MEDICAL ERRORS AND PATIENT SAFETY:

A CURRICULUM GUIDE FOR TEACHING MEDICAL STUDENTS AND FAMILY PRACTICE RESIDENTS

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Medical Errors And Patient Safety:

A Curriculum Guide for Teaching Medical Students and Family Practice Residents

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OVERVIEW OF THIS CURRICULUM GUIDE

“The knowledge, skills, and attitudes needed for safe practice are not normally acquired in medical school.”

Paul Barach, M.D.
“Delivering safe health care.”

The PURPOSE of this CURRICULUM GUIDE is to address this glaring deficit in medical education. We hope we can encourage and support a significant increase in the education about, and discussion of, PATIENT SAFETY AND MEDICAL ERROR in medical schools and residencies.

This guide has grown out of our own teaching about medical errors and patient safety to third year medical students and Family Practice residents. It also comes from our review of the literature, which has expanded rapidly over the past 3 years. The volume of information on medical errors and patient safety in medical and related journals is tremendous; however, very little has been directed at how and what to teach students and residents. In addition there is currently no centralized or easily accessible source of information or references that would be most useful to medical educators. This guide is intended to do just that. We have structured this guide into CONTENT AREAS that have been useful to us as we tried to organize this vast literature for teaching. In most CHAPTERS, we give objectives and a few references for the medical educator who wishes to learn more about that area; KEY WORDS are capitalized throughout. We hope this organization of the information can help educators interested in error and patient safety more easily locate useful information. We also hope that by sharing our experiences, other educators may not have to “reinvent the wheel.” Unfortunately, we have been unsuccessful in identifying many innovative TEACHING or EVALUATION strategies because there is so little in the literature on teaching about medical errors and patient safety.

This first chapter focuses on general information on Patient Safety and Medical Error and reference sources for people new to this field.

Chapters 2 through 7 cover SIX MAJOR CONTENT AREAS with a list of learning objectives specific to that area. We also compared our objectives to the broader MSOP (Medical School Objectives Project of the AAMC) and the Required Competencies for all residents (from the ACGME); we note the overlap of our CONTENT AREAS with those lists. We also note that a curriculum on Medical Error and Patient Safety has frequent overlap with curricula currently taught in medical school and residency; we have briefly noted those areas. For example, we have found our curriculum on disclosure of medical errors to be an effective method for instruction about communication skills. Each Chapter also includes a list of key references.
Chapter 8 is a brief summary of what we found in our review of the medical literature on MEDICAL EDUCATION related to PATIENT SAFETY AND MEDICAL ERROR.

In Chapter 9 we have tried to give some concrete resources to assist medical educators start or augment teaching about error in medicine. We have included three PowerPoint presentations that are “ready-to-go”. Inside the cover is a disc that is loaded with these presentations. Feel free to use these presentations; however, we would appreciate credit if you use our work. There is a list of references that we have used as required readings for trainees, realizing that much of what is distributed is not read.

In Chapter 10 we included two very good published lists of websites for major Patient Safety organizations, many of which we have found useful as we searched for information to develop our curriculum. We also wrote a BRIEF INDEX OF KEY TERMS to help users find topics in this guide.

Because of our background, we have developed this guide for teaching medical students and family practice residents. We hope it can be modified for use in teaching other residents and also other health professionals. Our OVERALL GOAL is to contribute to the PATIENT SAFETY MOVEMENT and ultimately decrease medical errors through the development of useful curriculum resources for educators that address the “knowledge, skills, and attitudes needed for safe practice.”

Not only would we appreciate any ideas, thoughts, recommendations and any experiences you have with teaching in the areas of medical errors and patient safety, we expect feedback from you!

The development of our initial curriculum on Medical Errors and Patient Safety was supported in part by a Title VII predoctoral education in family medicine grant from USDHHS, HRSA.

