



November 12, 2008

Earlier this year the Patient Safety Commission challenged Oregon to develop the safest healthcare system in the nation by the end of 2010. Our goal is to create a sense of urgency, to rivet attention, and to encourage cooperative action.

As a next step we now offer a set of patient safety benchmarks for Oregon hospitals. These measures—covering 6 safety areas—define a clear starting point and an objective way to gauge our progress.

In the near future we will also develop benchmarks for nursing homes and ambulatory surgery centers.

We encourage your comments.

Sincerely,

A handwritten signature in black ink that reads "Jim Dameron". The signature is written in a cursive style with a large, sweeping "J" and "D".

Jim Dameron
Administrator



North Star Goal: Oregon will have the safest healthcare system in the nation by the end of 2010.

Initial Benchmarks: HOSPITALS Summary of Findings – Hospital Measures

The Patient Safety Commission offers these initial benchmarks as a way to track Oregon's progress toward developing the safest healthcare system in the country (See body of report for full descriptions):

- **Outcome Measure:** Number of 'retained objects' accidentally left after surgery or procedure.
 - **Baseline:** 50 such events occurred in Oregon hospitals in 2007.
 - **2010 target:** 0.

- **Safe Practices Measure:** Percentage of hospitals that have implemented three specific best practices to eliminate surgical site infections (SCIP 1 – 3).
 - **Baseline:** 75% of Oregon patients currently receive optimal care (when all three practices are used for each patient). For each of the individual measures, between 22 and 42 states currently have better compliance rates than Oregon, depending on which of the three measures is considered.
 - **2010 target:** Best in nation.

- **Risk Assessment Measures:** a) Number of hospitals that actively share data with the Patient Safety Commission; b) Number of adverse events reported to the Commission.
 - **Baseline:** a) 39 of 55 participating hospitals have shared adverse event data since the program began; b) In 2008 we expect to receive about 110 reports.
 - **2010 target:** All 57 of Oregon's acute care hospitals will participate in the Commission's reporting program data. For every two-year period, 100% of Oregon hospitals will have reported at least one event. The volume of reports will increase to 150 - 200 by 2010.

- **Culture of Safety Measure:** Number of hospitals that routinely monitor their safety culture (ability to learn from adverse events) by using a facility-wide survey.
 - **Baseline:** Currently 80% of Oregon hospitals report using such a survey.
 - **2010 target:** 100% of hospitals.

- **Patient Empowerment Measure:** Number of Oregon hospitals that actively encourage their patients to report patient safety concerns.
 - **Baseline:** 87% of Oregon hospitals report that they have mechanisms in place.
 - **2010 target:** 100% of hospitals.

- **Connectivity Measure:** Hospital progress toward implementing electronic medical records (EMR)
 - **Baseline:** National data from an "EMR Adoption Index." Oregon's hospital average score is 2.25 (based on a 0 to 7 scale with 7 representing complete EMR adoption). This ranks Oregon 17th in the nation.
 - **2010 target:** Oregon is best in nation as measured by percentage of hospitals that have reached stage 5 or greater by 2010.

Introduction:

Early in 2008 the Patient Safety Commission challenged Oregon to develop the safest healthcare system in the nation. We put forth this audacious goal in order to create a sense of urgency, to rivet attention, and to encourage cooperative action. Now we offer our initial benchmark for Oregon hospitals. Our intent is to create a clear starting point and an objective way to measure our progress. In the near future we will also develop benchmarks for nursing homes and ambulatory surgery centers.

At its essence, safe care means that the healthcare system helps, not hurts. It means that doctors, nurses, medical staff, and hospitals work together to prevent unanticipated consequences while providing complex care. It means eliminating errors.

Over the last 10 years the patient safety movement has fundamentally changed how we think about health care quality. Now health care organizations are more likely to focus on fixing systems instead of blaming individuals. In doing so, we try to build reliable processes that compensate for human limitations. We emphasize learning from errors instead of hiding from them. And we stress the need for using the best scientific evidence to guide our work. In addition, the health care consumer movement has linked arms with patient safety efforts to insist on even more information and open discussion. The Commission's audacious goal represents a creative addition to these on-going activities.

