Are You Listening…Are You Really Listening?

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Objectives: This is the first of a series of articles addressing the concepts, tools, and resources that can be applied to an enormous performance gap in verbal communication among patients, families, frontline caregivers, physicians, and health care-organization administrative and governance leaders.

Methods: This first paper takes a “concept-centric” approach by laying the knowledge foundation necessary to improve communication. It references how such concepts may be applied to accelerate and improve adoption of best practices such as the National Quality Forum-Endorsed Safe Practices for Better Healthcare—2006 Update. The second article of the set takes a “safe practice-centric” approach to illustrate how listening concepts, tools, and resources may be leveraged to improve patient safety through the National Quality Forum (NQF) Safe Practices.

Results: This first article defines and supports recognition of key concepts including human factors performance, authority gradient factors, caregiver-to-caregiver barriers, health literacy factors, and the art and science of active listening.

Conclusions: Use of these concepts can have terrific impact on preventable patient harm and optimization of care.

Key Words: verbal communication; active listening


Communication failures between patients and health care personnel are the cause of systems failures and human errors that lead to enormous preventable harm to both patients and caregivers. Only too often do we cite that 70% of sentinel events are caused or exacerbated by lack of communication, yet few have launched a systematic tactical attack on this fundamental problem.1,2 There is a tremendous difference between hearing and practicing the art of really listening. In the words of national patient safety leader, Julie Ann Morath, RN, MS, Chief Operating Officer, Children’s Hospital and Clinics of Minnesota,

“The art of listening, REALLY listening, is foundational to clinical practice. When you listen, it’s a demonstration of respect, and listening in itself is a healing practice.”

She goes on to say, “When you fail to listen, the patient and their family have not had the opportunity to tell their story, and when you’ve missed that opportunity, there’s a sense of loss and emptiness.”3 She implores us to do much better for our patients and their families.

We pride ourselves on having the greatest health care system in the world, yet the World Health Organization has ranked us as 37th and the lowest of industrialized nations. It takes 17 years for new knowledge generated by randomized controlled trials to be incorporated into practice, and when it is adopted, implementation is highly uneven at best.4 Even strongly supported evidence-based best practice is adopted less than 55% of the time.5 Is there something to learn about improving our listening with patients and health care colleagues that may allow us to save lives, save money, and build value in our communities? Absolutely.

Perhaps, by weaving together certain core listening concepts and applying them to a discrete set of evidence-based practices, health care governance and administrative leaders, managers, physicians, nurses, and other frontline caregivers can take a moment and ask themselves, “Are we listening, are we REALLY listening?”

THE LISTENING PERFORMANCE GAP

Medical mishaps are a pervasive problem in health care organizations. The 1999 Institute of Medicine (IOM) study To Err Is Human cited that between 44,000 and 98,000 people die every year in U.S. hospitals because of medical errors. This report clearly captured attention; however, many believe that the numbers are far greater and that much of the problem stems from communication barriers.6 The terrific success of the Institute for Healthcare Improvement’s 100,000 Lives Campaign was calculated to have saved 122,300 lives during the first 18 months, with only 6 interventions in approximately
One out of 5 imaging and laboratory tests is undertaken and 1 of 7 admissions to the hospital is due to missing information. One of 6 hospital beds is occupied by a patient who has been readmitted with the same problems previously treated. Such readmissions consume 60% of hospital resources, and as many as one third are preventable, depending on how we handle information at discharge. Compliance by patients in the use of medications is very low at approximately 50%. Nurses are leaving the profession in droves with many attributing overwork, under-appreciation, lack of autonomy, communication failure, and patient safety risks as some of the drivers of their departures. Caregivers are even being criminally charged for their role in systems failures as they result in patient harm. They feel vulnerable and are frequently the people blamed for systems failure-linked human error.

In no way can these hospital performance gaps be completely explained by failures in verbal communication of information; however, some portion must be attributable to this problem. A review of the literature reveals examples of the impact of communication failures with patients. For instance, in late 1999, a study examined medical mishaps in which a sample of 26 residents was involved at a 600-bed U.S. teaching hospital. Residents reported a total of 70 incidents. The most commonly cited contributing factor was some aspect of communication. The conclusion of this study was that the occurrence of everyday medical mishaps is associated with faulty communication; but poor communication is not simply the result of poor transmission or exchange of information.

Communication failures are far more complex and relate to hierarchical gradients, concerns with upward influence, conflicting roles and role ambiguity, and interpersonal power and conflict. A clearer understanding of these dynamics highlights possibilities for appropriate interventions in medical education and in health care organizations aimed at improving patient safety.

These findings are consistent with other research showing a strong link between poor communication and errors and adverse events. Although few studies in medicine have systematically examined this association, the implications drawn from a variety of sources are that faulty communication in the hospital environment is widespread and results in a number of untoward consequences for patients, caregivers, and the organizations in which they are embedded. Faulty communication increasingly is being implicated in the evolution of medical errors and adverse events. The solution often proposed is to promote better information transfer; however, this is easier said than done. This goal is hard to achieve for attending clinicians in the best of circumstances, but it is even more challenging for residents in training who are caught in a web of complex relationships. Moreover, communication failures entail more than the faulty transfer of information. They are a consequence of individual, relational, and systemic factors, which suggests that more effective communication is more difficult than it looks.

The bottom-line aim of improving communication in the health care environment is to improve care quality and patient safety. In the words of Arlene Salamandra, one of the patient advocate authors of this article who was herself a victim of a preventable medical error, states that communication was the major breakdown in what happened to her family.

She refers to the power of patient stories: “I think every healthcare provider needs to hear our stories. I don’t think that change will come until caregivers hear these personal stories and becomes aware of how patients feel, and all that we go through.”

In Crossing the Quality Chasm: A New Healthcare System for the 21st Century, the frequently-cited IOM report published in 2001, “patient-centered care” was defined as an outcome of the health care system we need. The essential dimensions of patient-centered care include but are not limited to:

- accessible and customized information, communication, and education;
- continuous collaboration, coordination, and integration of care among providers, across conditions and settings;
- shared decision-making of clinicians with patients and their families;
- self-efficacy and self-management skills for patients;
- patients’ experience of care;
- provider-patient partnership; and
- enhanced cultural competence of health care providers.

