Interactive Nursing Skills Training Applying Advanced Networked Technology

Purpose:
The Pacific Telehealth & Technology Hui ("Hui") in partnership with Tripler Army Medical Center (TAMC) initiated the Interactive Nursing Skills Training Applying Advanced Networked Technology (INSTAANT) project to develop a web-based nursing skills training system that would allow rapid deployment of new training information and courseware for continuing medical education of nurses. The INSTAANT system will be designed as a user friendly, interactive application readily accessible via the Internet and will include:

1. Skill specific nursing education courses
2. On-line course testing capabilities
3. Physical skill assessment capabilities
4. Centralized documentation of users, course completion status, and skills assessments status
5. User satisfaction evaluation

Background:
There is a nationwide shortage of experienced nurses in the United States. Demographically, the average age of nurses is increasing. In many institutions turnover in nursing personnel is very high. The problem is especially acute in Department of Defense (DoD) and the Department of Veterans Affairs (VA) institutions, which often have difficulty competing with the private sector in salaries, benefits and work hours when market conditions are tight.

National accreditation organizations are increasingly requiring documentation of skills certification. Malpractice liability claims are on the rise for both physicians and non-physicians. Hospital environments are increasingly complex, and new medical devices and equipment are continually being introduced. In response to these trends, institutions have initiated risk management and risk reduction programs that incorporate nursing skills training.

Skills training and certification take time. Ideally, skills training should be standardized, which is difficult to achieve with instructor turnover and personnel shortages. Shortfalls of experienced nurses make the problem more chronic.

Since 1999, TAMC has had an annual Nursing Skills Fair devoted to teaching essential skills to junior nurses. Stations are set-up and staffed by experienced nurses. Storyboards provide didactic information. Hands-on training occurs in one-on-one and group settings. Checklists document completion of a skills station, and continuing education contact hours are awarded. Electronic documentation of the CEU contact hours and skills competency facilitates accurate record keeping to meet hospital accreditation standards and nursing license requirements. The Skills Fair has been primarily directed toward inpatient internal medicine skills.

Short Term Objectives:
1. INSTAANT will be designed to make training more accessible and convenient to nurses.
2. Success implies better-trained staff, improved patient care, reduced patient and Institutional risk, and reduced costs for TAMC and the DoD.

Long Term Goals:
INSTAANT will create an electronic version of the TAMC Nursing Skills Fair. Educational courses will be developed using the content of the existing annual Nursing Skills Fair. The INSTAANT system will be scalable in content, complexity, and cost to be potentially marketable.

INSTAANT will develop a two-part electronic nursing skills training system:

1. INSTAANT will utilize elements of a previously developed DoD web-based educational curriculum system to create the initial software framework for the didactic portion of the instruction, as well as the software documenting successful completion of the knowledge portion of the program. The system will allow learners to view instruction on demand and to review portions of the instruction as needed. Documentation of course completion is integrated into the system.

2. INSTAANT will develop an enhancement to the system that will allow instructors to certify that the hands-on portion of a course (physical skill assessment) has been successfully completed. The existing software will be modified to provide a framework for assessors to document progress or completion. In addition, the software will provide a training record for TAMC and the DoD.

Plan:
Preliminary planning for INSTAANT began in July of 2002, and initial project work began in September. Subject matter expert recruitment and software application modification and development commenced in October 2002. Course requirements were finalized in February of 2003, and taping of segments began thereafter. It is expected that software application development will be complete in September 2003. Development and taping of 13 courses will be completed by October 2003.

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