What we know so far about patient safety and quality of care in Oregon's hospitals:

Anyone with even a casual acquaintance with Oregon's health care system knows that it is a dynamic place with high levels of professionalism, creativity and passion for quality. However at present we lack adequate measures of how well we are collectively doing in providing safe care. The indices that do exist either look at individual components (like adherence to known best practices) or they are bundled into large aggregate quality measures. None focus exclusively on safety. Of the aggregate measures, the Commonwealth Fund's State Scorecard on Health System Performance (2007) ranks Oregon's quality of care as 36th of 50 states. The National Healthcare Quality Report (AHRQ, 2007) ranks Oregon's overall hospital quality as 'average.'

However, a closer look suggests these quality indicators are not the final word: In both cases the component scores are based on out-of-date information. Further, both scoring systems bundle together a lot of information. AHRQ combines 34 different hospital scores and on many of those scores Oregon was better than average. The Commonwealth Fund uses 14 measures, some of which cover hospitals, some nursing homes. In both sets of measures, the internal logic is strained, at best. So, while these various numbers hold a message, the meaning is garbled.

Therefore, the Patient Safety Commission's first challenge was to figure out a new way to measure overall safety at the state level.

Our strategy to measure patient safety:

The mission of the Patient Safety Commission is to reduce the risk of adverse events in Oregon's healthcare delivery system and to encourage a culture of safety. To the Commission's Board of Directors these goals still resonate as fundamental and important challenges. But to measure safety we needed to 'unpack' these ideas. In doing so, we came up with six questions:

1. Can we demonstrate that we are eliminating preventable harm events?
2. Are we using evidence-based best practices?
3. Are we assessing risk and learning from experience?
4. Do we have a culture that supports learning and improvement?
5. Are patients and consumers playing an active role?
6. Are we working to create connected systems of care?

We believe that in addressing each question we can generate progress toward becoming the safest state in the country. We believe that these six questions represent a coherent safety philosophy that balances outcome and process measures, highlights the importance of organizational culture and learning, places the patient/consumer in the middle of the equation, and offers a vision of connected systems replacing stand-alone silos.

A work in progress:

We are under no illusions that we've adequately nailed down a perfect set of measures. Almost every indicator we considered (and we considered many) has a limitation, which we attempt to clearly describe below. That said, we are committed to creating a learning enterprise. In that spirit we will call on hospitals and others to help us test and improve our measures. Now, to begin...

In developing our measurement approach we stuck to some straightforward ground rules:

- **Simplicity:** For each of the six questions we've selected only one or two measures. As such, some of the measures are proxies or only partial indicators. For example, to measure harm events, we selected retained objects. While we strive to eliminate all harm events, we begin by measuring a few.
- **Align measures:** We selected existing measures commonly in use. We believe that North Star can help align organizations around a short list of appropriate measures.
- **National comparisons:** Our goal is to be the safest state in the nation. To measure our progress we needed to include a few measures that allow for national benchmarks.
- **Ease of collection:** We wanted to make sure that we didn't add to the already-high administrative burden of hospitals. In some cases, when data didn't exist, we at the Patient Safety Commission collected it.

- Ever-improving: Even as we assembled a measurement scheme for 2008, we began sifting through possible improvements and additions. As such we have a group of measures in development.
- Consensus-based: We developed our measures in partnership with hospitals, public health, and others.
- Narrow focus on safety: Quality is more than safety. Overall *quality* measures should include (at a minimum) indicators of safety, clinical effectiveness, timeliness of care, access to care, efficiency of care delivery, and equity in providing care. Our measurements focus exclusively on patient safety.

2008 Benchmarks:

Dimension 1: Outcomes. Can we demonstrate that we are eliminating preventable harm events?

Context: The goal of patient safety is to eliminate harm. Therefore, our measurement approach must begin with a concrete outcome measure.

2008 Measure: Foreign body left during surgery.

Why this measure: Foreign bodies, accidentally left during a procedure, represent the largest class of events reported to the Patient Safety Commission. In 2007, in response to this finding the Commission convened an expert panel to draft a set of evidence-based recommendations. In addition, this type of event is defined by the federal Medicare program (CMS) as a “never” event. As of October 1, 2008, Medicare no longer pays hospitals for the added cost associated with finding and removing the foreign body. This new policy provides hospitals with another powerful incentive to address the problem.