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May 2002 (First Edition)
In the year and a half since we first distributed the Curriculum Guide, we have received many requests for information and lots of positive feedback. The Patient Safety Movement continues to grow and strengthen, and our curriculum for the third year medical students continues to be successful. The movements toward patient and family-centered care have also been flourishing. There have been a few “official” reports on education about safety, most notably the third report from the Institute of Medicine’s Quality Series: “Health Professions Education: A Bridge to Quality.” "There is a great educational website, AHRQ’s M and M on the Web.

Nonetheless, we are not hearing about many new curricula being offered to medical students and residents. If anything, the gap between the Patient Safety activities in hospitals, and physician education about them, is growing. The Joint Commission Patient Safety Goals are widespread, but medical students have puzzled looks when we ask if they have heard about them. This is a problem to us. Maybe it will just take much longer to infiltrate the medical education systems than the hospital systems. Or maybe we need to refocus our efforts.

Realizing this, we are continuing to update this CURRICULUM GUIDE to help groups who are in the “CONTEMPLATION” or “ACTION” stages of curriculum change; however, we also believe there needs to be a more formal and organized strategy for incorporating teaching about PATIENT SAFETY and MEDICAL ERRORS in medical education. It appears to us that many educational institutions are in the “PRE-CONTEMPLATION” stage in the Prochaska and DiClemente model, and so our efforts need to be refocused.

We have drawn from work done on other recent proposed changes to the medical education curriculum especially the contrast between the rapid acceptance of training about weapons of mass destruction\(^3\) and the less widespread acceptance of the work done by the National Environmental and Education Training Foundation (NEETF) on teaching about the health effects of pesticides.\(^2\)

**A PROPOSED STRATEGY FOR EDUCATIONAL CHANGE AROUND PATIENT SAFETY**

1) Make a STRONG CASE for incorporating training about Patient Safety including an “effective case statement to convince decision makers” about the need for this training.

2) Bridge the gap between Healthcare Institutions, and the organizations driving change in them (JCAHO, AHRQ, NQF), and the educational institutions. This would need to include bridging organizational gaps as well as language differences.

3) Strengthen and build faculty champions and incentives for this teaching.
4) Develop collaborations between MEDICAL and other HEALTH PROFESSIONALS especially the NURSING and PHARMACY PROFESSIONALS and educators to make the training for teamwork and better communication a possibility.

5) Identify sources of financial support for development and evaluation of training interventions.

As always, we are happy to help people in all stages of thinking about patient safety education and we appreciate feedback and ideas.

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September 2003 (Third Edition)

REFERENCES:


CHAPTER 1

INTRODUCTION, BACKGROUND, EPIDEMIOLOGY, AND HISTORY

"Viewed by those companies that have committed themselves to the most advanced applications of industrial quality management, the magnitude of the failures or quality defects in the provision of health care must seem stupefying....The Harvard Medical Practice Study estimated that hospitalized patients were injured because of negligence in about 1 percent of all admissions (Brennan et al. 1991), a figure that was characterized as comfortingly low by some observers when the study appeared. To Motorola, however, these failures translate into 10,000 defects per million, 3,000 times worse than [their] goal. “

From Chassin MR. 
The Milbank Quarterly;1998; 76.

Objectives:

With training on these Content Areas, the medical student/resident should be able to:

- Discuss, in general, the types of data used by the Institute of Medicine (IOM) to suggest high rates of medical errors.

- Be able to discuss the importance of data on errors made outside the hospital inpatient setting.

- Compare and contrast the approach to error in health care with the approach in other industries.

- Explain why the AVIATION INDUSTRY is used so frequently as a comparison for the health care industry in relation to errors.

- Compare the “SYSTEM ERRORS” explanation to the “BAD APPLE” explanation.

- Discuss emotional consequences of errors on patients/families and on physicians.

- Describe how health care workers/physicians would ideally use medical errors as “gems” to improve health care.
• Be able to list and discuss major types of error
  High-risk situations for error
  High-risk patients for error

• Be able to give a DEFINITION OF ERROR in medicine.

**Major references:**


Wu AW, McPhee SJ, and Christensen JF. Mistakes in medical practice. Chapter 32 in *Behavioral Medicine in Primary Care*. Appleton and Lange, Stamford,CT Edited by MD Feldman and JF Christensen.
**Other references:**


Chassin MR. Is health care ready for six sigma quality? *The Milbank Quarterly* 1998; 76.


