Using Patient-Centered Whiteboards as a Hospital Communication Tool

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P atient-centered communication is a growing priority, as highlighted by a 2011 Joint Commission standard prompting hospitals to adopt practices that promote improved communication and active patient engagement. The Institute of Medicine has identified providing patient-centered care as one of the 6 improvement aims integral to delivering high-quality patient care in the 21st century.

While efforts targeted at improving communication among hospital-based providers have included teamwork training programs, improved systems for handoffs, multidisciplinary care checklists, and structured interdisciplinary rounds, many have not successfully engaged patients and families. Achieving this goal requires a focus on improving communication between providers and their patients and family members, while positively affecting quality, safety, and satisfaction.

Whiteboards in patient rooms: A communication tool with tremendous potential

Whiteboards in patient rooms can engage patients in their care and facilitate communication between patients and providers, but their use is highly variable and can be sporadic. Despite the presence of whiteboards in most hospital patient rooms, specific guidelines about their use have been lacking. A recent survey asking providers about their whiteboard use revealed confusion about the goals of adopting them, as well as who is responsible for filling out and updating information.

In spite of this confusion, nurses and physicians agreed that standardized whiteboard elements, including the date, providers’ names, and family contact information, should be required fields to be completed. They also overwhelmingly agreed that whiteboard use can improve teamwork, communication, and patient care. The challenge is how to bring these objectives to reality.

At the University of California, San Francisco (UCSF) Medical Center, provider teams include trainees of all levels and in many disciplines. This led to ongoing confusion for patients and their families in identifying various team members, their roles, and how to best interface and interact with them.

Learning from prior unsuccessful whiteboard pilots and the above survey findings, an interdisciplinary staff team launched a robust whiteboard pilot program to implement, audit, and evaluate the boards’ use in daily patient care. The team included physicians, nurses, hospital administrators, and representatives from patient relations and volunteer services. Hospital leadership endorsed and supported

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Audits: Measuring utilization and patient satisfaction

In 2010, the new whiteboards were piloted and implemented on 3 medical/surgical units for a 3-month period. Trained volunteers conducted systematic audits 3 times a week to assess whiteboard utilization and the accuracy of information on the boards. The interdisciplinary project team regularly reviewed audit data; their feedback was provided to all stakeholders by unit-based champions to encourage behavioral and cultural change.

Audit data also were used to test small changes made during the pilot. For instance, it became clear early on that the “anticipated discharge date” section was used completely differently on the medical units than on the surgical units. Thus, the team decided to tailor this templated section to the needs of the medical units. When they changed “anticipated discharge date” to “discharge goals,” completion rates increased. Volunteers conducted more than 600 whiteboard audits during the initial 3-month period to drive rapid improvement. Overall, completion and accuracy rates approached more than 95% for RN sections and 85% for MD ones.

Volunteer staff also administered a brief patient survey to determine the whiteboards’ impact on patients’ ability to identify inpatient care teams, goals/plans for the day, and discharge goals. Patients strongly agreed that whiteboards helped them identify their care team, improved communication between patients and providers, and increased their awareness of daily goals/plans. More than 90% strongly recommended whiteboard use as a patient-centered communication tool. Patients were less enthusiastic about the role of whiteboards in increasing their awareness of discharge plans.

UCSF Medical Center assessed the impact of whiteboard utilization on patient satisfaction by an improvement

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WHITEBOARD IMPLEMENTATION—LESSONS LEARNED

- Multidisciplinary engagement and leadership support are critical to successful use of whiteboards.
- Templated whiteboards increase provider utilization, though a balance must be reached between selecting important information for the whiteboard versus trying to include “everything.”
- Approaching decisions from the patient’s perspective keeps an eye on the goal: to engage patients with meaningful information.
- Audit and data feedback by unit-based champions is key in encouraging sustained whiteboard use and compliance.
- Integrating whiteboard use into other efforts in discharge planning/education, improved teamwork, and health literacy initiatives can further advance their role as an effective communication tool.

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Filling a blank canvas: Templated whiteboards increase provider use

All of UCSF Medical Center’s registered nurses (RNs), patient care assistants (PCAs), and attending and resident physicians (MDs) were trained on whiteboard use and strategies to integrate them into their daily workflow. A standardized whiteboard with designated RN, PCA, and MD templated fields was designed to address past uncertainty about what the board should include. Chosen patient-centered information included:

- Today’s date
- Goals/plans for the day
- RN name
- PCA name
- MD names
- Discharge goals or anticipated discharge date
- Patient/family questions for providers
- Patient/family contact information

Healthcare team members were assigned whiteboard elements to complete (eg, MD responsible for entering MD name, goals/plans for the day, and discharge goals or anticipated discharge date; RN responsible for entering date, RN name, and goals/plans for the day; and PCA responsible for entering PCA name). Anyone, including the patient or family member, could enter information for patient/family questions for provider or patient/family contact Information.

