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## Our North Star Goal:

Oregon will have the safest health care system in the country by 2010.

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## From the Reporting Program:

### Too Task Focused?

Is it possible to be too focused on a task? The short answer is 'Yes' when attention to a task does not include the larger picture. Consider this adverse event report reviewed by the TAC: an elderly gentleman, living at home with his wife, had a two-week bout of gastroenteritis. He had diarrhea and nausea, with difficulty keeping any fluids or foods down, and was quite adamant about not going to the doctor. When finally persuaded by his wife to be seen, he was admitted with diagnoses that included severe protein malnutrition and failure to thrive. In addition, he had several small, but noticeable areas of skin breakdown at various stages. The admitting physician ordered NS at 125mg/hr, tube feedings via a PEG tube, and appetite enhancer. Four days later, the RN beginning a day shift assignment with the patient noticed his deteriorating condition immediately upon entering the room and called the RRT. The patient suffered acute pulmonary edema; however, despite all efforts, the patient responded poorly and was placed on comfort care.

In reviewing this case, the RCA team focused on the actions of both the night RN who had cared for the patient over three nights and the physician in not recognizing an accumulating fluid imbalance. They found that all nursing notes were complete, daily weights, intake/output all entered, vital signs noted appropriately. While day nursing staff assignments changed, there was consistent staff caring for the patient during nights who noted minimal disturbing of the patient so that he could get sufficient rest, an important consideration. The review team also discovered that while current documentation allowed data collection at each shift or daily, there was no cumulative or trend data for either input/output (I&O) nor daily weight changes available. Further, intake measurement included IV solutions only; none of the PEG tube nutrition was included.

The RCA team developed a number of action items based on their findings. The physician will add stop dates to fluid orders, nursing documentation will include cumulative data and trend charts, I&O measurements will include all liquid intake, and the story of this event will be shared with staff and physicians. In addition, both the nurse and physician indicated their intent to be more vigilant in monitoring patients' fluid balances.

The key question in formulating action plans is whether they are likely to reduce the risk of similar events in the future by others. Although increased vigilance is a good thing, these providers are unlikely to make the same mistake twice and action plans should not rest on provider vigilance. It is too easily subverted in the daily pressures of care.

## Task Focus, cont'd

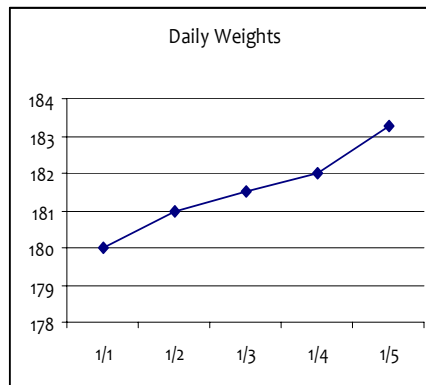
The action plans formulated by the review team other than increased vigilance are moderately strong and are likely to prevent similar future occurrences. They will be stronger with a broader scope, including providers other than the provider involved in the incident. For example, stop orders for fluids are more likely to decrease the risk of future events if they apply to all fluid orders, or a specific subset of fluid orders, such as the elderly, or infants across all providers.

This adverse event stems from failures in Situational Awareness (SA) and the action plans developed directly address some of the issues, decreasing the risk of future events. Situational Awareness requires that one notice the data, understand the information it conveys, and think ahead about what the information means for the future. (See also the April 2009 newsletter.) While noticing is the most common type of SA failure, in this situation all three failures occurred. The action plans deal directly with both the understanding failure and the thinking ahead failure by changing the data documentation into more decision support. The changes provide context for the data with the cumulative information and future projection with the trend charts. For example, a half-pound weight gain can be seen as a 1.5-pound gain since admission. Similarly, the initiation of trending supports thinking ahead by providing the information in a graph that clearly projects the data into the future. Consider the relative ease by which information is conveyed in the examples below and what is the best way for a busy RN or physician to have immediate access to important information.