In order to fully deliver patient-centered care, information transfer and exchange is critical. We propose that the application of listening concepts, the applications of tools, and the learning from key resources can have impact on the safety of patients and can reduce preventable harm.

In this article we propose five core listening concepts that can be applied to impact patient safety:

1. Human Performance Factors,
2. Authority Gradient Factors,
3. Caregiver-to-Caregiver Communication Factors,
4. Health Literacy Issues,
5. Active Listening principles.

These concepts are the subject of this review to provide a baseline information set that can be applied to patient safety. In an article that will follow this one as a series, we will apply the concepts to the NQF Safe Practices as an illustration of translation of the knowledge into action.
The 30 safe practices defined in the National Quality Forum-Endorsed Safe Practices for Better Healthcare—2006 Update provide a terrific opportunity to improve listening skills and methods. These 30 safe practices were endorsed by a diverse group of stakeholders pursuant to the NQF’s formal consensus development process.

In 2002, the NQF originally published Serious Reportable Events in Healthcare, which was updated in 2006 and has identified 28 adverse events that are serious, largely preventable, and of concern to both the public and health care providers. These NQF serious reportable events are events that can clearly be positively affected by optimized transfer of information between patients and caregivers, and between caregivers.

**HUMAN PERFORMANCE FACTORS**

**Background**

Knowledge about human performance, often referred to as human factors, has shed new light on the contributing elements to medical error and systems failures that lead to patient harm. Human performance is predictable with typical error rates. For instance, we make errors of commission, such as misreading a label, 3 out of 1000 times; we make errors of omission (when we forget to do something) without reminders, 1 in 100 times; we make errors of omission 3 out of 1000 times when the item is embedded in a procedure. Simple arithmetic errors occur 3 out of 100 times when we are self-checking. Furthermore, when we are under high stress, or when dangerous activities are occurring rapidly, we fail 1 out of 4 times with simple tasks. Given such predictable performance, it is incumbent on us to build in systems to prevent such failures.

**Human Factors in The Hospital Environment**

Multitasking is the norm in U.S. health care. A body of experimental studies addressing cognitive workload has underscored the limited processing capacity and fragile nature of short-term memory, which is relevant to understanding the risks inherent in interruption-driven environments such as clinical care. Individuals typically can store 5 to 9 pieces of information in short-term memory and can maintain information for about 20 seconds without active rehearsal, after which the information is lost. Given limited processing capacity, new information stemming from interruptions can only be processed by dislodging earlier received information.

Human factors such as multitasking, distractions, and interruptions can result in a care provider unintentionally failing to document or communicate critical patient information, which could potentially lead to catastrophic harm to the patient. Coiera et al studied nurses in a busy hospital to research the effects of complex human factors in communication. During just over 35 hours of observation, 1286 distinct communication events were identified, representing 36.5 events per person per hour. A third of the communication events (30.6%) were classified as interruptions, giving a rate of 11.15 interruptions per hour for all subjects; 10% of communication time involved 2 or more concurrent conversations.

Dayton and Henriksen in a separate study that correlates to Coiera’s data found that nurses may experience an average of 300 interruptions during an 8-hour shift.

More recently, Ann Hendrich, MS, RN, Vice President for Clinical Excellence Operations with Ascension Health, provided preliminary findings of a soon-to-be-published multi-institutional time/motion study of more than 2000 nursing shifts. In more than 30 institutions, nurses were found to be stationary for less than 20 seconds, pass their nursing station as many as 200 times, go to medication cabinets or storage more than 100 times, and travel between 2 and 5 miles per shift. Coupled with the frequency of interruptions during their work, mentioned below, it is not difficult to understand why our medical error and harm rates are so high. Interestingly, the “most wired” hospitals with more technologic support systems did not have dramatically different patterns.

Physicians, who are under increased pressure to see several patients per hour, have been found to interrupt 69% of patient interviews within 18 seconds of the patient beginning to speak. As a result, in 77% of the interviews, the patient’s true reason for visiting was never elicited.

**"Academic medicine is failing both doctors and patients by routinely requiring exhausted doctors to work marathon 30-hour shifts. The human brain simply does not perform reliably for 30 consecutive hours without sleep."**

Barger et al reported that when first-year doctors-in-training worked 5 extra-long shifts of 24 hours or more at a time without rest, there was a 300% increase in their chances of making a fatigue-related preventable adverse event that contributed to the death of a patient. Interns were 3 times more likely to report at least 1 fatigue-related preventable adverse event during the months in which they worked between 1 and 4 extended duration shifts. In the months in which they worked more than 5 extended duration shifts, the doctors were 7 times more likely to report at least 1 fatigue-related preventable adverse event, and they were also more likely to fall asleep during lectures, rounds, and clinical activities including surgery.

Although interns and resident doctors-in-training have limitations on the hours they can work, there are no such regulations for nurses who are at the front line and at very high risk for human error and systems failures.

James Reason, an expert on safety and human error, recently commented. [Oral Communication, Sept. 1, 2004]:

**"We can’t change the human condition, but we can change the conditions under which humans work."**
Clearly, some responsibility must be borne by hospital administrators for the conditions and systems such as work schedules. When we know the performance limitations of our workers, we must make sure that our systems do not pre-dispose caregivers to make predictable errors.

The degradation of human performance due to fatigue can be equivalent to degradation due to alcohol. Researchers found that the performance decrement for each hour of wakefulness between 10 and 26 hours was equivalent to the performance decrement observed with a 0.004% rise in blood alcohol concentration. Therefore, after 17 hours of sustained wakefulness, cognitive psychomotor performance decreases to a level equivalent to the performance impairment observed at a blood alcohol concentration of 0.05%, which is classified as moderate alcohol intoxication by western standards. As about 50% of shift workers do not sleep on the day before the first night shift, and levels of fatigue on subsequent night shifts can be even higher, the performance impairment associated with shift work could be even greater.

A patient advocate author of this article, Dan Ford, makes the following observation regarding the human factor of fatigue:

"We need to listen to our bodies, which will tell us what we can and cannot do any longer, and sometimes others need to call a time-out for us."