**Attachments:**

Four Tables including the “New Look” and others summarizing TYPES and CAUSES of medical mistakes.

Also included is a summary of the aspects relevant to practicing physicians entitled “Diagnosing and Managing Medical Errors in Family Practice” from the California Academy of Family Physicians.
TABLE 1-1. THE “NEW LOOK”

“The term…is being applied to a growing body of research on human and system performance aimed at learning how complex systems fail and how people contribute to safety.”

From: Phillips DF
JAMA 1999; 281: 217

1. Emphasis on systems rather than people
2. Nonpunitive approach
3. Emphasis on the multifactorial nature of error
4. Assumption that errors will occur
5. Emphasis on caregiver interactions
6. Sharp end, blunt end

From: Wears RL and Leape LL

### TABLE 1-2. Types of medical mistakes.

<table>
<thead>
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<th>EXAMPLE</th>
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<td>Diagnosis or evaluation</td>
<td>Missed diagnosis</td>
</tr>
<tr>
<td>Medical decision-making</td>
<td>Inappropriate or premature discharge</td>
</tr>
<tr>
<td>Treatment</td>
<td>Waiting when treatment is indicated</td>
</tr>
<tr>
<td>Medication</td>
<td>Incorrect dosage</td>
</tr>
<tr>
<td>Procedural complications</td>
<td>Faulty technique</td>
</tr>
<tr>
<td>Faulty communication</td>
<td>Failure to convey information during sign-out</td>
</tr>
<tr>
<td>Inadequate supervision</td>
<td>Failure to review treatment plan</td>
</tr>
</tbody>
</table>

From: Wu AW, McPhee SJ, and Christensen JF. Mistakes in Medical Practice, Chapter 32 in Behavioral Medicine in Primary Care. 1997 Appleton and Lange, Stamford, CT. Edited by MD Feldman and JF Christensen.


### TABLE 1-3. Common Causes of Medical Mistakes

- Ignorance
- Inexperience
- Faulty judgment
- Hesitation
- Fatigue
- Job overload
- Breaks in concentration
- Faulty communication
- Failure to monitor closely
- System flaws

From: Wu AW, McPhee SJ, and Christensen JF. Mistakes in Medical Practice, Chapter 32 in Behavioral Medicine in Primary Care. 1997 Appleton and Lange, Stamford, CT. Edited by MD Feldman and JF Christensen.
In a study of 53 family physicians, called "Perceived Causes of Family Physicians' Errors" published in the *Journal of Family Practice* (April 1995), John W. Ely, M.D., and his colleagues found numerous complex reasons for physician errors (errors included delayed or missed diagnoses, surgical mishaps and medical treatment mishaps, such as administering contraindicated drugs). Many physicians in the study cited multiple reasons for their error. Here are the most common:

1. Physician Stressors
   - Feeling hurried or distracted, usually because other patients were waiting to be seen or because the time of the visit was stressful (e.g., night, weekend, off-duty hours, quitting time.)
   - Feeling fatigued.
   - Being misled by advice or anticipated advice from other physicians.
   - Avoiding a medical intervention because of its cost.

2. Process-of-Care Factors
   - Being too focused on one diagnosis or treatment plan.
   - Not being aggressive enough in diagnosing or treating (e.g., didn't diagnose cancer because of the patient's young age).
   - Lacking an adequate follow-up plan.
   - Not asking advice.

3. Patient-Related Factors
   - Being misled by a normal or negative history, physical examination, laboratory result, or imaging study, which overshadowed other signs that the patient had a significant illness.
   - Not responding with aggressive treatment because the patient either underreported symptoms or insisted on an inappropriately conservative treatment.
   - Having an attitude of dislike or unusual fondness toward the patient that hinders objectivity.

4. Physician Characteristics
   - Lacking knowledge about the medical aspects of the case because of inexperience.
   - Having too much pride in his or her own abilities which leads to a wrong decision.

