



# PENNSYLVANIA PATIENT SAFETY ADVISORY

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to the Pennsylvania  
Patient Safety Authority

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**June 16, 2010**



## SUPPLEMENT

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Stephanie McKoin, RN, BSN, MPAHSA, NEA-BC; Douglas Arbittier, MD;  
Virginia S. Wesner, MPA; Donald W. Moorman, MD, FACS;  
John J. Castronuovo, Jr., MD, FACS

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## About the Pennsylvania Patient Safety Advisory

### OBJECTIVE

The *Pennsylvania Patient Safety Advisory* provides timely original scientific evidence and reviews of scientific evidence that can be used by healthcare systems and providers to improve healthcare delivery systems and educate providers about safe healthcare practices. The emphasis is on problems reported to the Pennsylvania Patient Safety Authority, especially those associated with a high combination of frequency, severity, and possibility of solution; novel problems and solutions; and those in which urgent communication of information could have a significant impact on patient outcomes.

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# Building a Culture of Operating Room Safety Using Crew Resource Management

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## Introduction

Crew resource management (CRM) can be defined as a group of techniques that can be used by a crew or team to reduce human performance errors. Those techniques form the basis of a training program that we used in the York Hospital operating room (OR) to create a culture of safety.

CRM originated from a National Aeronautics and Space Administration workshop in 1979. In the 1960s and 70s, the aviation industry began to realize that the primary cause of commercial aviation accidents had shifted from equipment failure to human error. The concepts and techniques encompassed in CRM help teams perform at optimum levels, recognize and correct errors and other threats, and reduce incidents and accidents. For several years, commercial air carriers have utilized CRM techniques to reduce human performance errors on the flight deck, thereby reducing airline accidents. These techniques have proven so successful that CRM training is mandated by the Federal Aviation Administration, and CRM has been adapted in such diverse activities as nuclear power station control rooms and medical operating theaters.<sup>1</sup>

York Hospital is a 572-bed, Magnet designated, nonprofit community hospital located in York, Pennsylvania. In 2006, the hospital began discussions to enhance the culture of safety in the OR. In the ORs, despite implementing numerous nationally recognized safety initiatives, there continued to be a significant number of adverse outcomes, including retained foreign objects and wrong-site surgeries. An internal analysis revealed that some errors were related to issues of communication and coordination

of care. The surgical service line (SSL) leadership felt that implementing a CRM training program for all members of the OR team might lead to a decrease in these events. CRM was chosen because it emphasizes techniques that improve communication and interdependence among the team members. These include briefings, a shared mental model, situational awareness, debriefings, and communication techniques that permit each team member to voice concerns in a timely way.

The SSL and patient safety officer evaluated several companies and individuals prior to development of the CRM program. Crew resource management has been adapted to healthcare in multiple formats. One of the earlier programs (introduced in 2000), which has now been recognized with the prestigious Eisenberg Award, was implemented by Benjamin Sachs and colleagues in the Beth Israel Deaconess Medical Center (BIDMC) labor and delivery unit in Boston, Massachusetts.<sup>2,3</sup>

The SSL leadership had discussions with Donald Moorman, MD, then at BIMDC, and developed a curriculum for the OR team members. Moorman facilitated development of the delivery of this curriculum by creating a model whereby successive teams of learners drawn from the OR staff become team trainers. The educational approach espoused by Moorman embraces a “train the trainers” philosophy because it is more effective than straightforward didactic instruction about the goals of highly effective teams in creating cultural change. The SSL elected to work with Dr. Moorman to adapt his program to our local needs.

The hospital CRM steering committee was created with leadership representation from all stakeholder disciplines in our ORs. The steering committee set its project goals and defined the behaviors it wished to inculcate; developed its own curriculum; enlisted surgeons, anesthesia providers, nurses, and surgical technologists as the trainers; and developed its own training videos and observational measurement tools to measure the impact of the program on daily work performance. (See Table.)

## Methods

Developing the York Hospital OR CRM training program was a two-year project that required the commitment and attention of the 17-member CRM steering committee. The steering committee’s primary focus was developing the CRM presentation and acting as CRM trainers and champions by coaching surgical teams in the OR on conducting briefs and debriefs. In order to facilitate day-to-day operations of the project, the CRM executive committee, consisting of the SSL medical director/chair of the surgery department, clinical director of surgical services,

**Table. Curricular Goals of Crew Resource Management Team Training**

MODULE/LENGTH (MIN)	TITLE	TOPICS PRESENTED
Module 1/60	"History of Crew Resource Management and its Potential to Improve Patient Safety"	Analogy of aviation disasters to operating room misadventure, Institute of Medicine recommendations, definition of a team
Module 2/30	"How Team Leader Constitutes a Team"	Introductions, shared mental model, briefings, team leader's role, situational awareness
Module 3/30	"Effective Team Communication"	Differences in communication style between disciplines, standards of effective communication, information transfer techniques, appropriately assertive communication, conflict management
Module 4/30	"Postoperative Debrief"	Checklist, what went well, what could have been done better, what were additional resources needed that were not anticipated, as well as follow-up on significant events

perioperative medical director/anesthesia department chair, patient safety officer, and CRM project manager, was formed. The CRM project manager was a designated assignment that allotted 25% of the manager's time to the project. The project manager was responsible for logistically implementing the program and developing program outcome measurement tools. The total time commitment to complete the development and implementation of this program was approximately 2,200 hours. The members of the OR and the steering committee committed to designing scenarios and presentations and producing videos, with an emphasis on creating a hospital-centric program. This commitment has been a primary factor in the positive reception of the use of CRM techniques to foster better communication, enhance teamwork, and improve patient safety.

The goal of York Hospital's CRM training program was to encourage each OR team, as it gathers to perform a procedure, to participate in a brief, creating the same mental model of the goals to be accomplished at surgery. The brief included introductions of all team members; identification of the patient; confirmation of the procedure to be performed, as well as site, side, or level; summation of the patient's medical history; and anticipation of potential problems and key portions of the procedure. Another goal of the CRM training was to encourage each OR team to participate in a debrief to determine what went well and what could have been done better, thus creating an environment that encourages everyone, from surgeons to housekeeping staff, to speak up if they feel that patient safety needs to be addressed.

The SSL charged the CRM steering committee to develop an overall CRM delivery strategy. CRM team training consisted of four modules: (1) the history of CRM and its potential to improve patient safety, (2) how a team leader constitutes a team in the OR, (3) effective team communication, and (4) postoperative debrief. The modules were delivered to groups of 30 to 40 members of the OR staff by various

combinations of OR team members who represented surgeons, anesthesia providers, and nursing and OR staff.

To illustrate the modules, CRM steering committee members acted in a series of videos, which were filmed in the OR. An internal marketing campaign, including "Where's the Brief?" posters, was implemented along with monthly three-hour training sessions. To encourage attendance at educational sessions, classes were approved for physician and nurse continuing education credits and patient safety credits. Hospital staff members were also compensated for their training time. To avoid closing the OR, presentations were scheduled during the evening and weekend hours. SSL leaders were present at every training session given by steering committee members. Usually, a physician member of the SSL acted as the program facilitator. The trainers for each session consisted of a surgeon or anesthesia provider and a registered nurse or surgical technologist. The educational sessions were attended by interdisciplinary teams of surgeons, anesthesia providers, registered nurses, surgical technologists, anesthesia and instrument technicians, secretaries, nursing assistants, and housekeeping staff. In addition to the hospital-developed videos, two videos from the BIDMC program were used to further emphasize the importance of using CRM tools in the OR.