Dr. Lucian Leape, a courageous and tireless champion often referred to as the "father of patient safety," is recognized for his research and expertise on the effects of human factors on performance and patient safety. In his 1994 article, Dr. Leape cited seminal work by Rasmussen and Jensen which classified human performance processing into 3 levels: (1) skill-based, controlled by stored patterns of instructions, and largely unconscious; (2) rule-based, in which solutions to familiar problems are controlled by stored rules; (3) knowledge-based, which is used for new situations in which critical thinking, based on the use of stored knowledge, is necessary. Factors such as fatigue and distraction that have a negative impact on performance were found to have greater impact on knowledge-based tasks requiring critical thinking skills. The act of "active listening" requires much more cognitive effort than merely registering the transmission of another person's verbal communication. Therefore, conditions which negatively affect human performance, such as fatigue and distraction, could seriously impede the ability to listen actively.

Errors were classified by Reason at each level of the skill-, rule-, and knowledge-based model described previously. Rule-based and knowledge-based errors involve conscious thought and are termed "mistakes." Skill-based errors are called "slips." These are unconscious glitches in automatic activity. Slips are errors of action and often occur as a result of a temporary loss of memory—"forgetting." Loss-of-memory slips are frequently caused by interruptions. A variety of factors can divert attention control and make slips more likely. Physiological factors include fatigue, sleep loss, and illness. Psychological factors include other activity ("busyness"), as well as emotional states such as boredom, frustration, fear, anxiety, or anger. All these factors lead to preoccupations that divert attention. Psychological factors, though considered "internal" or endogenous, may also be caused by a host of external factors, such as overwork, interpersonal relations, and many other forms of stress. Environmental factors, such as noise, heat, visual stimuli, motion, and other physical phenomena, also can cause distractions that divert attention and lead to slips.

Patti O'Regan, one of the patient advocate authors of this article, makes the following observation relating to human performance factors:

"The hospital's deepest resource of care information is patients and their families; this is because these people have the ability to share core root cause information, from symptom to outcome, that can drive the quality and safety of care in hospitals."

She goes on to state: "Allowing certain controllable human factors, e.g., distraction, interruptions, excessive workload, greater than 12-hour work shifts, fatigue, clinical knowledge-base and communication skills’ deficits to proliferate, and be culturally accepted in and part of the design of health care environments interferes with patients and families being actively listened and responded to in a timely manner, which is a recipe for continuing preventable medical error disaster."

In summary, human performance factors define the "performance envelope" of human beings who deliver the care in our hospitals. Understanding the limits of human performance and the factors that degrade it are the responsibility of the governance, senior leaders, and mid-level managers. Furthermore, it is their responsibility to put the systems in place to ensure that the number 1 person or the organization is operating outside of a safe performance envelope. Listening and the transfer of verbal communication between caregivers and between caregivers and patients is in no small part a responsibility of leadership. The human factors performance envelope is a powerful concept that must be considered when trying to improve performance and reduce patient safety failures.

**AUTHORITY GRADIENT FACTORS**

Hierarchical relationships and status differentials among physicians, nurses, assistants, and residents hinder effective listening and communication which puts patients at risk. There
is a reluctance to send information up the authority gradient. Hierarchical relationships discourage lower-status individuals from communicating about and drawing attention to problems that may put them at odds with those holding more power.30

The term “authority gradient” is a term that was first coined in aviation when it was noted that because of a hierarchical relationship copilots may not be able to communicate effectively, which is most important in stressful situations. Unintentional accidents related to authority gradients have been found to occur in many industries besides aviation, which include aerospace and chemical industries. This issue is largely unrecognized even though it was introduced in the IOM Report To Err Is Human.6,38

In a culture in which the authority or power gradients are maintained, there is clear reluctance for lesser-status individuals to speak up. They feel they will not be listened to and that they may be criticized. A study of 1200 nurses found that 31% felt that intimidation, concerns about retaliation, and a belief that their concern would not be listened to or dealt with led to severe barriers to reporting problems with physicians.39

In general, there is little incentive for the top of the hierarchy to want to change. For instance, a recent literature search on the topic of physician-nurse communication found more than 800 articles in the nursing journals, and fewer than 40 were found in physician journals. A recent survey of hospital staff across the entire country, conducted by the Institute for Safe Medication Practices, concluded that intimidation clearly has an impact on patient safety. Almost half (49%) of those surveyed reported that because of intimidation they had not handled order clarifications or questions about medication orders appropriately. Approximately 40% asked another professional to talk to the prescriber, rather than interact with the particularly intimidating prescriber. Three quarters (75%) had asked colleagues to help them interpret an order or validate its safety in order to avoid having to interact with an intimidating prescriber. Nearly half (49%) felt pressured to accept an order or give a medication despite their concerns. As a result, 7% of respondents reported that they had been involved in a medication error during the past year in which intimidation clearly played a role.40

Authority gradients between patients and caregivers are as important as such gradients between caregivers. Often the patient and his family feel that they are at the bottom of the hierarchy. Becky Martins, a patient advocate who experienced a medical error in her family, stated that “you have a system that patients are entering into and, yet, you’re not listening to them or including them as part of the solution.”3 She goes on to say:

“You are never going to achieve quality healthcare without bringing the patient into the loop, listening to them, empowering them and educating them to be a safer patient.”

A culture of safety is one in which real listening occurs no matter where in the hierarchy the information is coming from. In such a culture, all stakeholders will seek to help alleviate authority and power gradient factors and the risk for the resulting errors.

CAREGIVER-TO-CAREGIVER COMMUNICATION FACTORS

Health care and nonhealth care examples of good and bad communication and teamwork have captured the attention of the national press.

The National Aeronautics and Space Administration events of the Apollo 1 space capsule fire and Challenger explosion illustrated how communication and cultures bound by communication barriers can spell lethal results.41 Communication about risk during Apollo 1 space craft testing in a pure oxygen environment and communication between teams regarding O-ring performance at low ambient temperatures led to preventable deaths when viewed through the retrospect-o-scope. Conversely, teams performed in an extraordinary fashion communicating in a very stressful environment after an explosion during the Apollo 13 mission that saved the lives of 3 astronauts destined for certain death [oral Communication, Astronaut Admiral T. K. Mattingly, April 15, 2004].

Dan Ford, one of the patient advocate authors of this article, reiterates about caregiver-to-caregiver communication.3

“At the heart of teamwork is communication, and at the heart of communication is LISTENING.”