The findings:

Foreign bodies accidentally left during procedure All Oregon hospitals	
Year	Number of events
2002	47
2003	37
2004	44
2005	40
2006	37
2007	50

Average = 42.5 per year.

Definition/source: “Foreign body accidentally left during a procedure not elsewhere classified” (ICD-9-CM 998.4). Office of Health Policy and Research, Hospital discharge data.

Data limitations: Retained foreign bodies represent the largest cluster of reports submitted to the Commission, in part because they are easier to identify than other types of events. Still, we’ve received only about half as many reports as identified by the state’s Office of Health Policy and Research (OHPR) from their administrative data set. We do not completely understand why. In 2009 we will ask hospitals to voluntarily participate in a study to dig into the differences. Those findings will help establish better benchmarks.

The target: For 2009 the Commission calls for a 50% reduction in the number of these events as reported by OHPR. In 2010 we seek to eliminate the problem entirely.

Dimension #2: Safe Practices. Are we using evidence-based best practices?

Context: Evidence-based best practices represent “medical decisions, guidelines, and policies consistent with good evidence of effectiveness and benefit.” Evidence-based means that clinical decisions are grounded in scientific research, not convenience or custom.

2008 Measure: Adoption of Surgical Care Infection Prevention measures (called SCIP measures):

- Percent of patients who receive preventive antibiotic received within one hour prior to surgery (SCIP #1);
- Percent of surgery patients who received the appropriate preventive antibiotic(s) for their surgery (SCIP #2);
- Percent of patients who have preventive antibiotic discontinued within 24 hours after surgery (SCIP #3);

Why these measures: Eliminating healthcare acquired infections (HAIs) is a top priority of the country’s health care system; HAIs represent a large category of preventable harm events. The three measures selected by the Commission define HAI-elimination strategies endorsed by the American College of Surgeons, the Institute for Healthcare Improvement, Centers for Medicare and Medicaid Services (CMS) and others. These measures are publicly reported by CMS (Hospital Compare). The measures also align with Oregon’s new infection reporting program (to begin in January, 2009).

The findings:

As indicated in the following tables, between 75% and 94% of Oregon’s hospital patients receive one or more of these *best practices*, depending on the type of hospital and the specific measure.

All Oregon Hospitals – Use of SCIP best practices: 2008			
Measure	Oregon 2008 Q1	Oregon Benchmark†	National Benchmark*
SCIP Infection Measure #1 (1st dose antibiotic started on time)	90%	97.5%	99.0%
SCIP Infection Measure #2 (Appropriate antibiotic used)	94%	99.5%	99.5%
SCIP Infection Measure #3 (Preventive antibiotic stopped on time.)	86%	96.8%	98.2%

† First quarter, 2008 Oregon Benchmarks for PPS (prospective payment system) and CAH (critical access) hospitals (data supplied by Acumentra)

* Fourth quarter, 2007 National Benchmarks for PPS and CAH hospitals (top 10%) (data from Acumentra)

Oregon Critical Access Hospitals (CAH) – Use of SCIP best practices: 2008			
Measure	Oregon 2008 Q1	Oregon CAH Benchmark†	National Benchmark*
SCIP Infection Measure #1 (1st dose antibiotic started on time)	87%	95%	99.0%
SCIP Infection Measure #2 (Appropriate antibiotic used)	95%	100%	99.5%
SCIP Infection Measure #3 (Preventive antibiotic stopped on time)	75%	100%	98.2%

† First quarter, 2008 Oregon Benchmarks for PPS and CAH hospitals (Data from Acumentra)

* Fourth quarter, 2007 National Benchmarks for PPS and CAH hospitals (Data from Acumentra)

To be most effective it is important that each patient receive all three steps. By that standard, about 75% of Oregon patients receive optimal care.

