

# Prevention of Hospital Acquired Pressure Ulcers.

## Introduction

In 2002, the Sutter Health System (Northern California) embarked on a system wide initiative to reduce the incidence of nosocomial (facility acquired) pressure ulcers. These patient outcomes were deemed highly avoidable and unacceptable.

With a highly coordinated initiative, Sutter Health has achieved success in reducing the occurrence rates of pressure ulcers.

## Interventions

A two pronged approach was utilized. First, nursing policies and procedures were enhanced to be more aggressive in the identification and response to a patient's risk of skin breakdown. All patient care staff were provided training and testing.

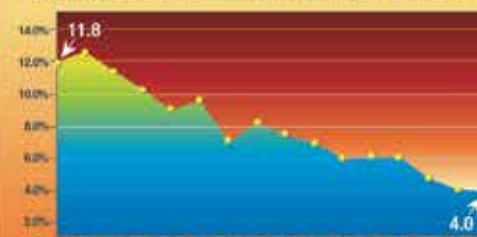
Secondly, clinicians recommended that all patients have the benefit of the AccuMax Quantum™ System. Through a formal product evaluation and selection process, clinicians chose this state of the art, convertible support surface from Encompass Therapeutic Support Systems. This system offered non-powered pressure relief therapy as well as having the ability to provide (powered) alternating pressure therapy as an additional therapy if desired.

- ◆ Sutter Health's protocol stipulated that all patients with a Braden score of less than 18 were required to receive the alternating pressure therapy.
- ◆ Beds in OB, Pediatrics and Psych were not converted due to those populations low risk for pressure ulcers.
- ◆ Because of specialized needs in ICU, only portions of those beds were converted to the AccuMax Quantum System.

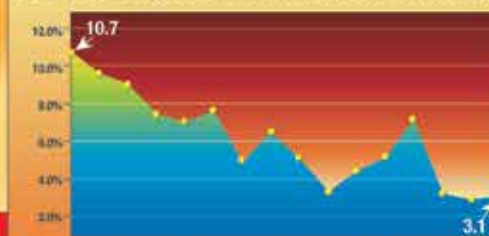
## Methodology

In 2003, twenty one hospitals began conducting quarterly prevalence studies. Since that time the P & I studies have continued on a quarterly basis to monitor the success or failure of the pressure ulcer initiative.

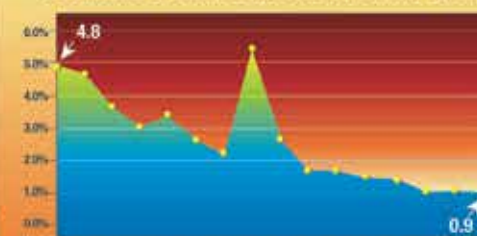
Prevalence of Nosocomial Ulcers for Sutter System



Medical & Surgical Units Combined for Sutter System



Prevalence of Ulcers on Heels for Sutter System



## Initial Results

In 2003, the baseline prevalence system wide rate was 11.0% and increased to 12.5% in the second quarter of 2003 as the new procedures and mattress were being implemented across the system.

- ◆ In the third quarter of 2004 (seven quarters later) the rate was 7.1%
- ◆ The reduction in the incidence of heel ulcers decreased from 4.5% to 2.0%
- ◆ In contrast, the ICU (which did not universally employ the AccuMax Quantum Systems) the prevalence rate began at 15.2% and ended at 15.0%

In less than two years, the conversion to the AccuMax Quantum Systems saved the Sutter Health system approximately \$2 million in costs for rental beds and surfaces.

## Initial Conclusion

While the implementation of the AccuMax Quantum System was but one factor of a system wide initiative, it was an integral and constant element that helped Sutter Health lower their incidence rate significantly and save millions of dollars.

## Validation of Initial Results

As part of the original initiative, the Sutter facilities continue to conduct quarterly prevalence and incidence studies. It is vitally important to monitor whether the program and the support surface are still successful in protecting patients from skin breakdown. Data collected during the studies is used to focus new strategies on areas of continued problems.



## Recap of 2006 Results

The Sutter facilities measured and compared a variety of pressure ulcer data on their patients prior to the implementation of their program and charted the trend ending in December of 2006.

Some highlights are listed below:

- ◆ Prevalence of Nosocomial Ulcers for the entire system
  - From a high of 12.5% to Q4 2006 of 4%
  - 68% reduction in pressure ulcers
- ◆ Prevalence of Nosocomial Ulcers on the Medical/Surgical Units
  - From a high of 10.7% (previous) to Q4 2006 of 3.1%
  - 71% reduction in pressure ulcers
- ◆ Prevalence of Nosocomial Ulcers on Skilled Nursing Facilities
  - From a high of 12.4% (previous) to a Q4 2006 of 5.4%
  - 56% reduction in pressure ulcers
- ◆ Prevalence of Ulcers on the Sacrum for the System
  - Q1 2003 (previous) of 4.5% to a Q4 2006 of 1.6%
  - 64% reduction in pressure ulcers
- ◆ Prevalence of Ulcers on the Buttocks for the System
  - Q1 2003 (previous) of 1.8% to a Q4 2006 of 1.3%
  - 28% reduction in pressure ulcers
- ◆ Prevalence of Ulcers on the Heel for the System
  - Q1 2003 (previous) of 4.8% to a Q4 2006 of .9%
  - 81% reduction in pressure ulcers

## Summary and Conclusion

The Sutter Health system wide initiative:

- 1) defined goals;
- 2) developed a strategy and action plan;
- 3) educated staff on standardized protocols and
- 4) used data to drive focus on further prevention.

It is also evident that over this four year period (2003 – 2006) the AccuMax Quantum Convertible was a consistent intervention for all patients, despite changes in staffing or other variables. The implementation of a high quality support surface played a vital role in the attainment of these clinical and financial results.



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