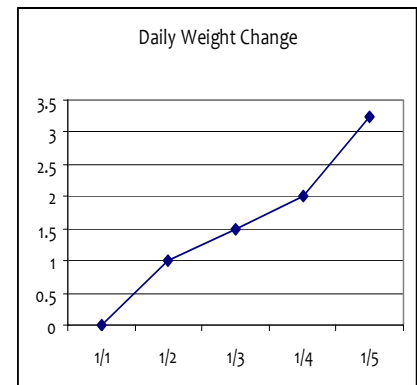
Example 1  
Table of Daily Weights

Weight	180	181	181.5	182	183.25
Date	1/1	1/2	1/3	1/4	1/5

Example 2  
Graph of Daily Weights



Example 3  
Graph of Cumulative Weight Change



The *noticing* dimension of SA is a more difficult failure to address. While the specific data related to the pulmonary edema was noticed, more subtle signs of deterioration in status did not rise to the level of awareness of any staff until the 3<sup>rd</sup> hospital day. An RN, newly assigned to the patient, observed his condition and called the RRT. Strategies to improve noticing might include such things as structured handoffs that include specific information on overall patient status; rounding (preferably with a multidisciplinary nursing team) that provides an opportunity to step back and consider the overall care of the patient, and perhaps including the patient; or a patient status board indicating condition, in sight of all staff, and updated at least each shift.

These strategies all rely on teamwork to one extent or another while SA is primarily individually based. Team SA is less well understood and requires a shared mental model among team members, which, in turn rests on common cultural understandings. The sharing of stories, one of the action plans the review team developed, helps not only warn about specific situations, but also can help build a common understanding. By successfully implementing and sustaining both the hard-wired actions described above and the less concrete culture-focused actions this organization is moving ahead in its patient safety journey.

## *Spotlight on Practice: Managing Sepsis*

Legacy Health System has seen an over 60% reduction in its sepsis-related mortality since 2004 due in large part to their implementation of the IHI Sepsis Bundles. The Legacy Journey began in 2006 with the revised sepsis guidelines from the Society for Critical Care Medicine (2008 guidelines [here](#)). Noting a practice gap, two champions led the project -- LuAnn Staul, the Critical Care Clinical Nurse Specialist, and Dr Poh Leng. Working through the multidisciplinary critical care quality committee, the guidelines were implemented as an ICU order set using usual [PDSA cycle](#) methods over a six to eight month period. Concurrent with the decrease in mortality, Legacy has noticed a decrease in Length of Stay from 13 days in 2008 to 9.8 days so far this year.



The project, with a new Physician Champion, Dr. Brian Young, and a project coordinator, Ashley Russell RN, is now moving to the Emergency Departments (ED) and Medical Surgical units to promote early recognition and treatment with antibiotics and implementation of a Resuscitation Bundle. The ED pilot site saw an almost immediate positive result with the 10 patients identified in the pilot; the length of stay for these patients was 5.4 days, down from 8 days.

The effective implementation of this improvement project rested on several key elements:

- A Clinical Nurse Specialist and a physician champion to coordinate the effort
- Clear evidence in the gap between best practice recommendations and practice
- Application of an effective change strategy (PDSA)
- Use of data to identify characteristics of sepsis patient - mortality, length of stay, type of bacteria ([antibiogram](#)); and comparing baseline data to data after implementation.
- Drawing on current processes to support the changes, e.g. modification of existing screening tools and development of a decision-support tool matching the antibiotic to the source of infection

As with all change efforts, the early implementation plans were adjusted in the pilots before being finalized as Legacy-wide practice in its ICUs. This iterative approach, essential to implementation, is now continuing for the EDs and Medical Surgical Units. For more information, please contact [LuAnn Staul](#).

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## *Journal Brief: Identifying and correcting communication problems in the ED*



The first of the two companion studies below describes an FMEA investigation conducted to identify potential failure points in emergency department communication. The second article looks at the effects of interventions undertaken to reduce communication failures at two critical junctures. Together they demonstrate the potential for avoiding adverse events using FMEA and following up with process changes.