Percent of patients who received all 3 SCIP measures – 2008	
Oregon	75%
National Benchmark	91%

Based on 1st quarter, 2008 data (Acumentra)

Finally, we can use SCIP scores to estimate how well Oregon is doing in comparison to other states:

2007 SCIP Scores - Based on Best and Worst State Performers				
	Worst State Performance	Best State Performance	Oregon SCIP Scores	Number of States with better results than Oregon
SCIP 1	73%	94%	80%	42
SCIP 2	81%	94%	90%	22
SCIP 3	70%	93%	81%	27

Definitions/sources: Hospital Compare.

Data limitations: These measures are defined by CMS. Every time CMS modifies its reporting specifications (which it does from time to time), the scores tend to rise or fall even if the underlying care processes have not changed. In addition, hospitals across the country are continually improving their SCIP scores. At some point we will see compression at the upper end of the scale—if all states are in the 95% to 100% range, the differences among them will be virtually meaningless. Finally, experts agree that the single most important SCIP measure is the percentage of patients who receive all three preventive steps. However, national and state-to-state comparisons are not readily available.

The targets: Oregon has best-in-nation scores for SCIP 1, SCIP 2, SCIP 3 by 2010. Oregon has highest percentage of patients receiving all three SCIP protocols by 2010.

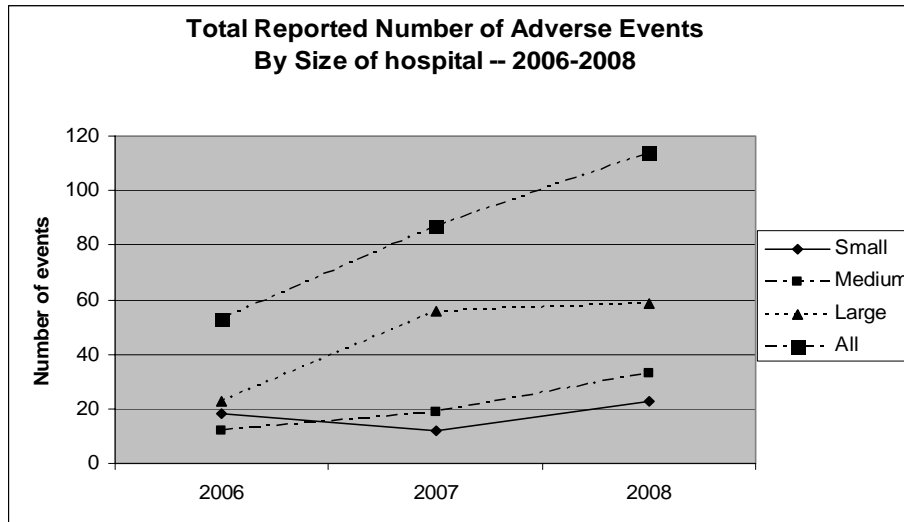
Dimension #3: Risk Assessment. Are we assessing risk and learning from experience?

Context: A critical tenet of the patient safety movement is that we can only improve if we identify errors, understand them, and systematically work to find root causes. This requires a reporting program.

2008 Measure: a) Number of hospitals that have reported at least one event to the Commission in the last two years; b) Number of events reported to the Commission.

Why this measure: Willingness to identify/share findings from adverse events is a powerful force for change. In the near term an increase in reports suggests improvement.

The findings: a) To date 39 of 55 participating hospitals have shared adverse event data. b) In 2008 we expect about 110 reports.



Definition/source: Patient Safety Commission data

Data limitations: The Commission believes it sees only a percentage of the actual number of adverse events that occur in Oregon hospitals. However, it is difficult to determine the ‘true’ number of such events. And, not only are we unsure about the overall number of reports to expect, we don’t really know how many reports to expect from big versus small hospitals, or from different units of the same hospital. In addition, the reports we do receive don’t completely mirror the true ‘epidemiology of errors.’ For example, we receive fewer reports about medication errors than expected. Finally, we need to ensure that the targets for Dimension #1 (fewer retained objects reported) and for Dimension #3 (more overall reports) do not contradict each other. One seems to create the expectation for fewer reports, the other for more.