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Errors in medicine—lapses in safety, quality of care, and compassion for patients—derive from 4 interacting influencers: large systems, micro systems, patients, and clinicians. (Figure 1) Micro-system factors have received particular attention in research and health policy since the Institute of Medicine published 2 seminal reports a decade ago.\(^1\)\(^2\) The healthcare reform debate has made large health-system factors the subject of great interest in the US. Patient factors have been relatively neglected, and discussion of clinician factors has largely been relegated to the social-cognitive psychology and medical education literature.

This discussion focuses on clinician factors, which have important implications for and interactions with the other 3 domains.

How can clinician factors improve patient safety?

Understanding how to optimize clinicians’ ability to provide safe and high-quality care starts with several observations:

- Knowledge and experience are necessary, but not sufficient to guarantee good care. Clinicians must also be able to utilize their expertise and practical wisdom in different contexts.
- Competence and safety are context-dependent. Clinicians must be adaptable enough to maintain a high level of competence in a variety of settings.\(^3\)
- Clinicians need to remain adaptable, thoughtful, and flexible in the face of cognitive overload and strong emotions. To be avoided: mental shortcuts (heuristics, scripts, biases, and stereotypes) that can derail effective assessment of clinical problems and medical decisions.\(^4\)\(^5\)
- Because quality and safety depend on effectively managing cognitive and emotional stressors, clinicians’ well-being is linked to the quality of care they provide. Clinician burnout is associated with a greater propensity to make errors and a lower likelihood of providing empathic and responsive care to patients in need.\(^6\)\(^7\)

What is mindful practice?

In the course of their training and professional careers, clinicians must acquire sufficient mental stability and resilience to be attentive to context, be present and responsive, and function effectively under cognitive and emotional stress. These qualities tend to be associated with mindful practice—moment-to-moment purposeful attentiveness to one’s own mental processes during everyday work with the goal of practicing with clarity and compassion.\(^8\)

Mindful practice involves:

- **Intention**—one’s values and purpose
- **Attention**—what one notices and considers important
- **Habits**—what one does and how one thinks

**Intention:** A willingness to face challenges

Intention consists of a commitment to engage with rather than withdraw from difficult challenges, unpleasant situations, and conflict. A physician who notes that he or she has committed an error will need to own up to that error, even if it involves temporary humiliation and loss of face.

Errors can occur in:

- **The technical dimension.** Example: tying off the wrong biliary duct.
- **The interpersonal domain.** Example: ignoring a patient’s distress.

Intentions are dynamic. We would all like to assume our intentions are always pro-social—bringing competence,
compassion and caring to each moment. However, depending on the circumstance, even well-meaning intentions can also include self-interest and survival strategies. Self-interest can be subtle and unconscious, such as convincing oneself that the patient needs a procedure from which the clinician derives financial benefit. Sometimes survival tactics are necessary—an exhausted resident might just do the 

“Mindfulness has not been an explicit focus of medical training, and it is not well understood how these attributes are acquired.”

minimum to be able to go home and get needed rest. If intentions go unexamined, clinicians can confuse their underlying motivations.

Attention: Alertness to the expected—and the unexpected
Attention refers to what clinicians notice. For example, a medical student pointed out to a surgeon that a kidney just dissected from the retroperitoneum had turned blue. The surgeon ignored the comment. It was not until some time later, when the student informed the first assistant of his observation, that the surgeon noted the grey, dusky kidney—which was at the edge of his field of vision—had twisted, cutting off its blood supply.

Thus, attention is far more than having the eyes, ears, and other senses to take in information. Cognitive psychology says that attention is highly dependent on expectations, perceived credibility of the source, and expected personal consequences. People tend to discount information that does not agree with their worldview, especially when under stress. Attention requires being alert to expected and unexpected information, and choosing what to notice within the flood of sensory data in each moment.

Habits: Awareness of one’s own performance
Habits of mind associated with mindful practice include:

- Curiosity—an interest in patients before categorizing or making judgments about them
- “Beginner’s mind”—the ability to see a familiar situation with new eyes
- Presence—a quality of “being there” rather than being on autopilot

One quality of presence is described by Carol-Anne Moulton, a hepatobiliary surgeon who notes how expert surgeons tend to “slow down when they should” rather than proceed quickly during difficult surgical moments. All of these attributes of mindful practice contribute to a capacity for self-monitoring—a key to all areas of medicine.