Teamwork

When we consider caregiver-to-caregiver communication and listening, the concept of a well-functioning team must be discussed. A team is defined as a group of 2 or more individuals who must interact and adapt in order to achieve a common objective. In order for a team to become successful, each individual must become aware of both the skills that enhance and the barriers that impede the effectiveness that a team has in achieving its common goal of patient safety and improved patient outcomes.42-44

A recent study, performed by the Cardiff University School of Medicine, adds confirmation to the assumption that distraction and lack of focus during listening significantly affects our ability to accurately retain the information given. Emergency room staff at several large hospitals was tested on numerous occasions following the handover of a patient from an ambulance crew. Emergency department staff receiving patients from ambulance crews will naturally be focused on their own initial assessment of the patient, which often
distracts them from listening carefully to the ambulance crew’s handover. Important information may be lost after the ambulance crew leaves. The study revealed that only 49% to 56% of the information reported was accurately retained by the ER staff.45

A very recent review of The Joint Commission experience with sentinel events by Dr. Peter Angood revealed that communication and leadership continue to be major issues and that compliance with best practices have not improved as expected.2,46

Barriers to caregiver-to-caregiver communication are as diverse as any societal communication problem. Lack of time, multitasking, use of jargon or poor explanation, and other concepts developed in this paper such as inability to listen actively, power gradients, literacy issues, and general lack of a culture where caregiver-to-caregiver communication is encouraged and rewarded can all lead to degraded caregiver-to-caregiver communication.

The members of a well-functioning team understand each other’s role and responsibilities, easily adapt to an ever-changing environment, anticipate team members’ needs, trust each other’s judgments, consider alternative solutions provided by teammates, look out for each other, and together try to anticipate errors before they happen. Effective teams, which include members from different disciplines and levels, come together often to discuss, evaluate, and make improvements to their process. Intimidating authority gradients, which often become barriers against the sharing of ideas and concerns, have been flattened. There is true collaboration and mutual respect.42–44

The benefits of improved teamwork are well documented in the literature. In general, teamwork results in enhanced effectiveness, more successful patient outcomes, fewer and shorter delays, improved morale and job satisfaction, increased efficiency, lower stress, and improved patient satisfaction.47,48

Members of highly effective teams have leadership and policies that support each member’s right to comfortably speak up for patients, themselves, and each other when they feel that an unsafe situation exists, that an error may occur, or when intimidation resulting from authority gradient factors is interfering with listening or communication.43,44

Effective teamwork does not come naturally. Leadership must recognize that including listening and communication skills in the formal teamwork training for staff is imperative. Teamwork effectiveness increases as the team’s level of listening and communication skills increases. Leadership of High Reliability Organizations supports the success and effectiveness of their teams by ensuring that a culture of safety and of learning exists which promotes ongoing training and education in the area of listening skills and improved ways of communicating. Resources are readily provided to support the learning needs of the organization. During teamwork training in high reliability organizations, all team members (doctors, nurses, and support staff) are trained together in one group through simulated practice. The simulated scenarios closely match the situations that the team members will encounter. Together, team members practice communication skills, how to resolve conflicts, and how to make team decisions.42–44

Handoffs

A handoff is defined as the transfer of role and responsibility from 1 person to another in a physical or mental process. Handoffs involve the transfer of rights, duties, and obligations from 1 person or team to another. Hospitals generally have informal handoff procedures, but they tend to vary from unit to unit or even caregiver to caregiver.48

Organizations report a growing evidence that communication breakdown during handoffs is the single largest source of medical error. The Joint Commission, as of January 1, 2006, now requires hospitals to establish standards for handoff communications and address the cultural barriers that interfere with the exchange of patient information between doctors and nurses.49

The quality of handoff directly influences the delivery of care for the following shift. Effective handoff practice prepares and enables caregivers to take over the care of patients and continue to deliver high-quality care specific to individual patients based on actual and perceived needs.50

Handoffs and transfers in care are especially vulnerable to communication breakdown. Without the use of standardized handoff forms, errors and oversights often occur when a patient is moved to another unit or turned over to a new care provider because communication is unorganized and factors such as noise, interruptions, distractions, and intimidating impatience from the one receiving the information, interfere with listening.51

Poor listening and communication skills can cause breakdowns in the handoff process including lack of communication of vital elements of the care plan, lack of reconciliation of the medication regimen that could lead to a patient getting a dose of a drug that was already administered on a previous shift, missing diagnostic imaging and laboratory test results, the absence of follow-up care among practitioners, and the absence of advanced care directives across settings, which could result in the inappropriate resuscitation of a patient because caregivers are unaware of a “do not resuscitate” order.

Ineffective handoff can lead to wrong treatment, delays in medical diagnosis, life-threatening adverse events, patient complaints, increased health care expenditure, and increased length of hospital stay.52

A study in the UK compared the reliability of different handoff methods. Only 2.5% of patient information was retained using the verbal-only handoff method and 99% was retained when a printed standardized form containing all patient information was used.53

When caregivers fail to listen and communicate correctly, errors occur that can lead to real harm and even death to patients. We are reminded of this truth when we listen to Sorrel King tell us the story of her 18-month-old daughter, Josie. Caregivers failed to correctly communicate changes in orders to each other regarding conversion from intravenous to oral fluids, and failed to listen to Sorrel when she voiced her concerns. When the wrong medication was given to her dehydrated child, it killed her. As Sorrel states it so clearly,
“Josie’s death was not the fault of one doctor, or one nurse, or one misplaced decimal point. It was the result of a total breakdown in the system. It was a result of a complete lack of communication between the different teams. It was the result of doctors and nurses not listening to a concerned parent. It was the results of the combination of many errors, all of which were avoidable.”

Good Teams Use Structured Communication Tools

Fewer errors occur when teams effectively combine active listening skills and the consistent use of structured communication tools such as read-back, SBAR (Situation-Background-Assessment-Recommendation),\(^7\) and standardized handoff report forms for communicating critical information among team members. These standardized systems avoid the use of memory and systematically organize important patient information.

The practice of accepting verbal/telephone orders and critical lab values without the use of a read-back process can result in information being misunderstood or misinterpreted, which can then lead to errors. In the 2007 National Patient Safety Goals, The Joint Commission requires organizations to verify verbal or telephone orders by having the person receiving it “read back” the complete order to the person initiating the order. This is also one of the Safe Practices, specifically Safe Practice #9 of the NQF-Endorsed Safe Practices for Better Health Care—2006 Update.\(^26\) This practice requires discipline which is frequently the missing link to consistent and reliable execution.