## Identifying vulnerabilities in communication in the emergency department.

Redfern E, Brown R, Vincent CA. Emerg Med J. 2009 Sep;26(9):653-7

**BACKGROUND:** Communication in the emergency department (ED) is a complex process where failure can lead to poor patient care, loss of information, delays, and inefficiency.

**AIM:** To describe the investigation of the communication processes within the ED, identify points of vulnerability and guide improvement strategies.

**METHODS:** The Failure Mode Effects Analysis (FMEA) technique was used to examine the process of communication between healthcare professionals involved in the care of individual patients during the time they spent in the ED.

**RESULTS:** A minimum of 19 communication events occurred per patient; all of these events were found to have failure modes which could compromise patient safety.

**CONCLUSION:** The communication process is unduly complex and the potential for breakdowns in communication is significant. There are multiple opportunities for error which may impact on patient care. Use of the FMEA allows members of the multidisciplinary team to uncover the problems within the system and to design countermeasures to improve safety and efficiency.

[Pub Med Citation](#)

## Improving communication in the emergency department.

Redfern E, Brown R, Vincent CA. Emerg Med J. 2009 Sep;26(9): 658-61

**BACKGROUND:** A previous study examined the communication process within the emergency department (ED) and identified a complex process with many opportunities for breakdown and error. In this paper, the first two interventions in a series of studies to improve this highly vulnerable communication process are described.

**AIM:** To improve the reliability of two steps of the communication process identified as having a high probability of failure: (1) transfer of information between the ambulance crew and the emergency staff; and (2) preparation of written documentation following patient assessment.

**METHODS:** Quantitative assessments of the reliability of communication were carried out to establish the extent of problems highlighted during the failures modes and effects analysis (FMEA) previously described. Improvements to the process were then introduced, and the process re-examined to assess the impact of the changes and reduction of the likelihood and severity of the failure mode.

**RESULTS:** The studies demonstrated very high levels of communication failure, particularly in transfer of written information from the ambulance crew. Countermeasures were introduced which resulted in a substantial reduction in missing and incorrect information. In addition, there was a threefold improvement in the number of correct clinical documents used by doctors in the resuscitation room.

**CONCLUSION:** Observational study and audit revealed the extent of process failures identified in the initial FMEA process. With the introduction of simple changes to the communication system, a marked improvement in the availability and quality of pertinent clinical information was achieved with considerable implications for the timeliness and quality of care provided to patients.

[Pub Med Citation](#)

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## *Resources: Patient Safety Papers 4*

Patient Safety Papers 4. Baker GR, ed. Healthcare Quarterly. 2009;12:1-198.

This special issue of Healthcare Quarterly discusses Canadian patient safety efforts in identifying risks, designing safe systems, implementing solutions, developing learning systems, and understanding legal decision making. Free text available [here](#). It is the fourth special issue devoted to patient safety; earlier issues devoted to patient safety are available through the website. [Click here for past issues.](#)

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## Heard on the Net: TJC Sentinel Event Alert on Leadership and Safety

The most recent Sentinel Event Alert\* published by the Joint Commission has elicited strong reactions among participants in the NPSF listserve. At issue is a paragraph in which TJC discusses actions in response to an error with a just culture perspective, using wording that is seemingly at odds with general understandings of just culture. As Diane Rydrych of Minnesota pointed out, there are a number of different models of just culture and it may be due simply to a lack of a common language for safety and culture. The Joint Commission has revised its alert and the revision is posted: click [here](#).

Beyond the just culture controversy, to which the Joint Commission has responded, the alert identifies 14 specific actions that hospital leaders can take that will support patient safety. The ideas suggested include those that many, if not most Oregon hospitals are doing and some that may not be as widespread. The list is intriguing and offers some clear direction for senior leadership in hospitals and health systems.