Much has been written about medical errors since late 1999 when the Institute of Medicine (IOM) published its watershed report, *To Err is Human: Building a Better Health System*. The well-publicized results of this study faulted America’s health system for causing between 44,000 and 98,000 error-related deaths annually and called for improvements in the reporting and handling of medical errors. Though some have taken issue with the report’s data on deaths attributable to errors, it exposed the fact that serious, preventable errors are occurring in our health system.

Primary care avoided the harsh glare of the IOM report, which focused almost exclusively on the inpatient setting, largely due to the fact that there are insufficient data to quantify the impact of medical mistakes in physicians’ offices. Family physicians have the perfect opportunity to look at the IOM report as a call to action to examine care processes and take steps to reduce the incidence of errors in their practices. If family physicians rise to this challenge, hopefully we’ll never have to read a similar report about primary care.

The purpose of this monograph is to identify key sources of errors in primary care and provide recommendations for family physicians to reduce the risk of errors—and adverse outcomes—in their practices.

**Simple Truths About Errors in Medicine**

There is a well-established body of research about errors in medicine, and most experts agree on the following:

1. Errors will happen. Since no human is infallible, errors are bound to happen, and this includes physicians and their staffs working in the delivery of health care services.

2. Since errors can be expected, systems must be designed to prevent and absorb them.

3. Errors are not synonymous with negligence. Medicine’s ethos of infallibility leads, wrongly, to a culture that sees mistakes as an individual problem and remedies them with blame and punishment instead of looking for root causes and fixing problems by improving systems.

4. Creating a culture supportive of errors reporting is the starting point in reducing future medical errors.

While errors are a part of every day practice, many errors are the direct result of overly complex processes and are preventable. As Becher and Chassin write, “If each step in a ten-step process can be performed with 99 percent reliability, that system functions error-free 90 percent of the time. A similar process with fifty steps functions error-free only 61 percent of the time.” They illustrate this point by describing a breast cancer patient who travels through the health care system to seven or more locations for diagnosis, treatment, and follow-up, and conclude:

> Often, the physicians involved in this woman’s care do not practice within any common organizational structure. Most often, none of them has direct access to the records kept by any of the others, to the results of previous tests or examinations, or to the recommendations or plans made by the other treating physicians. Too often, the patient serves as the communication link among her physicians. Can it be surprising, therefore, that errors are common?  

Given that family physicians act as their patients’ portal of entry into what in many cases is a fragmented health care system, complexity lies at the heart of addressing errors in primary care.

**Medical Errors and Their Causes**

A useful definition of error has been provided by AAFP Past President Bruce Bagley, MD: “A medical error is anything that happened in my office that shouldn’t have happened and that I absolutely do not want to happen again.”

A more technical definition, courtesy of the IOM, is “error is defined as the failure of a planned action to be completed as intended or the use of a wrong plan to achieve an aim.”
It is important to differentiate a discussion of medical errors from traditional malpractice risk management discussions. While some errors may result in malpractice lawsuits, many mistakes that could result in harm do not, and these “near misses” deserve our attention.

What causes medical error? James Reason has categorized errors according to two types of causes: active failure and latent conditions. We tend to think first of active failure when we think of error, due to the focus on individual acts in medicine. Active errors can take the form of slips (doing a familiar action in the wrong way, like pouring salt instead of cream into coffee), lapses (failures of memory such that planned actions do not happen), and mistakes (errors in reasoning that lead to wrong choices).

Latent conditions are the systemic properties, or root causes, that lead to errors. These might include system interfaces, or poor maintenance or management practices. In situations with latent conditions, if an individual errs she has, in a sense, been set up to fail by her environment. As Don Berwick, President and CEO of the Institute for Healthcare Improvement, has said “every system is perfectly designed to achieve exactly the results it gets.”