Multiple Physicians, Multiple Treatments

In many clinical settings, a patient is often cared for by several providers who either share the responsibility of care or are responsible for a particular part of it. This often leads to misunderstanding or conflict as to where the boundaries of responsibility lie. When there is no clear communication between providers about their roles and areas of responsibility, patients are at risk for errors as a result of the gaps caused by the diffusion of responsibility.\(^30\) The average American senior currently takes 9 different prescription medications a year—many of which treat chronic conditions that require daily drug therapy. One in 4 seniors is treated by 4 or more physicians, and 1 in 3 seniors uses 4 or more pharmacies to fill his prescriptions.\(^54\)

Jennifer Dingman, one of the patient advocate authors of this paper, shares her experience. “The entire situation that led to the loss of my mother concerned listening. Even though a pharmacist told us that he believed that a medication was causing her symptoms, 2 doctors would not listen or investigate the possibility. When my mother entered the hospital, again, no one listened to her or me, nor did the providers listen to each other.”

“Listening would have saved my mother’s life.”

“It is a shame that after all of this time, I still hear stories from others similar to my own. The majority of situations that come to my attention from others who have suffered loss have a major component involving listening.”

Critical issues in communication between caregivers are multi-factorial with human factors, authority gradients, and direct verbal communication all focused through the lens of how we work together as teams. It is this teamwork that is vital to the safety of our patients.

Great teamwork requires leadership, trust, and high reliability communication. Virtually every one of the NQF Safe Practices for Better Health Care\(^24\) that will be addressed in the second article of this series is dramatically affected by communication.

HEALTH LITERACY

Health literacy has been defined as a patient’s ability to read, comprehend, and act on medical instructions.\(^55\) The IOM defines health literacy as “the degree to which individuals can obtain, process, and understand the basic health information and services they need to make appropriate health decisions.”\(^56\)

Health Literacy Gap

Much of the health literature widely available to the public is written in English at a 10th-grade reading level, yet the average person in the US has a reading ability at a sixth-grade level. A growing body of research demonstrates that patients recall and comprehend less than half of what clinicians explain to them.\(^57,58\) Fewer than half of all patients understand written medication instructions.\(^59,60\)

According to the 2003 National Assessment of Adult Literacy (NAAL), almost 45% of the United States population (or 93 million Americans) has only basic or below basic literacy skills: The National Assessment of Adult Literacy categorizes Below Basic as the ability to perform only the most simple and concrete literacy skills. That means that only 55% of Americans can consistently read the headlines of a newspaper or, more importantly, health care instructions; yet most physicians speak to these same patients at a college level.\(^61\)

After documenting that 90 million Americans have trouble understanding medical advice, the IOM called for
changes in order to eliminate the costs of consumer confusion including the recommendation that health care information should not be written above a fifth-grade reading level.\textsuperscript{62}

Limited health literacy is common among elderly patients, patients with chronic diseases, and patients of lower socioeconomic status or educational attainment. Studies have shown a connection between failure to understand health information and poor patient compliance.

Patients with limited health literacy not only struggle with written documents, but also report troubles with oral communication in the clinical encounter. Many patients who have low literacy skills mask what they feel are their inadequacies. For them, there is too much shame in admitting that they do not read well, or that they do not understand. Physicians, nurses, and other health professionals may never know that among the patients they have seen for years, some have suffered silently, grasping far less than others would have expected.\textsuperscript{61}

\section*{Health Literacy Gap Between Clinical Staff and Non-clinical Leaders}

When health care leaders are willing to acknowledge that there are health literacy issues that exist between clinical and non-clinical staff, they can then take the time to actively listen to and include involvement from frontline staff. Material can then be written and presented in a “common” language understandable among all caregivers.\textsuperscript{61} When this gap is not addressed, organizations falter in performance improvement as there is a great divide between finance and operations centered administrators and clinical frontline caregivers.

\section*{Closing the Gap}

The communications gap between the abilities of ordinary citizens and the skills required to comprehend everyday health care information must be narrowed. Hundreds of studies have revealed that the skills required to understand and use health care-related communications far exceed the abilities of the average person. Health literacy is not simply dependent on level of education or reading ability. For even the most health-literate, the high literacy demands of health care delivery provide a considerable challenge, and it has been suggested that it is important to make written materials and verbal communications as simple as possible.\textsuperscript{56}

\section*{Limited Health Literacy and Risk of Adverse Events}

There is a considerable amount of research showing that low health literacy and its associated miscommunications and misunderstandings increase the risk of adverse events in health care. In its 2004 report, Health Literacy: A Prescription to End Confusion, the IOM states that “it is well documented that people with low health literacy are hospitalized more often and for longer periods of time, use emergency departments more frequently, and manage their diseases less proficiently.”\textsuperscript{56}

When providers are unwilling to take the time to listen carefully to patients, during which an assessment of the patient’s level of health literacy can be made, the provider instead uses complicated, hastily spoken medical terminology that he, as the provider, may be more comfortable with. The unfortunate result is that communications break down and the patient is left without a clear understanding of the implications of his diagnosis, prevention, or treatment plans. This is often when preventable harm occurs.

Efforts to reduce medical error and adverse events must begin with creating cultures of safety and quality. In such cultures, systems and processes of care—from accessing the “system” to the patient encounter, from informed consent to discharge—must be designed in a way that ensures that all information and communications are clear and understood by the patient.\textsuperscript{56}

\section*{National Standards}

The Joint Commission’s standards remind us of the fundamental right and need for patients to receive information about their care—both orally and written—that they can understand. These standards clearly direct organizations to ensure patient understanding. The safety of patients cannot be assured without eliminating, as much as possible, the negative effects of low health literacy and ineffective communications on patient care.\textsuperscript{62} This standard is directly related to one of the Safe Practices, specifically Safe Practice #2 of the National Quality Forum-Endorsed Safe Practices for Better Healthcare—2006 Update.\textsuperscript{26} We will go into more detail about this safe practice in the next article of this series.