**Results**

In April 2008, the first CRM training classes were given; by May 2009, more than 530 (98%) surgical services staff members were trained. Anecdotal reports of staff practicing the CRM techniques were noted in June 2008.

In evaluating the results of the implementation of CRM in the OR, there has been a slight decrease in the percentage of problematic responses in the Stanford Patient Safety Consortium: Patient Safety Culture Survey from 15.9% in 2006 to 15.2% in 2008, scoring a lower percent problematic response than the mean (17.2%) for all ORs in the consortium, as well as lower

than the overall hospital mean (16.1%) score. While some studies demonstrate a positive correlation between safety culture and clinical outcomes, in our case, the Stanford survey was coincidentally carried out before and after our CRM team training program and was not part of a study design. No p-value calculations or formal statistical analysis has been done nor would such analysis be appropriate. There also has been a slight improvement in National Database of Nursing Quality Indicators RN satisfaction scores in the RN:RN and RN:MD dimensions, but this again is a coincidental observation and was not part of a study design.

At the completion of team training, the brief/debrief utilization rate was estimated in an observational study to be 67% and 42%, respectively. A year after the CRM training program was initiated, a second observational study was implemented to monitor progress and found that the brief/debrief utilization rate had increased to 100% and 87%, respectively. We believe the best evidence of success of our CRM program can be measured by the use of the brief and debrief because these moments of leadership and team cohesion have not been mandated but rather are voluntarily adopted and observed. The effect of observer presence in the OR may have been a factor in the utilization rates, but the observers were medical students present each summer for educational purposes and not identified as observers collecting data.

**Conclusion**

We have demonstrated that a community teaching hospital can develop and implement a CRM program tailored to local needs. The response to our CRM

program was the gradual adoption of communication techniques and was best measured by assessing the voluntary implementation of the brief and debrief. We have utilized quarterly, joint grand rounds on patient safety topics to re-emphasize the value of CRM. To measure progress, we have developed several observational strategies that will help us monitor CRM activity, including using a tracking system that indicates when a brief/debrief activity is done during a surgical procedure and, over time, looking at our data to see if there has been a decrease in incidence of retained foreign objects and wrong-site surgeries. Steady increases in the utilization of these CRM techniques confirm that there has been widespread adoption of CRM in the York Hospital OR. The SSL will continue to assess the impact of the CRM program on changing the culture of safety in the OR. We will continue to closely follow these trends and others, including Agency for Healthcare Research and Quality safety indicators, nurse satisfaction scores, and patient outcomes (e.g., postoperative complication rates).

**Notes**

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# Chain of Command: When Disruptive Behavior Affects Communication and Teamwork

## ABSTRACT

*Chain of command in healthcare refers to an authoritative structure established to resolve administrative, clinical, or other patient safety issues by allowing healthcare clinicians to present an issue of concern through the lines of authority until a resolution is reached. Frontline healthcare clinicians, who have witnessed poor performance by their peers or supervisors, may be hesitant to use this means of communication because of the fear of retaliation or uncertainty about its importance in patient outcome. Staff may also be reluctant to call a physician, supervisor, or other clinician, even in the face of the deteriorating status of a patient, fearing intimidation, confrontation, antagonistic discussion, or other disruptive behavior. This article examines the issues that surround the use of the chain of command when disruptive clinician behaviors are encountered or when there are concerns about a patient's condition or the care they are receiving when these concerns are related to operational issues. The article discusses actions organizations can take to eliminate healthcare clinicians' inappropriate actions and attitudes in order to boost effective communication, teamwork, and collaboration and improve patient safety. (Pa Patient Saf Advis 2010 Jun 16;7[Suppl 2]:4-13.)*

## Chain of Command

Chain of command is a system whereby authority passes down from the top through a series of executive positions or military ranks in which each individual is accountable to their direct superior. Chain of command in healthcare is the line of responsibility to both the delivery of appropriate patient care and feedback about perceived appropriateness and the impact of that care. An effective chain of command in healthcare organizations facilitates, rather than impedes, communication, teamwork, and collaboration between the decision maker and the frontline clinician. Barriers to effective and safe healthcare may include disruptive behaviors, conflicts, and lack of physician availability. The Joint Commission instituted a new leadership standard effective January 1, 2009, that requires accredited hospitals to address healthcare clinician disruptive and inappropriate behaviors.<sup>1</sup> This standard expands the Joint Commission National Patient Safety Goal 2, which requires accredited organizations to improve the effectiveness of communication among caregivers to reduce risk, improve patient safety, and recommends standardization of communication whenever possible.<sup>2</sup>

Chain of command provides healthcare staff with a formal process to use when attempting to get

satisfactory resolution or to report concerns about questionable patient conditions or care delivery. When hierarchical differences exist between healthcare clinicians, people lower in the hierarchy tend to be uncomfortable communicating problems or concerns. Individuals at the top of the hierarchy that exhibit disruptive or unapproachable behaviors may further hinder communication between healthcare clinicians.<sup>3</sup> Delays, inappropriate care, or lack of patient care may be the byproducts of these hierarchical differences, particularly if the organization's chain of command fails to outline a structured communication method to address disruptive behaviors or concerns about a patient's condition or the care they are receiving. Chain of command may fail because the next person up the hierarchy "blinks," refuses to act, has not been trained to act, fears retaliation, or falls back on enabling behaviors. Leadership for introducing chain of command only works when there is a clear and consistent demonstration of a willingness to act.

## Overview of Authority Data

There were 177 events reported to the Pennsylvania Patient Safety Authority from May 2007 to October 2009 that detailed healthcare clinicians' disruptive behaviors, many of which negatively affected patient care. Of these events, 73 (41%) were due to conflicts between healthcare clinicians, 30 (17%) to procedures not followed, 17 (10%) to absence of responses or delays, 22 (12%) were listed as other, and behaviors for the remaining 35 (20%) were not given. (See Table 1.) Some of these reported events listed disruptive behaviors that may have contributed to delays in pain control, increased risk of healthcare-associated infections, or increased risk of burns. Implementation of a chain-of-command protocol could have resulted in different outcomes. Examples follow of reports describing conflicts between healthcare clinicians, refusals to adhere to procedures, and absences or delayed responses that resulted in patient care delays

**Table 1. Disruptive Behaviors Reported from May 2007 to October 2009**

DISRUPTIVE BEHAVIORS	NUMBER OF REPORTS (N = 177)	PERCENTAGE
Conflict	73	41%
Procedure not followed	30	17
Absence of response or delay	17	10
Other	22	12
Not given	35	20

and increased risks for healthcare-associated infections or burns.

### Conflicts

The primary surgeon walked out of the OR [operating room] suite, and the assistant surgeon completed the surgery. The event was a result of an altercation between surgeon, assistant surgeon, and anesthesiologist.

Physician was notified of a critical lab value. Physician asked why he was being called. Staff informed physician of hospital protocol for critical value reporting. Physician repeated the same statement and hung up the phone.

A call [was made] to a physician to clarify a medication reconciliation form. He stated he would not address the form. Nurse again asked [the physician] to review medications and reminded him that it was part of the admission and discharge instructions. Doctor stated he would not address the form and hung up [the phone].

A patient vomited immediately prior to [admittance to the] OR. The anesthesia clinician refused to do the case due to a concern for the patient's airway. The surgeon dismissed the anesthesia clinician and elected to perform the surgery utilizing IV [intravenous] sedation monitored by himself. The case was done in this manner. The patient's vital signs and airway [remained] stable during the procedure.