Self-monitoring can reduce the likelihood of errors by promoting awareness of elements that may interfere with performance, including:

- Cognitive factors, such as being outside one’s area of expertise
- Emotional factors, such as feeling anxious, angry, or bored
- Technical factors, such as having inadequate skill for a task and needing assistance

This awareness can promote corrective actions—slowing down, looking something up, taking a break, asking for help, creating emotional distance or engagement, and/or consulting a colleague.

Promoting mindfulness
Mindfulness has not been an explicit focus of medical training, and it is not well understood how these attributes are acquired. However, it appears possible to cultivate mindful practice in a deliberative, conscious way so that it becomes a habit.

In a 2009 study, primary care physicians participated in a year-long series of workshops designed to promote 4 attributes of mindful practice—attentive observation, critical curiosity, beginner’s mind, and presence. Each workshop touched on an important theme in clinical practice—errors, bias, burnout, balancing work and family, professionalism, conflict with patients and other clinicians, surprises, sadness, and grief.

Every session included self-awareness exercises such as meditation and body consciousness, narrative exercises (structured story-telling about difficult moments in clinical practice), appreciative inquiry, didactic presentations, and group discussion sessions.

As a result of the workshops, clinicians reported greater mindfulness, improved mood, lower burnout, and increased
Medical radiation is a major asset in the diagnosis and treatment of patient diseases and disabilities. However, its use exposes patients to potential hazards that must be controlled so the benefits of radiation use are achieved at minimum risk to patients.

Over the past 18 months, several articles have appeared in The New York Times and other newspapers describing patients’ overexposure to radiation used for medical purposes.1-4 These stories have revealed problems in the medical use of radiation that must—and can—be addressed by medical physicists working with physicians, technologists, and others.

At issue: CT overexposures
A number of patients have been overexposed to x-ray computed tomography (CT). One series of overexposures in several institutions involves the use of CT for brain perfusion studies to identify the neurological consequences of strokes and other traumatic events. In a few cases, patients were exposed to radiation doses several times greater than necessary. The overexposures were caused by use of inappropriate CT protocols for brain perfusion studies by CT operators with inadequate education and guidance.

What causes CT overexposures?
In response to reports of CT overexposures, the American Association of Physicists in Medicine (AAPM) assembled a meeting of physicists, physicians, technologists, individuals from regulatory agencies, and industry representatives in Atlanta in April 2010. They met to determine the causes of the overexposures and to identify ways to correct them.

Two major problems surfaced at the meeting:

1. Confusing CT parameter nomenclature that varies from one make and model of CT scanner to another. This problem makes selection of proper CT parameters unnecessarily complicated, and contributes to errors in protocol set-ups for individual patients.

2. Inadequate and often outmoded guidance for selecting the proper CT protocol for each patient.

What is the solution to CT overexposures?
To resolve these overexposure issues, the AAPM established a working group charged with:

• Standardizing the console terminology across different makes and models of CT scanners.

• Developing recommended protocols for CT procedures, beginning with more complex procedures such as brain perfusion studies, and making these protocols accessible so they can be consulted and implemented wherever CT procedures are performed.

The group is in discussions with industry representatives about standardizing the terminology of CT scanner consoles. Recommended protocols for adult brain perfusion studies on the more common makes and models of CT scanners are posted on the AAPM web site.5 Protocols for other CT studies are also being developed.

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CT users’ response
The stories of CT overexposures have served as a wake-up call to healthcare facilities. Many medical leaders have initiated studies to examine the magnitude of CT exposures in their facilities. There are multiple underlying causes, including inappropriate scanner settings and overutilization. To help assure that the most appropriate scanner settings are being used some hospitals are recording individual exposures for specific patient studies so that national agencies have better data to help better define appropriate dose levels. Overutilization is a tough problem to quantify and solve, and many radiology departments are now providing more guidance to referring physicians with regards to appropriate use of CT.

Overutilization of CT imaging also contributes to unnecessary radiation exposure of patients. The causes of overutilization, and approaches to its reduction, are addressed in a recent article emanating from a meeting sponsored by the American Board of Radiology Foundation.6

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Is Medical Radiation Safe? CONTINUED FROM PAGE 5

Overexposures in radiation therapy
Another series of overexposures reported by The New York Times resulted from mistakes in the calibration and application of x-ray beams used to treat patients with various forms of cancer. Two cases were highlighted in which the patients died as a result of the overexposures, and several other cases were described where patients received too much radiation due to calibration errors.1

X-ray cancer treatment uses high radiation doses to destroy malignant cells. Great precision is required to deliver the radiation where it’s needed, while limiting the amount received by normal tissues. When that precision is compromised by errors in calibration or delivery of the radiation, the consequences can be severe, as evident in the cases described in the New York Times articles.