Given the nature of primary care and the frenetic pace of today’s managed care medical practices, the chances for error are great. While it’s easy to think of the classic, serious slip-ups—prescribing a drug to a patient with known allergies, for example—think, too, of how little problems can accumulate to become big ones. The AAFP’s Robert Graham Policy Center has developed a patient safety model termed “toxic cascades” that describes how small errors which go by unnoticed (trickles) eventually add up to become torrents. Consider, for example, this story of patient care gone wrong:

It began when a woman whose husband and daughter were stricken with a community outbreak of E.coli tried, unsuccessfully at first, to reach the office by phone. She finally got through, only to be told that the next available appointment was five days away. Then, the receptionist who sent the patients to the lab for stool-specimen testing gave wrong directions—twice. And the physician never received or followed up on the results and never contacted the local health department for the protocol needed to treat patients with E.coli. Rude behavior from the staff topped it off.

While in isolation it would have been easy to set aside a long wait for an appointment or bad directions, consider the effect that these missteps, in their totality, could have had on these patients’ health. This illustrates perfectly how common office problems can snowball to truly threaten patient care and should be a wakeup call for family physicians who want only the best for their patients.

**EXAMINING ERRORS IN FAMILY PRACTICE**

While rigorous research on office-based errors is in its infancy, some useful signposts about errors in primary care come from the Robert Graham Policy Center. A recent study analyzed 330 errors made by 50 family physicians over the course of one year. According to AAFP policy analyst Susan Dovey, MPH, the errors they examined fell into the following categories:

- 24% — Communication problems (nursing, patients)
- 20% — Discontinuity of care (includes referrals of existing patients and itinerant/new patients)
- 19% — Lab results (logistics, timing, follow-up)
- 13% — Missing values/charting
- 8% — Clinical mistake (knowledge and skills)
- 8% — Prescribing errors (dosage, choice, allergy or interaction)
- 8% — Other

This list explodes two common myths about medical errors: One, that medical errors are synonymous with prescription errors, and that if we can fix prescribing, we will do away with medical error. Two, that errors are a result of clinical errors made by bad actors whose behavior needs to be changed if we are to solve medical errors. Together, prescribing and clinical judgment accounted for just 16% of the errors in this study.

The outcomes of the errors that the AAFP studied included one death and 10 hospitalizations. There were no consequences in just about half of the errors. But 20% of the errors resulted in delayed care, 10% in worsening illness, and 8% in patient upset.

This study reveals a fundamental truth about medical errors in family practice: They are by and large the result of latent conditions rather than active failure. Today’s health care infrastructure is becoming increasingly fragile, and many
physicians’ offices are a part of that system—for better or worse. While the risk of serious adverse outcomes is lower than commonly thought, delayed care, worsening illness, and patient dissatisfaction are also very real concerns for medical practices.

LEARNING FROM THE EXPERTS

One of the leading organizations studying error in health care is the National Patient Safety Foundation. Joanne Turnbull, NPSF’s executive director, points out that “the ambulatory/inpatient dichotomy is a false one. We have to think about populations and their continuum of care.” Turnbull recommends that error reduction programs focus on vulnerable process areas, starting with points of transition between care settings—a recommendation that is particularly salient in primary care given the way patients and patient information shuttle back and forth from one place to another—the lab, hospital, sub-specialists, and so on.

How is the work of error reduction undertaken? James Reason has provided an excellent overview of safety practices in his discussion of “high reliability” organizations. High reliability organizations include those whose margin for error is very small, and for which errors are catastrophic, such as airlines or nuclear power plants. Dr. Reason has identified three basic steps to dealing with error: Identify, prevent, and absorb.

1. To successfully identify errors, a culture of safety and errors reporting must be established. This includes making a clear distinction between blameless and blameworthy errors. Another key aspect is making sure that everyone in the organization is empowered to point out errors they feel have jeopardized patient safety. In the traditional hierarchy of medical practices, this can be difficult to achieve.

2. Errors must be prevented to the fullest extent possible.

   Error prevention measures include:
   - Reduced reliance on memory.
   - Improved information access.
   - Error-proofing systems.
   - Standardization.
   - Training on error identification and prevention.