\section*{Informed Consent}

Informed consent presents a special case for patient communication, which requires enough understanding on the part of the patient to determine the risks of a procedure in order to give the physician permission to perform it. The guidelines are to provide clear and understandable information to patients and their families about the risks associated with procedures or care and what to watch out for during or after such care. Provide information that is at reading level- or language-appropriate (never above a fifth-grade reading level), or in diagram form, about potential side effects of treatment so that the patient is better prepared. Redesign the informed consent process to include forms written in simple sentences and in the language of the patient; use “teach-back” during the informed consent discussion; and engage the patient in a dialogue about the nature and scope of the procedure.\textsuperscript{56,62,64} Safe Practice #2
proposes that we ask each patient or legal surrogate to “teach back” in his or her own words key information about the proposed treatments or procedures to which he or she is being asked to provide informed consent.\(^\text{26}\)

Patient advocate, Mary Foley, who lost a loved one because of cancer when the original diagnosis was delayed until too late, reminds health care providers about the importance of presenting information to patients and families in an understandable way. In doing so, they become empowered to make truly informed decisions and patient-centered care is truly achieved:

"I interpret ‘patient-centered care’ as a partnership. In other words, the care is planned cooperatively, collaboratively. It is communicated fully, that the patient and family participate in the decision making fully, have the full range of options available to them."

She goes on to say that such options must be understandable and translated by our culture of using very difficult terminology and abstract terms. “I think it is important to turn the information into plain English. Give people their choices and give them the power to make informed decisions. It means partnerships and it means using the right information at the right time and in the right way to empower the patients and their families not only to make the kinds of decisions they need to make about their care, but to make informed decisions, and for providers to listen to them.”\(^\text{3}\)

**ACTIVE LISTENING**

Early in modern medicine, great leaders realized that listening to the patient was essential to healing. Osler,\(^\text{65}\) credited with being the father of modern medicine, was well known for this admonition to his colleagues and students: “If you listen carefully to the patient they will tell you the diagnosis. “Florence Nightingale, the founder of modern nursing, considered “empathetic listening” as one of the essential ingredients of good nursing care.\(^\text{56}\)

**Active Listening**

Active listening, sometimes referred to as “attentive listening,” was studied and taught by psychologist Carl Rogers, who generalized it as “giving free and undivided attention to the speaker and performing the following activities:”

- Listen for total meaning: listen both for content and also for the underlying emotions.
- Respond to feelings: sometimes the real message is in the emotion rather than the surface content. In such cases, you should respond to the emotional message.
- Note all the cues: not all communication is verbal, so watch for the non-verbal messages.
- Reflecting: when you reflect what you hear back to the other person, you are demonstrating that you have heard what they have said.\(^\text{67}\) Rogers went on to refine the concept. “Attentive listening means giving one’s total and undivided attention to the other person, and tells the other that we are interested and concerned. Listening is difficult work that we will not undertake unless we have deep respect and care for the other... we listen not only with our ears, but with our eyes, mind, heart and imagination, as well. We listen to what is going on within ourselves, as well as to what is taking place in the person we are hearing. We listen to the words of the other, but we also listen to the messages buried in the words. We listen to the voice, the appearance, and the body language of the other... We simply try to absorb everything the speaker is saying verbally and nonverbally without adding, subtracting, or amending.”\(^\text{68}\)

Hugh Mackay, in “The Good Listener,” indicates that true active listening requires the listener to empty himself of personal concerns, distractions, and preconceptions, which takes courage, generosity and patience.\(^\text{69}\)

**Patient-centered Care**

Active listening, attentive listening, or patient-centered interviewing, of which active listening is a large component, is a fundamental process for developing effective long-term therapeutic relationships with complex patients and or complex medical situations.\(^\text{70}\) The IOM defined quality of care as “the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge.” Quality primary care is measured by positive patient outcomes in response to evidence-based health services. The IOM proposed 6 aims for improving health care in the 21st century including the safety, effectiveness, timeliness, efficiency, equity, and patient-centeredness of care.\(^\text{4}\) The same IOM report has determined that excellent listening skills and managing the clinical-patient relationship are especially important in “Level 3” patients, defined as those who have rare or complex health care conditions.

If we could all just learn to listen, everything else would fall into place. Listening is the key to being patient-centered.\(^\text{68}\) The most important predictor of patient compliance is trust in the doctor, and that begins with communication.

**Efficiency**

Time pressure is a major challenge in health care. Caregivers work in settings in which illness assessments are expected to be completed in limited amounts of time and there are many professional tasks to be performed besides listening to the patient. However, the data that are generated from patient-centered communication can result in substantially enriched patient data. The improved data in turn can lead to more accurate working diagnoses and a better understanding of specific approaches that may or may not work best for an individual patient.\(^\text{70}\)

**Physician and Patient Satisfaction**

The most significant factor in physician satisfaction is the patient encounter. “Physicians with better listening skills have
better-quality patient encounters and are more satisfied and less likely to burn out.”70

**Patient Compliance**

When doctors lack communication skills, their ability to gather information is compromised, they fail to engage patients in their own care (and thus have some responsibility for poor compliance with treatment regimens). “An activated patient who asks questions and negotiates with the doctor has better outcomes.”70

**Active Listening Can Help the Hospital Keep Their Competitive Edge**

The health care marketplace is going through rapid change and, as pointed out by Cohen et al., new business models are developing, including new specialties (hospitalists), selective care (concierge medicine), and joint ventures (ambulatory surgical centers, specialty hospitals), some with hospitals and others with independent vendors. Since both hospitals and physicians are feeling the squeeze of rising expenses, burdensome regulations, heightened consumer expectations, and stagnant or decreasing reimbursement, the response to global economic competition and the need to improve clinical and financial outcomes can bring physicians and hospitals together rather than drive them farther apart. Physician-hospital collaboration based on transparency, active listening, and prompt implementation can offer sustainable competitive advantage to those willing to embark on a lifetime learning journey.42

Jennifer Dingman, one of the authors of this paper, had the experience of not being heard when she questioned the use of certain combinations of medications for her mother. Her mother eventually died due to medication errors. Her statement regarding poor communication for a recent video was:

“What is so terribly sad is that, unfortunately, without those who are willing to listen to what occurred, without the answers, the listening failures can’t be used as teaching tools to stop these errors from being repeated again and again and again.”3

**Teamwork, Complex Setting, and Active Listening**

A recent press release from AHRQ, entitled “Many Errors by Medical Residents Caused by Teamwork Breakdowns, Lack of Supervision,” presented a study of 669 cases of medical error by trainees. Ineffective teamwork accounted for over 70% of the errors, and handoff communication breakdowns were cited as the biggest problem. Chains of communication in the hospital environment are complex, the study noted, and in a fifth of the cases, more than 2 entities were involved; in nearly a quarter, interactions with nurses, pharmacy, and laboratory personnel were involved. During these complex interactions, clear transfer of knowledge about the patient and active listening to ensure that the information was received correctly proved to be paramount to good teamwork and effective patient management.71

**CONCLUSION**

The patients and family members who have been cited and co-authored this article represent millions just like them across our nation. They have a message for us.