### Refusals to Adhere to Procedures

Physician dropped ET [endotracheal] blade and ET tube on the floor. Asked if he wanted a clean replacement, no answer was given. [The physician] used the ET tube from the floor to intubate the patient.

Surgeons, resident, and medical student were asked to change gloves, and they refused. An implant was inserted with contaminated gloves.

Staff were about to apply [a topical anesthetic] cream to a baby's penis when the baby's physician entered the room and stated that he was ready to do the circumcision. The physician was told that he would have to wait 30 minutes until after the cream was applied. He stated that he would not wait 30 minutes and that it would be done now. Baby had a pain score of 4/7 [after the procedure].

Dentist wanted to remove additional teeth from the patient. He gave the patient local anesthetic where he wanted to remove the teeth. He was informed he was not permitted to do this in the PACU [postanesthesia care unit]. He continued with the procedure despite being informed that he could not.

The physician was in [the patient's room] to place a lumbar drain. The nurse informed the physician that he would have to place the drain in monitored unit; the physician refused. The physician called another physician and was told by nursing supervisor and nurse [that the] patient had to be done in monitored unit. Both physicians brushed by the nurse, shut

the door, and started to place the lumbar drain. Also, the preprocedure checklist was done after the procedure. Both doctors were rude to the nurse and ignored policy.

The nurse noted the physician was using the warm touch warmer without the appropriate blanket. She had the hose hooked under the blanket at the right shoulder. When nurse told her [she was] not allowed to do that due to documented burns, she shook her head, "yes," she was aware of that. The physician did not remove the hose or turn the warmer off.

A patient arrived in PACU with an oral temperature of 99.7°F. The patient complained of being cold, and warm blankets were applied. Later, the patient began shivering. The anesthesiologist was contacted and ordered the nurse to place a bair hugger on the patient. I informed him [that the] patient's temperature was 99.7°, which [had been] reassessed. The physician said to place bair hugger on patient anyway. I informed him this is not usual practice of bair hugger use and stated we use Demerol when a patient has a high temperature. He said, "No, do as I say." I then notified [the nursing supervisor and] the charge nurse, both of whom told me to just do as he wants and not to argue. The physician came into PACU to reassess patient, increased the settings on the bair hugger, and ordered it in writing. After he left, I reassessed, orally, the patient's temperature, which was 100.8°. I notified the physician, and he discontinued treatment of bair hugger.

The gastroenterology service was consulted for bowel issues on a patient (ileus versus obstruction). The physicians came to floor and failed to notify a nurse of doing a procedure. The physicians wanted to do conscious sedation; however, staff made the physicians aware that this procedure is not to be done on the floor. The physicians proceeded with procedure and no sedation. The charge nurse entered [the patient's room] and told the [physicians] to stop the procedure; the patient was in a lot of pain. [A higher ranking physician and the nursing supervisor] were notified. The patient was transferred to [a higher level of care] for the procedure to be properly monitored.

### Absences or Delayed Responses

A patient's blood glucose increased to 583 without treatment for 13 hours. [There were] delays with multiple physicians in having the issue addressed. Patient [was transferred] to the ICU [intensive care unit] for an insulin drip.

A patient in active labor was complaining of severe pain. The anesthesiologist was notified of request to re-bolus [the patient's] epidural. Physician stated that someone could not come to [labor and delivery department] for an hour to medicate patient. After one and a half hours, the nurse called again and was told that lunch breaks were being given and to call a different physician. When called, physician stated that she was not on call for obstetrics, and no one was available to

help patient. Patient was finally injected two hours after the initial request.

Initiating a formal chain of command provides healthcare staff with guidance and examples of actions to be taken, exceptions, what to do when issues are unresolved after implementation, and documentation expectations. Thirteen (18%) of the total events based on conflicts between healthcare clinicians reported the implementation of a chain-of-command protocol when the disruptive behaviors were encountered. In 41 (56%) of the reports that did not report the use of chain of command, patient harm might have been averted if one had been implemented, while the patient outcomes on the remaining 19 (26%) reports that included healthcare clinicians' disruptive behaviors would have remained unchanged if chain of command had been implemented. (See Table 2.)

Rosenstein and O'Daniel conducted a survey of 4,503 nurses, physicians, administrative executives, and other participants from 102 hospitals to assess the significance of disruptive behaviors, their effect

on communication and collaboration between healthcare clinicians, and their impact on patient safety. The survey participants indicated the clinical areas where disruptive behaviors were reported: medical units (35%), ICUs (26%), ORs (23%), surgical units (20%), emergency departments (EDs) (7%), and others (less than 5%).<sup>4</sup> Seventy percent of the survey respondents indicated a link between these behaviors and medical errors and poor quality patient care. More than 65% of the participants indicated that disruptive behaviors were linked to adverse events, more than 50% indicated patient safety compromise, and more than 25% of the respondents linked the behaviors to patient mortality.<sup>4</sup>

In the disruptive behavior events reported to the Authority, the care areas where the behaviors most frequently occurred were in ORs (24%), medical/surgical units (24%), ICUs (16%), EDs (8%), outpatient departments (7%), labor and delivery units (4%), behavioral health units (3%), laboratories (1%), and others (8%). (See Table 3.)

**Table 2. Chain of Command Listed in Reports of Conflict, May 2007 to October 2009**

CONFLICT REPORTS	NUMBER OF REPORTS (N = 73)	PERCENTAGE
Chain of command present	13	18%
Chain of command not present, but presence might have affected outcome	41	56
Chain of command not present, and presence would not have affected outcome	19	26

**Table 3. Disruptive Behaviors by Care Area, May 2007 to October 2009**

CARE AREA	NUMBER OF REPORTS (N = 177)	PERCENTAGE
Operating room	43	24%
Medical/surgical unit	42	24
Intensive care unit	28	16
Emergency department	14	8
Outpatient	12	7
Imaging	9	5
Labor and delivery, pediatric	7	4
Behavioral health	5	3
Laboratory	2	1
Other	15	8

**Related External Principles**

The Joint Commission instituted a new leadership standard effective January 1, 2009, for all accredited hospitals to address disruptive and inappropriate clinician behaviors according to two elements of performance. These elements of performance mandate (1) that each hospital develop a code of conduct that defines acceptable, disruptive, and inappropriate behaviors and (2) that the organization's leadership create and implement a process to manage these behaviors within each facility.<sup>1</sup>

According to Joint Commission, a facility's code of conduct is to include educating all healthcare team members, holding the entire team accountable for the code of conduct, establishing a zero-tolerance policy for disruptive behaviors within the facility, developing a system to detect disruptive behaviors, and receiving reports of disruptive behaviors.<sup>1</sup> The Joint Commission encourages organizations to develop nonconfrontational interaction strategies to address disruptive and intimidating behaviors and to outline disciplinary actions to deal with these behaviors.<sup>1</sup> In addition to these new elements, the Joint Commission's medical staff standards chapter has been organized to follow six core competencies: medical/clinical knowledge, technical and clinical skills, clinical judgment, interpersonal skills, communication skills, and professionalism, which are to be addressed in the physician credentialing process.<sup>1,5</sup>

In April 2009, the American College of Physician Executives (ACPE) and the American Organization of Nurse Executives (AONE) formed a physician/nurse collaborative, the main concentration of which is to deliver safe care to patients and families while managing disruptive behaviors. ACPE and AONE share specific core principles that include building collaborative relationships, creating specific systems for rewards and recognition, and emphasizing

patient-focused care and better patient outcomes as their major priorities.<sup>6</sup>