   Examples in medical practice:
   - Checklists, flow sheets, tickler systems.
   - Handheld computer, electronic medical records.
   - Fail-safe to avoid prescribing two drugs that interact fatally.
   - Office formularies, guidelines synthesis.
   - Staff inservices.

3. Systems must be designed so that they can absorb a certain degree of error without harm to patients. Two key buffers include time lapses (built-in delays to verify information before proceeding) and redundancy (e.g., a pharmacist reviewing your prescription and catching your error).

Two characteristics of high reliability organizations include minimization of variability and an ability to adapt quickly to changing/emergency conditions. But perhaps the most important trait of high reliability organizations is what Dr. Reason refers to as a “constant preoccupation with the possibility of failure.” An organization that is thinking in these terms...

- is expecting failure and looking for weak links, anticipating error before it occurs;
- rehearses scenarios of failures and strives to think up novel problems that may arise;
- generalizes, not isolates, errors and looks for root causes; and
- has trained its staff in the recognition of and recovery from error.

MITIGATING MEDICAL ERRORS IN YOUR PRACTICE

Due to the prevalence of errors that are related to process issues, a comprehensive approach must be taken in any error reduction effort. Individual behavior, team dynamics, office processes, and relations with external businesses must all be examined. Here are some suggestions to get you started:

1. Pay a little more and hire great staff. They are an essential part of the health care process. Hire for positive, outgoing attitude, good communication skills, and established teamwork skills. Always check references carefully. Have thorough orientation and training plans for new hires to ensure that they learn the ropes quickly.
2. **Invest in new technologies — today.** Take a stepwise approach to building a technologically advanced practice. Two great places to start: using a handheld computer and communicating with patients via e-mail. Prescription writing and drug references are one of the key applications for handheld computers. Physicians using e-mail with patients love the clarity and convenience. Messages have less of a tendency to get lost, are easy to compose, and save the time of getting patients on the phone. Down the road, clinical decision support programs and/or electronic medical records would be wise investments.

3. **Standardize and simplify as much as possible.** Some possibilities include:
   - Establishing an office-wide formulary.
   - Adopting prescription-writing standards such as:
     - no abbreviations of drug names or dosages.
     - no trailing zeroes (a zero before a decimal point is required).
     - fixing changes by scratching errors out and writing "mistake."
   - Simplifying office systems.
   - Spreading authority and accountability in the office to provide "checks and balances."
   - Writing office flow sheets and check lists so that care is delivered the same time, every time.
     - Example: using a checklist to set up procedure rooms to eliminate surprises.
   - Rewarding staff for overriding a potential mistake rather than keeping quiet and only commenting "in their area."
   - Creating a tickler system for labwork follow-up.
   - Establishing patient tracking/follow-up systems for both missed appointments and periodic health screenings.
   - Following the principles of evidence-based medicine.

4. **Listen to your patients.** Joanne Turnbull of the National Patient Safety Foundation suggests that this is a key starting point in addressing errors in the outpatient setting. This should include:
   - Collecting data on patient satisfaction.
   - Asking patients what they need.
   - Designing services to meet patients’ needs.

5. **Create a culture of health care safety in your practice.** A practice that does this will...
   - Always look for weak links and anticipate errors before they occur.
   - Take leadership and ownership for safety and establish a clear chain of command.
   - Empower and incentivize staff to report errors.
   - Review and update policies and procedures, including expectations for errors reporting.
   - Avoid punishing those who commit errors, within reason.
   - Conduct office-wide inservices about error identification and quality improvement.

6. **Stay involved with CAFP.** While you work on errors in your practice, we will...
   - Keep you abreast of regulatory and legislative changes related to medical errors.
   - Advocate for balanced, fair, and progressive legislation developed to improve patient safety.
   - Represent you in state and national efforts to create anonymous, non-punitive error reporting systems.

