

Learn how researchers developed a faster, more practical method of measuring nurse-to-patient direct care.

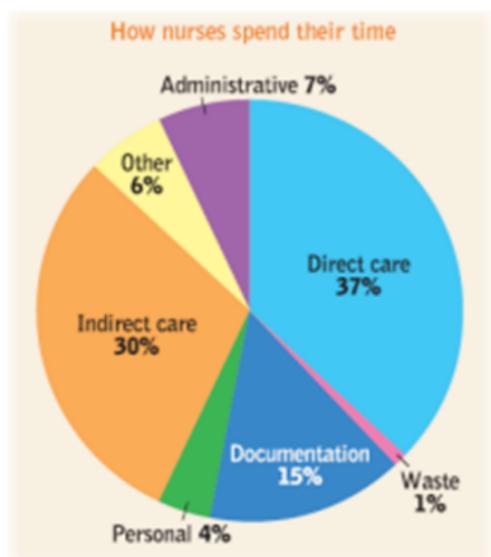
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- Nelson Lee, Rapid Modeling

Case Study: Hospitals find a way to measure and improve standards for nurses

Recent trends have developed that challenge the traditional business models of health care delivery in the United States. These trends include new technology, changing customer expectations, changes to Medicare, a growing population of uninsured patients, changes in the way insurance plans pay for services, and a large nursing shortage. This combination of factors has been described as a “storm” bearing down on the U.S. health care system. As a result, hospitals are learning to use lean initiatives such as continuous improvement, benchmarking, and process optimization to find more efficient ways to deliver care.



Current studies indicate that nurses in a typical hospital unit spend 30% of their time providing direct care. A group of researchers across the country is trying to increase that metric to 70% by implementing a continuous improvement process. Time study research was performed by filming more than 1,000 hours of video that captured each event occurring inside a patient room, the nursing station, and the hallway. This video time study was used to measure direct care and helped the team identify problems affecting the delivery of care at the bedside.

However, the researchers needed to develop a faster, more practical method of measuring direct care to estimate the impact of the continuous improvement initiatives implemented by the team. Implementing a video time study every month to measure the impact on direct care of the various projects was simply not feasible from a cost and time perspective. The researchers needed a data collection device that would allow nurses to self-sample and at the end of the shift upload and transfer the data automatically to a central computer. Nelson Lee at Rapid Modeling Corp. led the project to select and implement a solution that would meet the needs of the team.

After significant research into available time study devices and methods, the team turned to Laubrass Inc. to provide the software UMT Plus to power the study.

Rapid Modeling evaluated more than 10 other products before selecting Laubrass' UMT Plus software for the application. ***“UMT Plus software offered the combination of features and capabilities that we needed to satisfy 100 percent of our requirements,” Lee.*** The health care environment is extremely sensitive to these types of studies because they can significantly impact the patient experience and the caregiver workload. To minimize patient interruption, the study includes a silent alarm to alert the nurse that a data collection event is needed. The nurse then selects from a list of locations and a list of activities being performed. Data collection is a simple two-click process that minimally affects nurse workload.

UMT Plus also proved to be the most intuitive product evaluated. According to Lee, ***“we were able to program the study and move directly into a pilot project in one of our hospitals in less than two days.”*** pilot project was performed over a two-day period in November 2003 at Seton Northwest Hospital in Austin, Texas. Nurses were successful in using the tool after only 15 minutes of training.

As a result of the success of the pilot study, the technology has been implemented at the 13 hospitals participating in the research. Data is collected monthly at each hospital and automatically transferred to researchers for analysis.