**Disruptive Behaviors**

Relationships among healthcare staff can have a powerful influence on how well important information is communicated. Disruptive behaviors may be displayed as aggressive, which is an easier type of behavior to observe, but may also be demonstrated as passive or passive aggressive. These behaviors may threaten patient safety and quality of care. It is not only physicians who exhibit disruptive behaviors, and the challenge for organizations is to address disruptive behaviors by all healthcare clinicians.<sup>1,7</sup> Nurses and other frontline clinicians who witness these behaviors may be hesitant to point them out because of the fear of retaliation. Furthermore, nurses may be reluctant or may refuse entirely to communicate with a disruptive clinician, even in the face of the deteriorating status of a patient. Reasons for not reporting these behaviors may include intimidation, fear of conflict, perceived lack of reporting confidentiality, fear of being labeled as a troublemaker, and concern that nothing ever seems to change in the organization. Intimidating treatment of healthcare clinicians, lack of confidence, and an unresponsive administration all contribute to a difficult situation for frontline healthcare staff and set the stage for catastrophic patient care in present and future institutions, as well. Delays in patient care, disruptive behaviors, and recurring communication problems may occur due to ongoing or unresolved disputes between clinicians, which may be related to personality conflicts or different communication styles.

ACPE conducted an electronic survey on the doctor-nurse behaviors of more than 2,100 physicians (33%) and nurses (67%). The survey results indicated a fundamental lack of respect between the two groups, which affected every aspect of their jobs, including staff morale, patient safety, and the public perception of healthcare. Nearly 85% of the survey participants indicated that degrading comments and insults were the most common complaints. Lack of respect and communication were cited as the worst behavioral problems that most adversely affected patient care and staff morale.<sup>8</sup>

In the disruptive behavior events reported to the Authority, 35 (57%) were associated with physicians (nonsurgeons), 5 (8%) were identified specifically as surgeons, and 3 (5%) listed anesthesia clinicians as having the disruptive behaviors. Two (3%) of the reports listed nurses, 2 (3%) indicated medical students, and 14 (23%) associated other healthcare clinicians with the disruptive behavior. (See Table 4.) It is important to note that, typically, facility staff who report events to the Authority are not physicians, which may bias the data.

Forty-four events reported to the Authority indicated that the disruptive behaviors or inappropriate interactions occurred between healthcare clinicians from

different disciplines. Thirty-nine (89%) of these interactions occurred between physicians and nursing staff, 3 (7%) occurred between surgeons and anesthesia clinicians, and 2 (5%) occurred between nurses and medical students. (See Table 5.)

Organizations should expect professionals to behave as professionals. Nonresponsive health systems or dysfunctional organizations provide the antecedent for disruptive behaviors. There is a history of tolerance and indifference to intimidating and disruptive behaviors in healthcare, and organization leaders may fail to address healthcare clinicians' disruptive behaviors for many reasons.<sup>7</sup> One reason may be ignorance of the problem. Disruptive behaviors often take the form of intimidation, and in some instances, individuals who engage in these behaviors may be very powerful in the organization. This may discourage other healthcare clinicians from reporting the problem, and the lack of such reports may be incorrectly interpreted by organizational leaders as absence of the problem.<sup>9</sup> Still other organizations may value financial stability above all else and tolerate disruptive behaviors by revenue producers. The major concern about disruptive behaviors is how frequently they occur and the potential negative effect on patient care.<sup>3</sup>

According to a 2002 survey about physician-nurse relationships by Rosenstein et al., nurses indicated that

**Table 4. Disruptive Behaviors by Healthcare Clinicians, May 2007 to October 2009**

HEALTHCARE CLINICIAN	NUMBER OF REPORTS (N = 61)	PERCENTAGE
Physician (nonsurgeon)	35	57%
Surgeon	5	8
Anesthesia clinician	3	5
Nurse	2	3
Medical student	2	3
Other healthcare clinician (e.g., respiratory care, laboratory)	14	23

**Table 5. Disruptive Behaviors between Healthcare Clinicians, May 2007 to October 2009**

HEALTHCARE CLINICIAN TO HEALTHCARE CLINICIAN	NUMBER OF REPORTS (N = 44)	PERCENTAGE
Physician to nurse	39	89%
Surgeon to anesthesia clinician	3	7
Nurse to medical student	2	5

placing calls to physicians to clarify physician orders was the most common precipitant to disruptive behaviors.<sup>10</sup> Physicians indicated that orders that were not carried out correctly or in a timely manner were the largest problems. Forty-four percent of all participants indicated that barriers to reporting disruptive behaviors existed, including fear of retaliation, the concern that nothing ever changes, lack of confidentiality and administrative support, and physician lack of awareness or unwillingness to change. The survey listed contributing factors to disruptive behaviors, including differences in individual personalities, education, gender biases, historical behaviors, and environmental factors, which may not be easy to change. The overall findings of the survey indicated that perceptions between physicians and nurses differ when it comes to the causes, responsibilities, barriers, and solutions that surround these complicated yet essential relationships.<sup>10</sup>

Some Pennsylvania facilities that submitted disruptive behavior reports to the Authority listed the contributing factors of these events as follows: 44% were organizational/management factors (i.e., procedures not followed, unclear or ambiguous policies and procedures), 19% were team issues (i.e., communication problem between clinicians), 14% were task factors (i.e., training issue, emergency situation, inexperienced

staff), 11% were staff factors (i.e., issue related to proficiency), 8% were patient characteristics, and the remaining 5% were related to work environment. (See Table 6.)

### Communication and Collaboration

Effective communication encourages successful collaboration and teamwork among healthcare clinicians, helps to prevent errors, and promotes patient safety. Communication, collaboration, and teamwork may not always occur in clinical settings.<sup>3</sup> The Joint Commission lists problems with communication as the root cause in over 60% of all sentinel events studied since 1995.<sup>10-13</sup> A culture of low expectations has developed in some healthcare settings, with healthcare clinicians anticipating poor communication and teamwork. Such a culture can lead to faulty or incomplete exchange of patient information and patient safety compromise due to ignored alerts or clinical discrepancies.<sup>3</sup> Healthcare clinicians must know how to effectively communicate with each other so that vital patient information can be shared promptly.<sup>12</sup> While nurses and physicians share the common goal of taking care of patients, differing communication styles can impact patient health and safety.

Schmalenberg and Kramer tested the construct validity and psychometrics of the Essentials of Magnetism tool, based on 5 types of nurse-physician relationships, identified by 3,602 staff nurse interviews from 26 Magnet\* and comparison hospitals. This tool measures the nurse-physician unit climate and the proportion of positive relationships to neutral or negative relationships, all of which impact effective communication, success collaboration, and teamwork. The five types are as follows:<sup>14</sup>

1. A *collegial* relationship, in which nurses and physicians have equal trust, power, and respect and in which nurses are asked by physicians for their input about patients
2. A *collaborative* relationship, marked by mutual trust, power, respect, and cooperation based on mutuality rather than equality
3. A *student-teacher* relationship, in which the physician or nurse takes on the teacher/guidance role
4. A *friendly-formal* relationship, which is based on a neutral feeling and tone and the formal exchange of information
5. A *hostile/adversarial* relationship type between the nurse and physician, which is marked by anger, verbal abuse, or resignation

**Table 6. Contributing Factors Listed in Disruptive Behaviors Reports, May 2007 to October 2009**

CONTRIBUTING FACTORS	NUMBER OF REPORTS (N = 37)	
	NUMBER OF REPORTS	PERCENTAGE
<b>Organizational/Management</b>		
Procedure not followed	15	41%
Unclear or ambiguous policy and procedure	1	3
<b>Team Factors</b>		
Communication problem between clinicians	7	19
<b>Task Factors</b>		
Training issue	3	8
Emergency situation	1	3
Inexperienced staff	1	3
<b>Staff Factors</b>		
Issue related to proficiency	4	11
<b>Patient Characteristics</b>		
Lack of patient compliance/adherence	2	5
Lack of patient understanding	1	3
<b>Work Environment</b>		
High noise level	2	5

\* “The American Nurses Credentialing Center (ANCC) Magnet Recognition Program® recognizes healthcare organizations that provide the very best in nursing care and professionalism in nursing practice. The program also provides a vehicle for disseminating best practices and strategies among nursing systems. The ANCC Magnet Recognition Program is the gold standard for nursing excellence.” (American Nurses Credentialing Center. *About ANCC* [online] 2010 [cited 2010 Jan 13]. Available from Internet: <http://www.nursecredentialing.org/FunctionalCategory/AboutANCC.aspx>.)