The target: By 2009 57 of 57 hospitals will participate [Note: Oregon has 57 acute care hospitals. Fifty-five currently participate in the Commission’s reporting program]. For every two-year period, 100% of Oregon hospitals will have reported at least one event. By 2010, the volume of adverse event reports will increase to 150 - 200. This increase will reflect the growing ability of hospitals to identify adverse events and to share information about those events.

Dimension #4: Culture of Safety. Do we have a culture that supports learning and improvement?

Context: A fundamental issue for patient safety is whether organizations can quickly learn from their own mistakes. This requires, among other factors, better teamwork, a willingness to engage in open discussion, and a sense of trust on the part of health care workers that they will not be punished for speaking out or for challenging colleagues.

2008 Measure: The percentage of hospitals that have completed a “culture of safety” survey within the last three years.

Why this measure: Over the past few years hospitals have begun to systematically survey their employees and clinical staff to learn more about the organization's climate. Using a survey is one very positive way for organizations to address the fundamental willingness of staff to align with and champion patient safety priorities.

The findings:

Complete culture survey in last 3 years?	
Yes	80%
No	20%

Of those who have completed a culture survey, 50% used the same questionnaire (a survey developed by the Agency for Healthcare Research and Quality). About 25% use a facility-specific questionnaire, sometimes associated with an employee survey.

Definition/Source: The Commission fielded a web-based survey of Oregon hospitals asking quality managers three questions:

- *Has your hospital completed a 'culture of safety' survey within the last three years?*
- *[if yes] When?*
- *[If yes] Which culture survey tool did you use?*

Data limitations: Thirty hospitals (of 57) responded to the Commission's survey. The response rate (53%) raises questions about the generalizability of the findings. More to the point, the critical factor in using a culture survey is whether a hospital acts on the results. This measure does not address that issue. See *Next Steps* (page 12) for some additional ideas.

The target: 100% of Oregon hospitals complete culture surveys.

Dimension #5: Patient Empowerment. Are patients and consumers playing an active role?

Context: In order for safety efforts to be effective patients must become integral members of their own health care team.

2008 Measure: Number of hospitals that encourage patients to report concerns (derived from the Joint Commission's 2009 Patient Safety Goal #13.)

Why this measure: Provides a simple way to begin capturing information about a hospital's willingness to offer patients a venue for suggestions and criticism.

The findings:

Encourage patients to report safety concerns?	
Yes	87%
No	13%

Definition/source: The Commission fielded a web-based survey of Oregon hospitals asking quality managers two questions about patient empowerment.

- *Do you encourage patients to report patient safety concerns?*
- *[If yes] Please briefly describe how you do this.*

Data limitations: As mentioned in measure #4, the benchmark data are based on a hospital survey with a response rate of 53%. In addition, this measure does not quite measure a truly active patient engagement. See Next Steps for additional ideas.

The target: 100% of hospitals have active systems for capturing patient concerns and for acting on those concerns.

Dimension #6: Community-wide Connectivity. Are we working to create connected systems of care?

Context: This dimension highlights the need for coordinated care. Patients treated in isolation, without complete medical information, are more likely to suffer harm. In addition, without integrated information it is difficult for organizations to fundamentally learn from their mistakes.

2008 Measure: Electronic Medical Record (EMR) Adoption Score. *From HIMSS Analytics*. Based on 0 to 7 scale, as follows:

Stage 7 – Hospital has a paperless EMR environment. Clinical information is readily shared via electronic transactions with all appropriate entities and providers.

Stage 6 – Full physician documentation/charting implemented for at least one patient care area. Full radiology system implemented.

Stage 5 – Closed loop medication administration environment is full implemented in at least one patient care area.

Stage 4 – Computerized practitioner order entry (CPOE) for use by any clinician is added to nursing and others. Second-level of clinical decision support implemented.

Stage 3 – Clinical documentation installed. First level of clinician decision support is implemented to conduct error checking with order entry. Some level of medical image access.

Stage 2 – Major ancillary clinical systems feed data to clinical data repository.

Stage 1 – Laboratory, pharmacy and radiology installed.

Stage 0 – Some clinical automation may exist, but Stage 1 not yet met.

