming. The nurse educator has to take time away from work to prepare and present the material. And a lot of people need the training because almost all levels of nurses must meet requirements set by the Joint Commission on Accreditation of Healthcare Organizations. It can be difficult to find a competent person who is also available to teach. And, as studies have shown, the lecture-only approach hasn't proven especially effective in changing people's behaviors or increasing retention of learning.

This case study shows how a team of trainers, instructional designers, and medical experts developed training modules that nurse educators could use in their own medical facilities on their own schedules. The modules aim to teach new knowledge and skills and to help develop staff. The team included a subject matter expert, a videotape scriptwriter, audiovisual designers, evaluators, and a project director.

The team decided to adapt the process of quality function deployment to create the modules.

From corporate to educational

Typically, quality function deployment is used in corporate settings at each stage of product development. It's a team-oriented planning tool for translating customer requirements into operating standards. Developers spend a lot of time and effort on front-end analysis to determine what customers really want. Though this tends to increase the initial planning time, it decreases the overall cycle time in bringing a product to market.

In some ways, adapting QFD to design a training module is similar to designing a custom home. First, the training "architects" must decide who should give input, how to get it, and

how to use it. They must decide who should conduct the training and which delivery formats are appropriate.

In the case of continuing education for nurses, the development team had to produce modules that would comply with regulations, protect patients, and change nurses' attitudes and behaviors. What did the trainees really need to know? And how would facilitators use the modules?

The team identified the primary end-users or customers as the nurse educators and nursing staff and the secondary customers as the medical facilities and accrediting organizations.

A module of restraint

The first module, "The Restraint-Free Environment: What Does It Really Mean?" was designed to comply with new restrictions on the use of patient restraints in clinical settings. The goal was to change nurses' attitudes about using patient restraints as a safety measure. The module included an experiential section on practicing alternative techniques.

Nurse educators and other clinicians representing 27 health-care facilities met with the development team to review the initial design of the module. Some attendees served as "learners," representing the intended audience of the training. The nurse educators would either conduct the completed training themselves or arrange for training. The development team, nurse educators, clinicians, and learners reviewed the module for content, format, time frame, and intended audience—staff nurses.

The development team's SME described the proposed lecture content, exercises, case studies, overhead transparencies, and handouts. All participants discussed the plans in an open forum. Then they completed an evaluation with pre- and post-training questions to determine whether their attitudes about restraints had changed since reviewing the proposed module.

The nurse educators in particular suggested that the completed module include a user-friendly manual; visuals such as a videotape, handouts, and overhead transparencies; material specific to their own facilities; and a section on alternative approaches to using restraints in routine situations such as administering intravenous solutions. They also thought that two hours should be long enough for the module.

Next, the videotape scriptwriter prepared a draft for review by the development team and nurse educators. The main goal was to help nurses realize that a restraint-free environment is possible. The introduction reflected and affirmed most nurses' concerns about using fewer restraints. Then the script presented three typical situations: a disoriented patient pulling at an IV tube, a stroke patient who forgets to ask for help when getting out of a wheelchair, and a person with cognitive impairment who tends to wander.

THE GOAL WAS TO CHANGE NURSES' ATTITUDES ABOUT USING PATIENT RESTRAINTS AS A SAFETY MEASURE

Everyone's input was incorporated into the next design stage.

Testing, testing, testing

Now, the training module was ready to test to determine whether it needed further refinement.

Four large health-care facilities in the United States participated in the pilot test. They included an acute-care center in the Midwest; an extended-care facility in the East; a facility in the South that provides acute care, geriatric care, and psychiatric care; and an acute-care and psychiatric facility in a large inner city.

The pilot sites received handouts, overhead transparencies, a videotape, and a draft of the instruction manual. The development team selected, interviewed, and instructed four nurse educator/facilitators and four monitors at each pilot site. The facilitators and monitors read the materials and prepared to present the module at their own sites. They studied the manual, recorded the amount of time they spent preparing, and made notes on their ideas for revisions.

During the actual presentations, the monitors served as silent observers. They were instructed not to evaluate the facilitators' skills but to determine whether the module's design, content, materials, and delivery format were sound.

The pilot tests took two months to complete. The monitors, facilitators, and participants suggested that the development team replace overhead transparencies with more interesting visuals to accompany the lecture. They also wanted facilitators to distribute all handouts in one package instead of individually. They unanimously approved the videotape.

Overall, the pilot-test evaluations showed that participants acquired new knowledge and experienced a change in attitude about using patient restraints.

Next, the icebreaker Circle of Knowledge was incorporated into the training design to introduce the content to participants and foster a sense of community. The facilitator asks participants to complete the statement, "One thing I know about the Omnibus Budget Reconciliation Act (on restraints) is...." Or, participants can complete the statement, "One thing I would like to know about the law is...." The responses are recorded on flipcharts and used in the review and summary.

In the affective or attitude part of the training, it's necessary to have several armchairs with restraints in the classroom. First, the facilitator assures participants that everyone is concerned about patient safety. Then the facilitator says, "I'm afraid that some of you may fall out of your chairs. I think we need some protective restraints."

He or she asks several participants to apply wrist and vest restraints to other participants.

During the exercise, some people may object.

The facilitator says, "It's for your safety"—the typical response nurses give patients who resist being restrained. Then participants are

released and asked how they feel.

The facilitator records their comments on flipcharts and refers to them during the lecture when discussing new regulations on patients' "right to be free." The goal is to acknowledge people's feelings of anger, humiliation, and panic about being restrained.

Overall, the training module emphasizes experiential or heuristic thinking in which participants use their own knowledge to solve problems. The videotape presents real-life situations in which restraints are used routinely. Then participants discuss alternatives to using the restraints. The manual also includes alternative techniques.

All 27 facilities opted to use the first of the training modules and to receive further training via a low-cost, three-hour audio teleconference. The facilities received a revised manual, the videotape, visuals, and handouts.

The development team and the pilot-test facilitators, monitors, and participants served as faculty for the teleconference. The module is now being considered for use in training nursing students.

Using quality function deployment in an educational setting proved to be effective and enlightening. More than anything else, it highlighted the need for thorough front-end analysis. As in building houses, time spent in the design phase is time saved in redesign. And that's an important lesson for the architects of training in any environment. ■

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