Whether we are doctors, nurses, hospital chief executive officers (CEOs), trustees, or other patients and family members, we can save lives, save money, and build value in the communities we serve if we just learn to LISTEN.

Although any setting can benefit from applying the concepts of human performance factors, authority gradients, caregiver-to-caregiver breakdowns, health care literacy, and active listening; we have prioritized our focus on hospitals in this paper. The greatest concentration of hazardous risk per patient treated today is in hospitals.

**The Hospital Listening Story: From a Mystery Novel to a Documentary**

Stories are the most powerful medium of communication across all industries, according to experts who study the transmission of ideas and their impact.72 Leaders of the business press tell us that every good story has a villain, a victim, a crisis, a hero, and a resolution.

The current hospital listening story is evolving rapidly, as of this writing, from a mystery novel to a documentary. From a mystery story of a silent killer to a documentary of failed hospital leadership. Up to now, the villain has been a faceless, insidious enemy operating in the shadows of well-meaning caregivers and trusting patients who both become unsuspecting victims. The destiny of these victims has been catastrophic harm—for caregivers, events that end their careers, and for patients, a path of great suffering and even death. The crisis is only now being recognized and there are few heroes.

More often than not, resolution of a local listening crisis begins to occur at a hospital only after a highly celebrated event occurs that “stops the line.” Only the most progressive organizations are making a preemptive strike on the villain of communication failure.

The future story that is unfolding will be a documentary that is quite different from what has been a mystery with seemingly unpreventable, tragic outcomes. Now that the limits of the human performance envelope are being mapped, the barriers of authority gradients and health care literacy are being scoped, the etiology of communication failures between caregivers is better understood, and the art and science of active listening is being confirmed, accountability for harm will come to rest squarely on the shoulders of hospital governance and administrative leaders.
To quote the air combat instructor in the movie “Top Gun, who caught the character “Maverick,” played by Tom Cruise, completely by surprise and defeated him in an air combat exercise when Maverick arrogantly left his wingman to win a competition:

“You can run…but you can’t hide”

Once there is awareness of a “safe performance envelope” of nurses with regard to distractions, fatigue, and causes of predictable human error; hospital leaders will become accountable.

How is it any different for hospital leaders to allow systems to exist that make nurses operate out of their safe performance envelope than it is for an airline executive to send an unsafe airplane up with a load of trusting passengers? The answer is easy for consumers, regulators, and payers: there is no difference.

It is very clear that it will only be a matter of time before the listening story in hospitals becomes a documentary of leadership performance – positive odds ratio OR negative. It won’t be long before the names of hospital trustees and leaders are found on the front page of the local newspaper and repeatedly shown on local and national news programs associated with the cause of catastrophic medical accidents.

One only has to follow the trajectory of business scandals in America. The beast of 24-hour news cycles is voraciously hungry for villains. Once the cause of the majority of hospital medical errors becomes more well known to the press and the public, hospital leaders are going to be thrust into the harsh light of accountability. The victims of the future documentary will still be the patients and families suffering their loss; the crisis will appear irresolvable without the firing of leaders; and the press will try to appear to be heroes protecting the public while selling more advertising through sensationalistic stories.

The big difference between the mystery novel of the past and the leadership documentary of the future is that the villains will change—from a faceless enemy of systems communications failures to the typical faces we find in fundraising pictures, those smiling faces of hospital administrators and trustees who are being recognized for raising money for a new wing of the hospital or a parking garage.

Only Now They Will Not Be Smiling

They will be angry and defensive because they will resent being blamed for something they should have listened to, found out about, prioritized, and addressed. The “you can’t hold me responsible for what I did not know” excuse of Enron’s leader, Ken Lay, will fall as flat for hospital leaders as it did for Lay when the music stopped.

A Call to Action: Rewrite Your Future Documentary

We implore senior hospital governance, administrative, and clinical leaders to act on the knowledge of the concepts presented in this paper. There is still time for many to actively rewrite their future documentaries as success stories of leadership rather than passively to let stories of failure be written for them.

Many hospital CEOs are shocked to find out how much common preventable performance gaps in verbal communication affect and cost their organizations.

Without awareness of communication problems, they cannot assign accountability to those who can implement changes; they cannot allocate resources to invest in their organization’s ability to close such performance gaps; and they cannot be sure that direct action will be taken to improve communication-related system failures.

Change occurs from the top down. Therefore, we challenge leaders to apply the principles of the 4A Model for Innovation adoption8 which has been used in the design of the National Quality Forum Safe Practices for Better Healthcare—2006 Update26 and The Leapfrog Quality and Safety Survey.73

Drive awareness of the performance gaps typical to institutions by assimilating the knowledge that is abundantly available regarding the concepts of listening discussed in this article. Develop ways of assessing the gaps at your institution. Seek to make the right people accountable for driving awareness and measurable change. Invest in the ability to improve through dark green dollars of financial resources and light green dollars of compensated staff time to improve. Finally, make sure that direct actions are taken to get results.