Why this measure: Having an EMR is a critical component of having a connected healthcare delivery system. With a functioning EMR hospitals can quickly share clinical information with all necessary providers and with all appropriate entities within a network. A fully integrated EMR also allows hospitals to more actively share health and wellness information with consumers. And it would encourage sophisticated mining of data to improve care protocols and decision support tools.

The findings: Based on second quarter 2008 data, HIMSS ranks Oregon 17th of 50 states in making progress toward a complete EMR (based on median scores). The following table shows the percentage of Oregon hospitals at each stage of development. According to HIMSS, most hospitals in the US are now working on Stage 3. Also according to HIMSS, the significant patient safety gains will come when hospitals reach Stage 5 (having a “closed loop” medication administration process). As of second quarter, 2008 no Oregon hospital had reached Stage 5.

Electronic Medical Record Adoption Model			
Stage	Cumulative Capabilities	National Q2 2008	Oregon
Stage 7	Medical record fully electronic	0.0%	0.0%
Stage 6	Physician documentation, full Clinical Decision Support System	.9%	0.0%
Stage 5	Closed loop medication admin.	1.3%	0.0%
Stage 4	CPOE, clinical protocols	1.8%	3.0%
Stage 3	Clinical documentation, clinical decision support (error checking)	32.0%	31.0%
Stage 2	Clinical data repository, etc	33.9%	41.0%
Stage 1	Ancillaries – lab, rad, Rx – installed	12.6%	15.0%
Stage 0	Ancillaries not all installed	17.7%	10.0%

* Data from HIMSS Analytics

Definition/Source: HIMSS collects data from 5,073 hospitals across the United States on progress toward adopting electronic medical records. In Oregon 59 hospitals regularly complete an on-line survey describing their progress.

Data limitations: Self reported data. State scores are bunched together (not much spread). Smaller hospitals will be slower to adopt EMR. Data don't adjust for large proportion of critical access hospitals in Oregon.

The target: Oregon is best in nation as measured by percentage of hospitals that have reached stage 5 or greater by 2010.

Next Steps

It bears repeating – in measuring statewide progress toward becoming the safest state in the nation, the Patient Safety Commission’s goal is to create a flexible learning tool. Toward that end:

1. After an initial round of discussions about the merits of the Commission’s benchmarking approach, we will begin publishing a “Dashboard” of the best measures. This dashboard will act as a simple monitoring tool to show progress toward North Star goals.

2. We will continue to develop our measurement set. We will do so in cooperation with hospital and clinical leaders around the state. Some initial ideas:

- Outcome Measure: In 2009 we hope to work with hospitals in Oregon to better understand why the number of retained objects reported to the Commission varies from the number reported in OHPR’s administrative data set. In addition we will begin exploring the possibility of creating outcome measures for all CMS “never events” and for various types of hospital-acquired infection rates (based on the new state reporting program)
- Safe Practices Measure: Since the 2008 safe practice measures (SCIP) focus on infection control, we might add “Participation in OAHHS hand washing project” in 2009. There has also been some interest in adding “compliance with universal protocol for all invasive procedures” and some new medication safety measures.
- Risk Assessment Measures: We believe reporting to the Commission is a useful step in improving safety in Oregon, and therefore a useful measure of organizational willingness to learn from mistakes. But there are other, more direct tools available that we need to explore. For example IHI’s “Trigger Tool” might be an innovation worth championing. Or we might find ways to better encourage the quality of root cause analyses done by hospitals as they investigate their own adverse events.
- Culture of Safety Measure: For 2008 we’ve taken only a small step by trying to determine how many hospitals use culture surveys to monitor their organizational ability to make big changes. In 2009 we hope to benchmark data from specific questions within those surveys. In addition we will talk with hospitals about including a measure to benchmark progress in using written notification to patients after a serious adverse event. And, we think there is merit in benchmarking the efforts of hospital Boards of Directors to improve patient safety.
- Patient Empowerment Measure: In 2009 we will explore ways to measure the effectiveness of empowerment programs such as *Speak Up*, especially as it might relate to the patient’s role in making sure that hospitals follow basic hand washing protocols.
- Connectivity Measure: The *HIMSS Analytics* measures of EMR adoption are still very new. We need to continue to seek ways to verify the utility of this approach.