The causes of radiation therapy overexposures
Stimulated in part by the New York Times series,7 the AAPM convened a meeting in Miami in June 2010 to bring together physicists, physicians, technologists (therapists), representatives of regulatory agencies, and senior industry executives. Their purpose was to identify the causes of errors in radiation therapy, establish approaches to reducing these errors, and protect patients from disastrous consequences if errors do occur.

Several patient safety problems surfaced during their discussions, resulting in approximately 20 recommendations for improvement; 10 of these are highlighted below. The problems and recommendations were described in an article, “Improving Patient Safety in Radiation Oncology,” published simultaneously in the January 2011 issues of Medical Physics and Practical Radiation Oncology.8

The AAPM is discussing follow-up to the recommendations, which will in part be the responsibility of the Institute for the Assessment of Medical Devices, a collaboration between the AAPM and the Morgridge Institute of Research based in Madison, Wisconsin.9

10 RECOMMENDATIONS TO PREVENT RADIATION THERAPY OVEREXPOSURES

The AAPM meeting convened in Miami in June 2010 produced the following recommendations8:

1. Reduce distractions and traffic at the console of the treatment x-ray machine so the operator can focus exclusively on treating the patient.
2. Simplify the treatment console so the operator has fewer computer screens to monitor and fewer parameters to track during treatment.
3. Reduce reliance on computer control of the treatment and return knowledge about the delivery of treatment to the operator.
4. Provide early-warning systems to indicate when a treatment exceeds defined parameters, or an equipment malfunction or operator mistake occurs.
5. Use checklists and implement a double-check verification process to ensure that the patient and machine set-ups are proper before commencing treatment.
6. Apply statistical tools to the treatment process to identify potential problems and to analyze the cause of problems when they occur.
7. Establish a national reporting system for errors and malfunctions to enable collective learning from problems in treatment delivery at specific institutions.
8. Encourage external audits and accreditation of treatment facilities to ensure periodic review of the adequacy of their treatment regimens.
9. Reinforce reliance on written policies and procedures to guide the treatment process with individual patients.
10. Empower all members of the treatment team to call “time out” when a treatment design seems inadequate or a treatment process encounters a problem.

References
Using Patient-Centered Whiteboards

in Press Ganey patient satisfaction survey scores on the participating medicine units. While it is not possible to conclude the improvements were solely due to the whiteboard efforts, the “likelihood to recommend” rating increased from a mean of 88.7 (52nd percentile) during the 3 months prior to the pilot to 90.6 (74th percentile) during the 3 months during the pilot.

Ahead: Interactive whiteboards?
The ubiquitous whiteboard seen in every hospital room can be leveraged to immediately improve the patient experience and engage patients in their care. In the future, the continued growth of health information technology solutions makes a more interactive whiteboard a true possibility—perhaps even integrated with a hospital’s electronic health record and/or a patient portal.

These advances could further engage patients, allowing them to pose questions to providers, seek health information, and receive tailored discharge counseling and education. In the meantime, the low-technology whiteboard can begin moving toward those ambitions. NPSF

Mindful Practice

empathy and orientation toward patients’ clinical needs. While these results are preliminary, they set the stage for other activities to promote clinicians’ ability to use their mental capabilities to promote well-being, reduce errors, and provide compassionate, high-quality care. NPSF

References


NPSF Awards Honor Achievement in Patient Safety

Each year NPSF recognizes individuals and organizations for leadership and achievement in patient safety. The following awards were presented at the 2011 NPSF Annual Congress in Washington, DC.

National Patient Safety Foundation Chairman’s Medal
Awarded in recognition of emerging leadership in the patient safety field.
Recipient: Robert Connors, MD, President, Helen DeVos Children’s Hospital

National Patient Safety Foundation Socius Award
Given in recognition of work that promotes positive and effective partnering between patients/families and providers in pursuit of improved patient safety.
Recipient: Massachusetts General Hospital and Massachusetts General Physicians Organization, Program to Coordinate Care for High-Risk Medicare Patients

National Patient Safety Foundation Stand Up for Patient Safety Management Award
Granted to a member hospital of the National Patient Safety Foundation’s Stand Up for Patient Safety™ program in recognition of the successful implementation of an outstanding patient safety initiative that was led by, or created by, mid-level management.
Recipient: Franciscan St. Anthony Health – Michigan City, Sentinel Lymph Node Visualization Rates