Another issue is passively ignoring the input of other team members. Interestingly, nurses interviewed indicated that all five relationship types can be found on any patient care area, simultaneously. Participating nurses from Magnet hospitals consistently reported more collegial and collaborative relationships than nurses from non-Magnet hospitals.<sup>14</sup>

Featherstone et al. identified communication between healthcare clinicians as the largest problem in all reported deaths in United Kingdom acute hospitals.<sup>15</sup> Structuring the content of communication can facilitate a more thorough patient information transfer, particularly when complex information needs to be communicated quickly.<sup>3</sup>

As the person with the greatest exposure to the patients, the nurse often has the ultimate responsibility of making the crucial assessment of the patient's status and effectively communicating this to the physician. When this essential line of communication fails, tragic events may follow. Effective communication between nurses, physicians, and other healthcare clinicians is essential to patient safety. That said, communication patterns are highly variable and influenced by multiple factors.<sup>11</sup> There are many reasons for poor communication, one of which is the difference between what kinds of patient information nurses and physicians communicate to each other. (See "Common Barriers to Interprofessional Communication and Collaboration.") Collaboration between nurses and physicians is vital to create and sustain a healthy work environment.<sup>16</sup> Even though nurses and physicians interact numerous times each day, they often have different perceptions of their roles and responsibilities regarding patient needs and differing goals for patient care.<sup>3</sup>

Nurses tend to describe a situation in broader terms, are often process- and outcomes-driven, and build relationships using democratic leadership styles. Nurses also tend to avoid disagreements and, as a result, may compromise when conflicts arise.<sup>16</sup> Most nurses in healthcare facilities are assigned to one care area, making their concerns unit-based. Physicians, on the other hand, are action-oriented, outcomes-driven, and generally have a commanding leadership style. They typically desire only the main subject matter of the problem, so action can be taken promptly; they may regard other healthcare workers as assistants.<sup>12,16,17</sup> Physicians may be adversarial when conflict arises.<sup>16</sup> Physicians are frequently service-based, so their patients and responsibilities may be spread over the organization's entire geographic area.<sup>16</sup>

The nurse is expected to implement standards of care and advance the chain of command when needed. As a patient's advocate, if the nurse determines that a patient may be in peril when unsafe or inadequate care is administered, the chain of command must be instituted.<sup>13</sup> Those healthcare environments that are characterized by a vertical hierarchical culture often institute physicians at the top. In these environments,

physicians may believe that the environment is a collaborative one, but other direct healthcare clinicians frequently perceive communication difficulties with physicians.<sup>3</sup> While collaborative interactions may help to ensure that the proper treatments are being delivered appropriately to patients, hierarchical differences may diminish these exchanges between healthcare clinicians.

Manning divides communication failures into three categories: (1) system failures, (2) message failures, and (3) reception failures. System failures are those in which there are no formal channels for communication (e.g., nonfunctioning page system). Message failures are those in which the formal channels are present, but the necessary information is not transmitted (e.g., incomplete information given). Reception failures occur when there are formal channels present, the correct information is transmitted, but the information is either misinterpreted or arrives too late (e.g., written order not discovered for several hours).<sup>11</sup> Of the reports of disruptive behaviors to the Authority, 5 were identified as having system failures,

### Common Barriers to Interprofessional Communication and Collaboration

- Complexity of care
- Concerns regarding clinical responsibility
- Culture and ethnicity
- Differences in accountability, payment, and rewards
- Differences in language and jargon
- Differences in requirements, regulations, and norms of professional education
- Differences in schedules and professional routines
- Disruptive behaviors
- Emphasis on rapid decision making
- Fears of diluted professional identity
- Gender
- Generational differences
- Hierarchy
- Historical, interprofessional, and intraprofessional rivalries
- Personal values and expectations
- Personality differences
- Varying levels of preparation, qualifications, and status

**Source:** O'Daniel M, Rosenstein AH. Chapter 33: Professional communication and team collaboration [online]. In: *Patient Safety and Quality: An Evidence-Based Handbook for Nurses*. 2008 Apr [cited 2009 Nov 13]. Available from Internet: [http://www.ahrq.gov/qual/nursesdbk/docs/O'DanielM\\_TWC.pdf](http://www.ahrq.gov/qual/nursesdbk/docs/O'DanielM_TWC.pdf).

while 41 reports fell into the category of reception failure. The differences in communication styles have the potential to make disruptive behaviors erupt. It is important for organizations to hold all healthcare clinicians, regardless of seniority or clinical discipline, accountable for modeling desirable behaviors including basic business etiquette and phone and people skills, with an emphasis on respect.

Featherstone et al. indicated that nurses have a greater chance of getting a helpful response if a structured call for assistance is used when contacting a physician about a deteriorating patient's condition.<sup>15</sup> A structured communication tool conveys a patient's change in condition with a clear statement that indicates the purpose for the contact or call. The call content provides the physician with a brief summary of how the patient presents by providing a convincing and succinct way to communicate how the patient's condition has changed and to request assistance for the acutely ill patient.<sup>15</sup>

There are several cross-discipline communication methods available for healthcare clinicians. According to Nadzam, any structured verbal or written communication tool should be simple enough to complete quickly, convey patient information efficiently, promote multidisciplinary collaboration, and limit the likelihood of miscommunication. Such structured communication tools that promote good communication may include interdisciplinary assessment forms, medication order forms, progress notes, time-outs, read-backs, and briefings.<sup>12</sup>

### Teamwork

One of the Joint Commission's National Patient Safety Goals requires facilities to improve the effectiveness of communication among healthcare clinicians. This goal recommends the development, use, and implementation of standardized communication, coordinated teamwork, and defined roles and responsibilities.<sup>2</sup>

The Center for Medical Simulation and 40 anesthesia trainees affiliated with Harvard Medical School participated in simulated clinical case scenarios to practice the management of obstetric emergencies and improve teamwork skills. The scenarios simulated challenges between the trainees and the resident's faculty anesthesiologist, faculty surgeon, and circulating nurse. Cases included three clinical problems presented to the trainees in a fully simulated OR. The "two-challenge rule" was the first communication method used by the trainees to speak up when actions of the team members seemed incorrect. Each team member shares responsibility for a safe outcome. The "advocacy and inquiry method" was the second technique used to obtain additional help. This was instituted in acute clinical situations in which speaking up and taking action were indicated: a form of chain of command.<sup>18</sup> Trainees had difficulty recognizing opportunities to challenge the circulating nurse during the simulations and may not have fully

appreciated the importance of the nurses' role when critical events occur. The study revealed that simulated educational interventions can be learned and applied, and are significant in clinical settings.