Activities That Trustees Can Take

Request that the CEO and senior management team assess the risks of communication failures at the institution; ask that a formal briefing session be undertaken covering at least the concepts proposed in this paper and pertinent practices from the latest NQF Safe Practices for Better Healthcare26 be covered. Trustees should insist that actions be taken to apply the concepts and request follow up progress reports. Trustees should request and assure that Safe Practice 1, Creating and Sustaining a Culture of Patient Safety, be adopted in the full spirit of the practice, since so many of the specifications address governance activities. One of the most important things trustees can do is to insist that patients and families be formally included on committees and to make them intrinsic to the leadership of the hospital. The leading organizations in the country, such as the Dana-Farber Cancer Institute, take this very seriously and have made such an approach a way of doing business, according to their former COO and national patient safety thought leader, Jim Conway [Oral Communication September 7, 2007]. Trustees do not need to know all the answers, they just need to know the right questions.8

Activities That CEOs Can Take

The CEO sets the tempo, tone, and strategic focus of his organization. In addition to implementing the activities cited previously for trustees, the CEO should make sure that the risks inherent to care giving that have been identified in human factors research, authority gradient issues, caregiver-to-caregiver communication breakdowns, and health literacy issues are
addressed. One of the sub-elements to the NQF Safe Practice #1 addressing culture, cited previously, is called “Risk Identification and Mitigation.” It is absolutely critical that the CEO take a personal interest and weigh in on ensuring that the information flow to the board and to the senior administrative leadership team be clear and complete, and allow fine-tuning of performance improvement activities to risks as they evolve. Safe Practice #1, which will be addressed in more detail in following articles, provides a skeletal roadmap for the CEO. They should own it, live it, and drive it.

Activities That Patient Safety Officers and Chief Medical Officers Can Take

Supporting the implementation of the activities recommended previously. The role of the patient safety officer is evolving with certain key elements of their responsibilities becoming clear. They truly are becoming a “LifeLine for patients and a life jacket for the CEO.”74 Frequently saddled with unfunded mandates, they can become frustrated with inertial gridlock; however, the unrelenting waves of the Pay-for-Performance movement will transform their domain from a nuisance cost center to a revenue preservation center. The recent ruling by the Centers for Medicare & Medicaid regarding the plan to no longer pay for certain Serious Reportable Events75 is only the beginning of the more and more important role for patient safety and quality leaders. Specific activities related to listening and communication failures include development of educational briefings regarding the concepts described in this paper, implementation of tools such as the SBAR tool mentioned earlier, and focus on the listening features of the NQF Safe Practices that will be addressed in later articles in this series. Discharge planning, medication reconciliation, and best practices in information management and transmission should be core focus areas.

Activities That Chief Nursing Officers Can Take

Assimilating the nursing-specific information outlined in this paper and developing a strategy to mitigate the risks that are currently embedded in their nursing operating systems. These include looking at work schedules and conditions that predispose to errors relating to fatigue and distraction. They should embrace the granular detail defined in Safe Practice #5 (well-designed nursing workforce). It addresses implementation of critical components of a well-designed nursing workforce that reinforces patient safeguards, including nurse staffing plans, leadership development, and adequate financial resource allocation to nursing services. They should step up to argue the case for the resources to reduce the risk at the heart of frontline care.

This is not a battleground for the meek. Very often a face-off can develop between financial managers and nursing leaders where the former “out-gun” the latter with quantitative arguments or comparative benchmarks. It is incumbent on nursing leaders to abandon the often-held position of “victims of a broken system” and play a new game with the numbers. The facts and evidence presented in this article provide an ample start.

The “no margin-no mission” internal mantra is giving way to the “no outcome-no income” battle cry of purchasers. It will pay great dividends to listen to our nursing leaders, who will tell us that we may have to spend more than historical budgets to deliver safe care, now that we are understanding the critical nature of improving the quality and amount of nursing time with patients.

Our nurses are an early warning system if we choose to listen to them. It IS time for them to step up and be heard, and it IS time to listen to them.

Activities That Frontline Nurses, Physicians, Pharmacists, and Direct Caregivers Can Take

Although we spend a great deal of print on the formal leaders of the organization above, the heat and light in an organization occurs right at the front line between caregivers, and between caregivers and patients and their families. We are reminded of the words of Dr. Gary Kaplan, the enormously successful CEO of Virginia Mason Hospital in Seattle Washington who states that “leadership is not just a noun, it is a verb.” [Oral communication, Dec. 1, 2007]. Servant leadership at the front line is probably the most important vehicle of improvement in listening and verbal information transfer. Just being aware of the evidence summarized in this article can help us improve listening. We feel sure that if we unleash the terrific innovation potential of our great caregivers in our nation’s hospitals and clinics on this problem, there will be no end of improvement that can be generated. Again, we must take a systematic approach to changing how we care for patients immediately and not wait for someone to create a program for us. The NQF Safe Practices that will be covered in the next article of this series will provide real tactical detail in an organized approach; however, caregivers need to start immediately following a review of this article, changing their approach with their very next interaction with patients and colleagues.

This article was not intended to become just another paper that will collect dust on the shelves of a few Safety Geeks. It is intended to drive action.

Life is about choices. Whether you are a doctor, nurse, pharmacist, hospital CEO, or trustee, or have any other role in health care, you now have a choice: you can act on what we have shared or not.

A year from now you merely need to look back at your calendar, your checkbook, and your journal. If there are no entries that tie your time, resources, and results to preventing listening communication failures, then we have failed together.

We pray that you will re-write your role in the script of your organization’s listening documentary and that it will be a success story of the triumph of leadership over inertia.

In the end we know from high-performing organizations that success is about leadership, values, and resources. Leaders who drive the hospital business bus fixated on a financial rear-view mirror are like politicians who decide what to do from opinion polls. Both miss the curves ahead.

The powerful words of Sorrel King in a video that has now been produced in multiple languages is resonating in hospitals around the world: “What if someone had taken my concerns seriously? What if a patient safety program had been in place?
What if someone would have listened? I believe...that if any one of these things had occurred, the outcome could have been different and Josie would be here today.3

In your next interaction with caregiver, patient, or a family member ask yourself: “Have I listened...really listened?”

The “no margin-no mission” internal mantra is becoming drowned out by the “no outcome-no income” battle cry of purchasers.

Like it or not, if you do not act now, the forces of pay-for-performance and the pen of transparency will write your story for you. It is your choice.

REFERENCES


September 8, 2008

Dear Healthcare Leader:

We are delighted to announce that the Journal of Patient Safety has graciously given us permission to distribute copies of recently published articles to you in the interest of helping you adopt the National Quality Forum Safe Practices for Better Healthcare – 2006 Update.

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We want to acknowledge you and your institution for your current efforts in patient safety. We hope you enjoy this article and find it useful in your future work.

Sincerely,

Charles R. Denham, M.D.
Chairman