

NSCCHS Patches Up Wound Care with Minitab

Serving a population of more than 1 million across northern Sydney, the Northern Sydney Central Coast Health Service (NSCCHS) understands the importance of quality health care. With an estimated 270,000 Australians currently suffering from a chronic wound—one that takes longer than three months to heal, or that doesn't heal predictably—maintaining a high quality of life for these patients during treatment is a primary goal of the NSCCHS. Wound care is a high-volume activity at NSCCHS's eleven major facilities and system officials knew that treating wounds often involves high costs and high risks. If a facility provided care that wasn't sufficient, patients could be more likely to suffer infections, delayed healing, preventable pain and reduced quality of life.

Significant variations among wound care services were noticed at various sites, and NSCCHS Wound Care Coordinator, Melissa O'Brien was appointed to lead several area wound care sub-committees. O'Brien and the committees set off to create, implement, and evaluate guidelines for all major categories of wounds. That team trusted Minitab Statistical Software to perform the data analysis necessary to evaluate if patients throughout the system received safe, appropriate, and effective wound care.

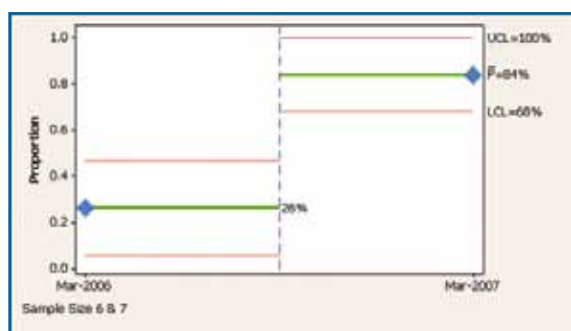
The effort is just one of many quality improvement projects undertaken by NSCCHS and its award-winning Statistical Thinking and Methods Program, known as "STaMP." The addition of a Minitab enterprise license



Using Minitab Statistical Software, the Northern Sydney Central Coast Health Service performed the data analysis necessary to evaluate wound care at their facilities. Above is an aerial view of the Royal North Shore Hospital with the Sydney Harbour in the background.

has enabled NSCCHS to become "increasingly more capable of transforming data into knowledge and acting on insights to improve clinical and business results," says Helen Ganley, quality systems analyst.

For the wound care standardization effort, local wound care committees reviewed and applied new strategies at each NSCCHS site. Once the new treatment plans were implemented, O'Brien used Minitab control charts to analyze wound care interventions and ensure that each site's processes consistently met the standards of care. A control chart plots data sequentially, making it easy to see how a process varies over time—and whether that variation is unusual or not. Minor process variability is normal, but sometimes it is due to a factor that is not part of the normal process and can be corrected. Identifying different causes of variation lets you make adjustments in a process without over-controlling it.

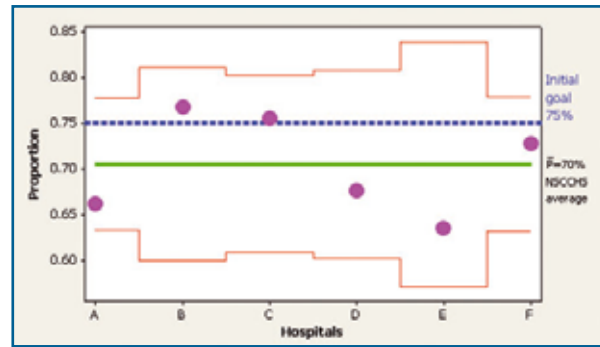


The NSCCHS used Minitab to assess short-term project performance for staff beginning to practice new leg ulcer care guidelines. This historical control chart displayed the interventions implemented in March 2006 versus those implemented in March 2007.

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O'Brien used Minitab to create control charts and monitor the new treatments, and appreciated the software's ease of use and simplicity for monitoring and evaluating processes over time. "Minitab is simple to use and teach," she says.

The control charts enabled the improvement team to compare the proportion of patients who received "perfect" care before and after the new procedures were implemented, as well as patients whose wounds healed within the 10-day target range. The NSCCHS also used Minitab to assess short-term project performance for staff beginning to practice the new wound care guidelines. The analysis revealed the proportion of leg ulcer interventions implemented was 26% before the quality improvement project. After the project, that figure soared to 84%.



Minitab graphs helped the NSCCHS assess and evaluate treatment plans—showing the team if they had met goals set at various stages of their quality improvement project.

Adapted from an article entitled "Best Practices Wound Care," recently published in the *International Wound Journal*, April 2011.