The University of California developed a four-hour educational program on teamwork that combined teaching strategies to practice effective communication skills and team behaviors. The program created a shared forum for healthcare clinicians to learn about and discuss interdisciplinary communication and teamwork. The communication methods used in this program included the Situation, Background, Assessment, Recommendation tool (SBAR), which is used to convey critical information between healthcare clinicians, as well as the words, "I'm Concerned, I'm Uncomfortable, this is a Safety issue (CUS)," which are said to get healthcare providers' attention to stop what they are doing and listen.<sup>19</sup> The program was rated highly by all disciplines that attended, and the participants reported that it likely changed the way they communicate with each other.<sup>19</sup>

Support of professional behaviors is not possible without a commitment to address disruptive behaviors whenever they occur.<sup>20</sup> Hickson et al. describes several collaborative approaches used by the Vanderbilt University Medical Center's (VUMC) and Vanderbilt University School of Medicine (VUSM) to promote professional behaviors for all faculty, staff, and students. One approach developed in 2004 is the VUSM's Academic Leadership Program, which focuses on physician leadership training and includes a foundational introduction on disruptive behaviors and ways to address them. This process includes the use of the Disruptive Behavior Pyramid, which identifies, measures, and addresses unprofessional physician behaviors (available online at <http://www.studergroup.com/DB>). The pyramid provides guidance on how and when to intervene when physician disruptive behaviors are encountered. Those physicians that exhibit disruptive behaviors represent a threat to patient quality care and safety and require authoritative intervention, such as a tiered intervention process, beginning with informal, nonjudgmental feedback and progressing to an awareness intervention. If a disruptive behavior persists and becomes a pattern, the intervention is set up to advance to a more authority-based intervention. Persistent patterns of disruptive behaviors that fail to respond to interventions may be disciplined with privilege restriction or termination with reporting to government entities. Those that exhibit a single unprofessional act may require a less formal intervention, such as a conversation.<sup>20</sup>

All VUMC employees and students are required to sign and follow the Credo Behaviors creed (available online at [http://www.mc.vanderbilt.edu/root/pdfs/elevate/8\\_5credo.pdf](http://www.mc.vanderbilt.edu/root/pdfs/elevate/8_5credo.pdf)) developed by VUMC leadership, which outlines elements relating to respect of patients and staff, privacy and confidentiality, employee and/or student ownership, effective communication, professional conduct, and a commitment to colleagues.

VUMC also has a Patient Advocacy Reporting System (PARS), a surveillance system designed to recognize patterns of unprofessional behaviors based on patient complaint records from the institution’s database. PARS operate under an oversight committee of physicians that provide applicable peer review and interventions to those physicians who exhibit patterns of unprofessional behaviors. VUMC reports an approximate 60% improvement in complaint scores after an informal level one awareness intervention.<sup>20</sup>

The benefits of programs, such as VUMC’s, that work to eliminate disruptive behaviors include improved staff satisfaction and retention, enhanced institution and leadership reputation, creation of a culture of professionals who are role models for staff and students, improved patient safety due to staff willingness to speak up when unprofessional behaviors are encountered, reduced liability exposure and risk, improved teamwork, and, overall, more productive, civil, and desirable work environments.<sup>20</sup>

Another program designed to advance the quality, safety, and efficiency of healthcare by improving communication and other teamwork skills is Team Strategies and Tools to Enhance Performance and Patient Safety™ (TeamSTEPPS™), which was developed by the Agency for Healthcare Research and Quality and the Department of Defense. TeamSTEPPS is a teamwork system based on 20 years of experience and lessons learned from high-reliability organizations. The skills emphasized in this program contribute to important strategies that enable teams to adapt to changing situations, share an understanding of the patient’s care plan, develop positive attitudes towards teamwork, provide reliable and efficient patient care, and to reach the desired outcome of safer care. The program’s success depends on enhancing the organization’s culture to focus on teamwork.<sup>21</sup> (Some Pennsylvania facilities have successfully used the program to help improve communication within their facilities and reduce errors; see the article “Patient Safety is Enhanced by Teamwork” in this issue.)

**Risk Reduction Strategies**

Some events reported to the Authority listed recommendations to prevent future events due to disruptive behaviors. These include the need to rectify system communication problems, encourage all staff to comply with hospital policies, improve documentation issues, investigate any pending accusations of disruptive behaviors, refer the event to interdepartmental meeting or chair, discuss the event with the involved healthcare worker, reeducate the healthcare worker, track the events, or look for trends within the organization. (See Table 7.)

Other risk reduction strategies found in the clinical literature include the following:

- Develop an organizational chain-of-command policy that includes an administrative commitment and expectation that staff are responsible

**Table 7. Recommendations Listed in Reports to Reduce Disruptive Behaviors, May 2007 to October 2009**

RECOMMENDATIONS LISTED IN REPORTS	NUMBER OF REPORTS (N = 78)	PERCENTAGE
Talk with patient/family	9	12%
Arrange for support of staff member involved	2	3
Discuss event with involved healthcare worker	27	35
Discuss unsafe practice with staff	6	8
Review/revise policy and procedure	3	4
Implement education/training of staff	6	8
Refer issue to another department	7	9
Refer issue to medical or administrative leadership	16	21
Request assistance from quality improvement in conducting analysis of event	2	3

for ensuring that patients receive quality care and are expected to implement the chain-of-command policy when the quality of care or patient safety is in question. Having a set chain-of-command policy means that all involved personnel will be familiar with the delineation of care and responsibilities. Policies detail the levels of management that should be contacted and the order in which the contact should occur. (Organizations have developed algorithms for chain of command and deterioration of patient condition.) Educate all staff about the organizations’ chain-of-command policy. Provide regular chain-of-command demonstrations for staff that include simulated scenarios to better prepare healthcare clinicians when initiating a chain of command or when concerns about questionable patient care are encountered. Policies should also include documentation guidelines and outline alternatives and instances when an inappropriate chain of command is implemented.<sup>22</sup>

- Develop an organizational code of conduct that includes training in basic business etiquette and phone and people skills with an emphasis on respect. Educate all physicians, nurses, and other staff, including contract workers, about appropriate professional behaviors as defined by the code of conduct. Define and establish an organization-wide safety culture. Add a human element and a sense of urgency to safety improvement by having patients communicate their experiences and perceptions to board members, executive leadership,

and medical staff. Make the organization's overall safety performance a key, measurable part of the evaluation by the chief executive officer and all leadership. Regularly measure leadership's commitment to safety using climate surveys and upward appraisal techniques (in which staff review or appraise their managers and leaders).<sup>1,7</sup>