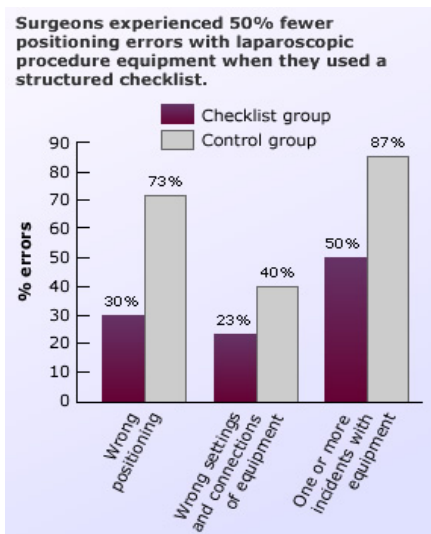
\*Leadership committed to safety. Sentinel Event Alert Issue 43, August 27, 2009

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### Did You Know? from AHRQ [PSNet](#):

Source: Verdaasdonk EG, Stassen LP, Hoffman WF, van der Elst M, Dankelman J. Can a structured checklist prevent problems with laparoscopic equipment. Surg Endosc. 2008. Available at: <http://dx.doi.org/10.1007/s00464-008-0029-3>



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## From the Commission

**Reports Received** The Commission received 10 adverse event reports in August. Of the six serious harm events, two were deaths. A near-miss involving the MRI suite was also reported.

### Action Plan Follow-Up

The Commission is currently developing its plan for action plan follow-up of adverse events. Hospitals will soon begin to receive requests for action plan follow-up for all serious adverse events submitted during the first and second quarters of 2009. Action plans from third and fourth quarter events will be surveyed late January, 2010. If you have comments, questions, or specific suggestions regarding the process please contact [Leslie Ray](#).

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Reports Received	August	Totals
Fall	1	17
Retained Object	5	14
Med Error		8
Wrong Site		7
Care Delay		7
Other	1	6
Pressure Ulcer		5
Perinatal	2	4
Iatrogenic Injury		3
HAI	1	3
Perforation		2
Hypoglycemia		2
Wrong Procedure		1
Suicide		1
Burn		1

## Infection Prevention Project

The Patient Safety Commission, in partnership with the Oregon Public Health Division and the Office of Health Policy and Research, has received a large federal grant to build and sustain state programs to prevent healthcare-associated infections within hospitals. The Commission role will be organizing and coordinating an infection prevention collaborative. To support this effort, the Commission will be adding a 'Collaboratives' manager and a data analyst. For further information, please contact [Jim Dameron](#).

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## *Upcoming Events*

### Commission Meeting

October 13, 2009 from 12:30 to 3:30pm at the Wilsonville Training Center of Clackamas Community College To request an agenda, please contact [Linda Goertz](#). All 2009 Commission meetings are on the second Tuesday of even-numbered months. Click [here](#) for a listing of meeting dates.



### Technical Advisory Group meeting

October 13, 2009 from 9 to 11:30 am at the Wilsonville Training Center of Clackamas Community College.

**2009 Annual Oregon Rural Health Conference "You as a Leader"** November 5-7, 2009 Salishan Spa & Golf Resort Gleneden Beach, OR. For more information click [here](#).

**IHI Seminar "Perfecting Emergency Department Operations"** November 5-6, Chicago, IL. For more information please go to:

<http://www.ihl.org/IHI/Programs/ConferencesAndSeminars/PerfectingEDOperationsNovember2009.htm>

**Save the Date:** Tuesday, April 6, 2010 for a conference on safe patient care for the extremely obese. Held in Portland and presented by the Oregon Patient Safety Commission, Washington State Association for Healthcare Quality, and the Oregon Association of Healthcare Quality.



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This newsletter is being sent to interested parties and participants in the Oregon Patient Safety Commission's adverse event reporting program for hospitals. Your E-mail address will not be shared or used for any purpose unrelated to the Commission's activities. If you wish to unsubscribe, please send an E-mail to [linda.goertz@oregonpatientsafety.org](mailto:linda.goertz@oregonpatientsafety.org) with subject "Hospital Unsubscribe."

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