Reducing Pressure Ulcers in Kaiser Foundation Hospitals

What are we measuring and why?

A pressure ulcer is defined as any lesion caused by unrelieved pressure resulting in damage of underlying tissue.

- Pressure ulcers usually occur over bony prominences and are graded or staged to classify the degree of tissue damage observed.
- Because muscle and subcutaneous tissue are more susceptible to pressure-induced injury than skin, pressure ulcers are often worse than their initial appearance and range in severity from mild to severe.

Pressure ulcers may cause considerable harm to patients, interfering with functional recovery and causing pain and the development of serious infections.

- It is estimated that 2.5 million patients are treated for pressure ulcers in U.S. health acute-care facilities each year. Pressure ulcers are associated with extended length of stay and mortality.
- Among hospitalizations involving pressure ulcers as a primary diagnosis, about 1 in 25 admissions ended in death. The death rate was higher when pressure ulcers were a secondary diagnosis—about 1 in 8. http://www.ahrq.gov/news/nn/nn120308.htm

Although pressure ulcers are preventable in most cases, they are increasing in health care facilities nationwide.

How are we doing and how do we compare?

<table>
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<th>Report Card 2015 (lower is better)</th>
<th>Kaiser Foundation Hospitals Programwide Result</th>
<th>KP 2008 Program Goal</th>
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<tbody>
<tr>
<td>Prevalence of pressure ulcers* (#pts w/ulcers / #pts in study)</td>
<td>.63%</td>
<td>1.00%</td>
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Prevalence methodology provides a “snapshot” of pressure ulcers on a selected day. All consenting and appropriate hospitalized patients are examined for pressure ulcers. The term nosocomial refers to new ulcers, i.e., developed after hospital admission. The measure is expressed in a percentage derived from the number of patients with pressure ulcers divided by the number of patients in the study.

The following graph shows the improvement over time of programwide performance for Kaiser Permanente’s Kaiser Foundation Hospitals in relation to our target for Hospital Acquired Pressure Ulcers Stage 2+ using prevalence methodology.

Percent Hospital Acquired Pressure Ulcers (HAPU) Stage 2+ in Kaiser Foundation Hospitals 2009 – 2015 (lower is better)

All KFH Average 3.80% 3.11% 2.56%
2008 Program Goal 1.00% 1.00% 1.00%

What are we doing to improve?
Many patients are at risk for developing a pressure ulcer. Key factors contributing to the development of pressure ulcers include age, immobility, incontinence, inadequate nutrition, sensory deficiency, multiple co-morbidities, circulatory abnormalities, and dehydration. Pressure ulcer prevention has two major steps:

- Identifying patients at-risk.
- Reliably implementing prevention strategies for all at-risk patients.

It is Kaiser Permanente practice for providers to conduct an assessment analysis for pressure ulcers at hospital admission for patients at risk and reassess them daily.

- For those at risk, we keep the skin dry and moisturize dry skin, optimize high protein diet and hydration, and minimize pressure – turning patients every two
hours and using pressure-relieving surfaces.

- Specialized support surfaces such as mattresses, beds, and cushions reduce and redistribute the pressure that the patient’s body weight exerts on the skin and subcutaneous tissues. If a patient’s mobility is compromised and the patient’s pressure points are not relieved, the pressure can lead to impaired circulation and pressure ulcer formation.

Staff incorporates a skin inspection into their normal workflow, with each patient assessment. The nurse hand-off at the bedside is a time when skin assessment can become part of the normal daily routine with both RNs completing the skin assessment together.

- Surgical patients, under anesthesia for extended periods of time, have an increased risk of developing pressure ulcers. Providers and staff implement prevention strategies for pre-operative, intra-operative, and post-anesthesia patients.

Example: Kaiser Permanente Northern California’s Pressure Ulcer Reduction Program

Beginning in 2007, Kaiser Permanente Northern California HEROES patient safety collaborative project adapted the four evidence-based practices called **Zero SKIN**, focused on reducing the incidence of hospital-acquired pressure ulcers.

- The SKIN bundle prevention strategies are reliably implemented for all patients who are identified as being at-risk. In KP NCAL, the skin assessment is completed within the first 8 hours of admission. At-risk patients with a Braden Score of 18 or less require the implementation of all the elements of the SKIN bundle to prevent pressure ulcers.

- The SKIN care bundle has been tested through Plan-Do-Study-Act for rapid cycle improvement and implemented in all 19 KP Northern California medical centers, with a dramatic decrease in the incidence rates of hospital-acquired pressure ulcers.