- Institute an organizationwide policy of transparency that sheds light on all adverse events and patient safety issues within the organization to create an environment in which it is safe for everyone to talk about vulnerabilities and failures without fear of reprisal. Hold all healthcare clinicians accountable for modeling desirable behaviors. Enforce the code consistently and equitably among all staff regardless of seniority or clinical discipline. Provide reinforcement of the code in a positive fashion.<sup>1,7,20</sup>
- Develop and implement policies and procedures and processes appropriate for the organization that address "zero tolerance" for the most egregious disruptive behaviors. Incorporate this policy into medical staff bylaws, all staff employment agreements, and administrative policies. Medical staff policies regarding intimidating and/or disruptive behaviors of physicians within a healthcare organization should be complementary and support the organization's policies pertaining to nonphysician staff. Protect those who report or cooperate in the investigation of intimidating, disruptive, and other unprofessional behaviors. Include nonretaliation clauses in all policy statements that address disruptive behaviors and how and when to begin disciplinary actions.<sup>1,8</sup>
- Regularly hold open discussions with the patient safety officer; risk management, performance improvement, physician, nursing, and pharmacy leaders; and all healthcare clinicians who are caring for patients to develop a true, unvarnished view of the safety risks and barriers to safety facing patients and staff. Patient safety rounds at the point of care may provide the ideal opportunity for these discussions, which focus on learning and improvement, rather than blame or retribution.<sup>1</sup>
- Create and communicate a policy that defines the behaviors that will be referred for disciplinary action; include the timeframe in which the disciplinary action will take place. Develop an organizational process to address intimidating and disruptive behaviors that solicits and integrates substantial input from an interdisciplinary team of medical and nursing staff, administrators, and other employees.<sup>1,7</sup>
- Provide skills-based training and coaching for all leaders and managers in relationship-building and collaborative practice that includes skills for providing feedback about chain of command, unprofessional behaviors, and conflict resolution. Cultural assessment tools can also be used to measure changes in attitude over time.<sup>1</sup>

- Assess staff perceptions of the seriousness and extent of instances of unprofessional behaviors and the risk of harm to patients. Ensure that caregivers involved in adverse events receive attention that is just, respectful, compassionate, supportive, and timely. Ensure that staff have the opportunity to fully participate in the investigation and in risk identification and mitigation activities that will prevent future adverse events.<sup>1,7</sup>
- Develop and implement a reporting/surveillance system (possibly anonymous) for detecting unprofessional behaviors. Include patient advocates who provide important feedback from patients and families who may experience intimidating or disruptive behaviors from healthcare professionals. Monitor system effectiveness through regular surveys, focus groups, and peer- and team-member evaluations. Learn whether intimidating or disruptive behaviors exist or recur through multiple and specific strategies, such as direct inquiries at routine intervals with staff, supervisors, and peers.<sup>20</sup>
- Support surveillance with tiered, nonconfrontational interventional strategies that start with informal conversations directly addressing the problem and move toward detailed action plans and progressive discipline, if patterns persist. These interventions may initially be nonadversarial, with the focus on building trust, placing accountability on and rehabilitating the offending individual, and protecting patient safety. Make use of mediators and conflict coaches when professional dispute resolution skills are needed.<sup>1,7,20</sup>
- Conduct all interventions within the context of an organizational commitment to the health and well-being of all staff, with adequate resources to support individuals whose behaviors are caused or influenced by physical or mental health pathologies.<sup>1,20</sup>
- Encourage interdisciplinary dialogues across a variety of forums as a proactive way to address ongoing conflicts, to overcome them, and to move forward through improved collaboration and communication. Communicate to staff when their work improves safety. Reward and recognize those whose efforts contribute to safety.<sup>1,7</sup>

## Conclusion

When hierarchical differences exist between healthcare clinicians, communication problems may occur. Those individuals that exhibit intimidating behaviors may further hinder communication between healthcare clinicians, causing delays in patient care particularly if the organization's chain of command fails to outline structured communication techniques and clinical practice guidelines to follow when disruptive behaviors are encountered. Disruptive behaviors of healthcare clinicians have been linked to adverse events. An organization that values all healthcare clinicians is one that invests in chain-of-command policies and provides adequate investigation and follow-up of reports of disruptive behaviors. The

chain-of-command policy provides healthcare staff with actions, exceptions, steps to take regarding unresolved issues, and documentation guidelines. Chain-of-command development is an essential part of healthcare organizations' efforts to build trust, communication, collaboration, and teamwork among healthcare clinicians, all of which have positive effects on patient safety and outcomes. Education of healthcare clinicians about the chain-of-command policy can include role-playing demonstrations, which may better prepare healthcare clinicians to initiate a chain of command when they have concerns about questionable patient care or when they encounter disruptive behaviors.

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## Patient Safety is Enhanced by Teamwork



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A trend evident during my liaison visits is that healthcare providers seek tools to maintain effective teams and foster team interaction. Team interaction has been shown to be helpful in advancing patient safety by emphasizing improved communication and outcomes.<sup>1</sup> To that end, some facilities in south central Pennsylvania plan to participate in teamwork training to improve patient safety and communication. In an effort to provide Pennsylvania facilities with an additional resource on teamwork training, the Pennsylvania Patient Safety Authority's patient safety liaisons will be attending a teamwork training session this year.

According to research compiled by the Agency for Healthcare Research and Quality (AHRQ) and the Department of Defense (DoD), evidence of the benefits of improved team performance can be seen within the military. In the mid-1980s, 147 aviation fatalities occurred in the U.S. Army. The failures were attributed to errors in crew communication, workload management, and task prioritization. The army developed a coordination training and evaluation system that saved 15 lives and \$30 million annually.<sup>1</sup> In 1990, the Navy studied teamwork and team training interventions using a program known as TADMUS (Tactical Decision Making Under Stress). This program increased understanding of team knowledge, skill, and attitude requirements; provided reliable and valid measures of team processes and outcomes; and developed new training strategies for enhancing teamwork.<sup>1</sup> Healthcare facilities can learn from these methods and lessons learned about using teamwork strategies.

Much like the military, healthcare performance relies on communication and teamwork. In Pennsylvania, facilities have been required to report Incidents and Serious Events to the Authority since June 2004. In a review of the event reports submitted in 2009, 1,300 reports included the following key terms in the context of the report: teamwork, communication, team, SBAR (Situation, Background, Assessment, Recommendation), and handoff communication. Each of these processes plays an integral part in patient safety and is included within teamwork training. Some of the comments from these reports include the following:

*There needs to be better communication between departments when transferring patients . . .*

*Improve SBAR communication . . .*

*Better communication . . .*

*Patient came down to radiology for xrays. Isolation was not selected on the handoff communication form . . .*

*Extra dose to patient—process not followed for hand-off communication between nursing . . .*

Statistics have shown that teamwork can improve patient safety. One healthcare facility that has implemented teamwork initiatives decreased their clinical error rate from 30.9% to 4.4%.<sup>2</sup> Another facility had a 50% reduction in adverse outcomes after team training.<sup>3</sup> Team Strategies and Tools to Enhance Performance and Patient Safety™ (TeamSTEPPS™), a program offered by AHRQ and DoD, offers tools and strategies for improving communication and teamwork, reducing chance of error, and providing safer patient care.<sup>1</sup> According to Clancy and Tornberg, TeamSTEPPS is composed of four teachable-learnable skills:<sup>4</sup>

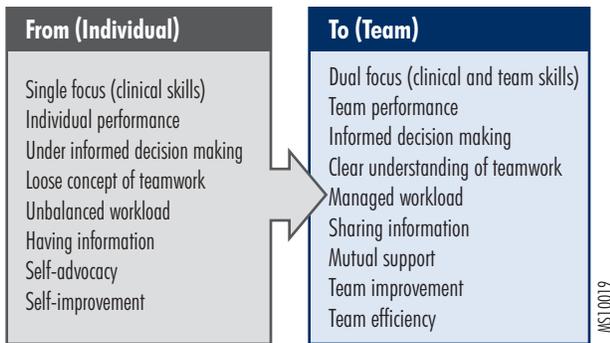
1. *Leadership* is the ability to direct and coordinate activities of team members, assess team performance, assign tasks, develop team knowledge and skills, motivate team members, plan and organize, and establish a positive team atmosphere.
2. *Mutual support* is the ability to anticipate other team members' needs and to shift workload among members to achieve balance.
3. *Situation monitoring* is the capacity to develop common understandings of the team environment and apply appropriate strategies to monitor teammate performance accurately.
4. *Communication* includes the efficient exchange of information and consultation with other team members.

