Lowering Patient Mortality in Kaiser Foundation Hospitals

What are we measuring and why?

The majority of U.S. deaths today do not take place at home; most occur in some kind of health care facility. Hospitals measure the number of patients who die while being treated in a hospital and examine the reasons for these patient mortalities.

Comparing mortality rates among hospitals is very difficult because patients admitted with the same condition do not have the same risk and incidence of death. Mortality data does not necessarily indicate good or bad quality and patient safety; however, widely used methods to compare mortality on a risk-adjusted basis help hospitals monitor performance and identify opportunities for improvement. Many hospitals participate in the Institute for Healthcare Improvement’s collaborative, which uses a method called the Hospital Standardized Mortality Ratio (HSMR).

Using the Hospital Standardized Mortality Ratio

HSMR takes into account six factors that affect mortality but not necessarily the quality of care provided. These include: age, sex, principal discharge diagnosis, admission source (referral from a physician's office, transfer from another hospital, etc.), admission status (emergent, urgent, or elective), and length of stay. Only Medicare beneficiaries are included in the HSMR calculation for both individual hospital and U.S. Medicare Overall results.

How are we doing and how do we compare?

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<td>Hospital Standardized Mortality Ratio</td>
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Interpreting HSMRs

Interpretation of a hospital's adjusted HSMR is based on how much the ratio differs from 1.0 and in which direction. An adjusted HSMR of 1.0 for a hospital means that it is performing just like the aggregated pool of all American hospitals in the year 2000. An SMR lower than 1.0 shows that the hospital has a lower mortality rate and is performing better than other hospitals, while a higher SMR means that the hospital is performing worse.
The graph below shows the patient mortality performance improvement of Kaiser Permanente Southern California hospitals in relation to U.S. Medicare overall performance. Kaiser Permanente’s performance in HSMR has shown significant reductions in recent years and has been well below the U.S. Medicare cohort.

**Percent of Hospital Deaths in KPSC Hospitals**
**Hospital Standardized Mortality Ratio**
**January 2012 – June 2015**
*(lower is better)*

**What are we doing to improve?**

Kaiser Permanente has implemented strategies to reduce inpatient mortality, including:

- Evidence-based practices of medical care that reduce harm including targeted efforts such as: reducing blood stream infections both in and outside the Intensive Care Unit, reducing catheter-associated urinary tract infections, reducing surgical site infections (hips, knees), reducing *Clostridium Difficile* (a pathogen), reducing vancomycin-resistant enterococci, reducing Methicillin-resistant staphylococcus aureus, reducing sepsis, and ensuring hand hygiene.
- Improving the palliative care and hospice care processes.
- Improving care processes to reduce harm in areas such as medication safety/adherence and patient falls.
- Improvement efforts that include using KP HealthConnect® systems to promote patient safety and implementation of The Joint Commission core measures.