Patient Safety Initiative at America’s Public Hospitals Leadership Award
Awarded to a participating member of the grant-funded Patient Safety Initiative at America’s Public Hospitals, recognizing the successful implementation of an outstanding patient safety program and/or project that was created, implemented, or advanced through participation in the initiative.
Recipient: Harborview Medical Center

The Doctors Company Foundation Young Physicians Patient Safety Award
An award to recognize young physicians for their deep personal insight into the significance of patient safety work, given by the Doctors Company Foundation in partnership with the Lucian Leape Institute at the National Patient Safety Foundation.
Recipients:
Dan Henderson, University of Connecticut School of Medicine, Harvard School of Public Health
Mengyao Liang, University of Illinois at Chicago
Andrey Ostrovsky, Boston University School of Medicine
Noah Rosenberg, University of Massachusetts Medical School
Wael Salem, Mayo Medical School
Christopher Thom, University of Virginia

Read more about the award recipients at www.npsf.org.

A Tribute to Ellison C. Pierce Jr., MD

With great sadness we note the passing of Dr. Ellison Pierce Jr., MD, on April 3, 2011. Known as “Jeep” by friends and colleagues, Dr. Pierce was widely recognized as a pioneer and driving force in the improvement of anesthesia patient safety. A former president of the American Society of Anesthesiologists and founder of the Anesthesia Patient Safety Foundation in 1985, Jeep was at the forefront of early efforts that helped to establish anesthesia patient safety as a discipline, setting a model for initiatives in the broader healthcare context and providing a template for the founding of the National Patient Safety Foundation. Jeep continued to pursue patient safety throughout his career, and his efforts extended beyond the field of anesthesiology. He was a founding member of the NPSF governing board and executive committee and was instrumental in shaping the direction and mission of the organization at its outset.

NPSF honors Jeep, his remarkable career, his inspiring presence and the indelible mark he left on health care and on our organization. He was a friend and a colleague and, while he will be sorely missed, he will always be with us as we carry on the patient safety work that was so important to him and to the patients we all serve. We extend sincere condolences to Jeep’s family, friends, and colleagues and join with many others in the patient safety community in mourning his loss.

The Institute for Safe Medication Practices (ISMP), in partnership with the Health Research and Educational Trust (HRET) and the American Hospital Association (AHA), has released the 2011 ISMP Medication Self Assessment for Hospitals. The assessment is designed to provide hospitals with a tool to gauge the safety of their medication of their medication practices, track their performance over time, and compare their experiences with those of similar organizations. Hospitals will be able to submit self-assessment data anonymously through a secure, password-protected website.

Many organizations, including NPSF, have endorsed the assessment. For more information and to obtain a copy of the assessment, go to www.ismp.org/selfassessments/Hospital/2011/Default.asp. The deadline for submitting data is August 31, 2011.

NPSF Announces Patient Safety Research Grant Opportunity

The NPSF Research Grants Program is accepting applications for grant projects beginning in 2011. In this first stage of a two-stage application process, Letters of Intent (LOIs) are solicited for research and development that is broadly related to identifying the causes of preventable injuries and errors and/or developing prevention strategies and methods to implement them. From these LOIs, a subset will be selected for preparation of a final proposal.

The NPSF Research Grants Program seeks to stimulate new, innovative projects directed toward enhancing patient safety in the United States. The program’s objective is to promote studies leading to the prevention of human errors, system errors, patient injuries, and the consequences of such adverse events in the healthcare setting. Since 1998, the program has supported 36 research projects with a total of nearly $3.6 million in grant funding. Many of these grants have been awarded to interdisciplinary teams to support research on diverse topics in areas such as medication errors, organizational design, and disclosure or communication issues.

The deadline for submission of letters of intent is September 6, 2011. For more information and application instructions, go to www.npsf.org/r/.

Plan to Attend the Lucian Leape Institute Annual Forum & Gala

Special Guest Speaker: Atul Gawande, MD, MPH

Please join us for the Lucian Leape Institute Fourth Annual Forum & Gala on September 22, 2011, in Boston. The event begins with afternoon discussions led by Institute members, followed by a special evening including a welcome reception, dinner, and entertainment, featuring special guest speaker Atul Gawande, MD, MPH, surgeon, professor, renowned researcher, and author of three New York Times bestselling books, including Complications: A Surgeon’s Notes on an Imperfect Science.

For details and to make reservations, go to www.npsf.org/lli/2011Gala.php.