Lewis B. Ergen stated, "The ratio of We's to I's is the best indicator of the development of a team."<sup>1</sup> Team structure is the first step in implementing a teamwork system, as a properly structured team is an integral part of the teamwork process. Team structure is the glue that holds together an effective strategy for ensuring patient safety and reducing medical error. TeamSTEPPS promotes partnering with the patient as part of the team structure. Roles change from individual to team, as depicted in the Figure, and can show the importance of team structure.<sup>1</sup>

Teamwork in healthcare can be a means to reduce clinical errors, improve patient and process outcomes, and increase patient and staff satisfaction. A team interacts dynamically, interdependently, and adaptively towards a common and valued goal. Characteristics of a well-performing team include shared vision, clear roles and responsibilities, common purpose, strong team leadership, and the ability to manage and optimize performance outcomes.

Shared understanding of important information can be exchanged during team interactions such as briefs,

**Figure. Individual to Team**



**Source:** Agency for Healthcare Research and Quality. TeamSTEPPS™: national implementation [online]. [cited 2009 Dec 2]. Available from Internet: <http://teamstepps.ahrq.gov/index.htm>.

huddles, and debriefs. A brief is a short meeting to discuss essential team information like team roles, clinical status of the patient, team goals and barriers, and issues affecting team operations. A huddle is used to reinforce the plans in place. This is also known as an information update and can occur at any time when necessary. A debrief recounts what happened during the event and extracts lessons learned, as well as establishes a method to formally change the existing plan to incorporate lessons learned. (An example of a tool useful for brief or debrief interactions is the World Health Organization surgical safety checklist, which can be found at [http://www.who.int/patientsafety/safesurgery/ss\\_checklist/en/index.html](http://www.who.int/patientsafety/safesurgery/ss_checklist/en/index.html).)

A successful team has good communication. TeamSTEPPS offers tools and strategies to improve the effectiveness and promote the sharing of information. According to the Joint Commission’s Sentinel Event data, inadequate communication was the root cause for approximately 66% of reported errors between 1995 and 2005.<sup>5</sup> According to Salas and McIntyre, communication can be defined as the exchange of information between a sender and a receiver.<sup>6</sup> Communication should be complete, clear, brief, and timely.

Strategies to improve communication and information exchange include the following:<sup>1</sup>

- **SBAR**, a standard method to communicate information about a patient’s condition. An example of a situation in which to use SBAR would be when calling a physician to update him or her on a patient condition and receive new orders for care.
- **Call-out**, which is used to communicate critical information during an emergent event. An example of when to use a call-out would be during an arrest situation when the nurse “calls-out” what medication he or she is giving to the patient.
- **Check-back**, which is used to close the loop of communication and verify and validate exchanged information. An example of a check-back would be when the laboratory calls a critical laboratory

result, and the nurse repeats all the information back to verify that it was correct.

- **Handoff**, which allows for the exchange of necessary information during transitions in care. An example of this would be the report from the emergency room to the medical floor where the patient is being admitted.

Many of these strategies are currently being used by hospitals across the country; however, it is important to evaluate the use of these strategies in your facility specifically to ensure that staff are utilizing the tools properly.<sup>1</sup>

Throughout my visits with facilities in the south central region of Pennsylvania, I have had many staff members tell me that they use tools such as SBAR, handoff communication, and check-backs. Other facilities are looking at improving the use of these tools to facilitate better communication among employees. One hospital in my region, Waynesboro Hospital, has incorporated the TeamSTEPPS program.

Waynesboro Hospital is a 64-bed, acute care, nonprofit, community hospital in south central Pennsylvania. The facility has used TeamSTEPPS as the core program to help nursing staff improve communication. After looking into different teamwork training programs, the facility felt that this was the most comprehensive program. The training took approximately one year to complete and required a commitment from nursing staff and administration. Waynesboro believes the program has helped empower their nurses to use phrases such as “I need clarity” to improve communication as well as attain new tools to use in their daily practice. Many of the nurses found this training helpful and fun. Currently, Waynesboro Hospital is planning to modify some of the TeamSTEPPS tools to apply them throughout the entire facility.

TeamSTEPPS is a foundation that facilities can use to help provide healthcare workers with the necessary strategies and tools to reduce errors. Determine the readiness of your facility to accept and implement these strategies and tools. Determine the barriers that might obstruct effective teamwork. After attending the teamwork training in 2010, the patient safety liaisons will be able to increase awareness of the TeamSTEPPS program and provide Pennsylvania facilities with these tools and strategies. (To learn more about teamwork tools and TeamSTEPPS, contact Christina Hunt at 717-395-0713 or [chrhunt@state.pa.us](mailto:chrhunt@state.pa.us).)

**Notes**

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## Online Resources Associated with Patient Safety Advisories

Patient Safety Officers have expressed their interest in distributing educational resources within their healthcare facilities. The Pennsylvania Patient Safety Authority provides a growing collection of resources related to *Pennsylvania Patient Safety Advisory* articles to help increase situational awareness and patient safety within healthcare facilities. Examples include sample policies, educational videos and posters, brochures, interactive learning graphics, and reference materials.

This collection of resources is available online at <http://www.patientsafetyauthority.org>. Topics addressed include the following:

- ▶ Preventing wrong-site surgery
- ▶ Aspiration screening
- ▶ Diagnostic radiation and pregnancy
- ▶ ASF patient screening and assessment
- ▶ Hospital bed safety
- ▶ Airway fires during surgery
- ▶ Color-coded wristbands
- ▶ Common hazards in the behavioral health patient room

*More improvement comes from improving a system than improving the performance of individuals within an existing system.*



An Independent Agency of the Commonwealth of Pennsylvania

Whether you would like to learn more about the topics described above, or you need tools to help you meet other challenges, these educational resources can help.

If you would like additional information, please contact us at (866) 316-1070, or e-mail [support\\_papsrs@state.pa.us](mailto:support_papsrs@state.pa.us).

# PENNSYLVANIA PATIENT SAFETY ADVISORY

## THE PENNSYLVANIA PATIENT SAFETY AUTHORITY AND ITS CONTRACTORS



The Pennsylvania Patient Safety Authority is an independent state agency created by Act 13 of 2002, the Medical Care Availability and Reduction of Error (“Mcare”) Act. Consistent with Act 13, ECRI Institute, as contractor for the Authority, is issuing this publication to advise medical facilities of immediate changes that can be instituted to reduce Serious Events and Incidents. For more information about the Pennsylvania Patient Safety Authority, see the Authority’s Web site at <http://www.patientsafetyauthority.org>.



ECRI Institute, a nonprofit organization, dedicates itself to bringing the discipline of applied scientific research in healthcare to uncover the best approaches to improving patient care. As pioneers in this science for nearly 40 years, ECRI Institute marries experience and independence with the objectivity of evidence-based research. More than 5,000 healthcare organizations worldwide rely on ECRI Institute’s expertise in patient safety improvement, risk and quality management, and healthcare processes, devices, procedures and drug technology.



The Institute for Safe Medication Practices (ISMP) is an independent, nonprofit organization dedicated solely to medication error prevention and safe medication use. ISMP provides recommendations for the safe use of medications to the healthcare community including healthcare professionals, government agencies, accrediting organizations, and consumers. ISMP’s efforts are built on a nonpunitive approach and systems-based solutions.