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**CONCLUDING REMARKS**

Reducing errors and improving how we respond to error is but a subset of the all-important issue of quality of care. The medical professions must acknowledge that there is a gap between the care that many Americans receive and what is known about the highest standards of care, as the Institute of Medicine recently pointed out in its follow-up report, *Crossing the Quality Chasm*. While much work remains to be done, family physicians have a wonderful opportunity to work in their practices right now on process improvement and error reduction. In so doing, we can be leaders in an effort to provide the best care possible to all Americans.
RESOURCES

The Institute for Healthcare Improvement’s Idealized Design of Clinical Office Practices is one of the leading models for process improvement and excellence in primary care: www.ihi.org/idealized/idcop/index.asp

AAFP’s Family Practice Management is a wealth of information on nuts-and-bolts, process improvement issues: www.aafp.org/fpm

Downloadable forms, including referral forms, test tracking workflow, and chart preview checklists: www.physicianspractice.com


Information on handheld computers, electronic medical records, technology listserves, and much more: www.aafp.org/fpnet

American Medical News has an article about using the Web to find handheld information: www.ama-assn.org/sci-pubs/amnews/pick_01/tesa0910.htm

A thorough review of clinical decision support systems can be found in Hippocrates: www.hippocrates.com/archive/March2000/03features/03cds.html


A useful review of how to gather patient satisfaction information: www.aafp.org/fpm/toolbox/old/3.html

FDA’s MedWatch program for reporting adverse drug-related events: www.fda.gov/medwatch

US Pharmacopeia is now tracking medication errors: www.usp.org

The Medical Device Safety Reports tracks problems with medical devices that may compromise patient or professional safety: www.mdsr.ecri.org/index.asp

CAFP’s monograph, “Making the Most of Physician-Patient E-mail” is a top-to-bottom rundown of the issues you should consider before exchanging e-mail with patients. To receive a copy, call CAFP at 415/345-8667.

REFERENCES

(2) Ibid, p. 73.
(4) Dovey, S., Identifying threats to patient safety in family practice, AAFP Poster, June, 2000.
(6) Becher and Chassin, op. cit., p. 69.
(8) American Academy of Family Physicians, Toxic cascades: a comprehensive way to think about medical errors, AAFP Policy Center One-Pager #6, September, 2000.
(9) Lippman, op. cit.
(10), (11) Dovey, op. cit.
(13) Reason, op. cit.
CHAPTER 2

ETHICAL, LEGAL, PROFESSIONAL ISSUES AND THE “CULTURE OF MEDICINE”

“The American Medical Association’s Code of Medical Ethics states that situations occasionally occur in which a patient experiences significant medical complications that may have resulted from the physician’s mistake or judgment. In these situations, the physician is ethically required to inform the patient of all the facts necessary to ensure understanding of what has occurred. Only through full disclosure is a patient able to make informed decisions regarding future medical care.”


“Under the shame-and-blame method, attempts to “correct” the error are reactive, focusing on preventing the error from being repeated by the specific person who made it; assessments of the system that would identify underlying and root causes remain unexplored. As such, and particularly in combination with medical liability concerns, providers fear admitting mistakes; thus, the key lessons that could be learned from adverse events are lost. This failure in the health delivery system represents a large and gaping hole against effectively addressing medical error and patient injury.”


“All individuals and groups involved in health care, whether providing access or services, have the continuing responsibility to help improve its quality.”

Objectives:

With training on this Content Area, the medical student/resident should be able to:

- Discuss the ETHICAL PRINCIPLES that impact the decision to report and disclose errors made and those principles that might justify non-disclosure.

- Discuss the role of the attending, the resident, and the medical student in reporting and disclosing one’s own error versus errors made by another health professional and errors resulting from problems in the health care system.

- Discuss the characteristics and responsibilities of a “PROFESSION”.

- List the “TAVISTOCK PRINCIPLES” and how these affect the discussion on ethical behavior in relation to medical errors.

- Be able to describe and discuss the impact, on the handling of medical errors, of the alleged “CULTURE OF MEDICINE” including:
  - Expectations of perfection and fear/avoidance of punishment
  - Roles of physicians especially senior physicians vis-à-vis more junior physicians and physicians vis-à-vis other health professionals.
  - Other fundamental changes occurring in health-care (see Table 2-1)

- Be able to discuss attitudes about, and data on, MALPRACTICE as it affects reporting and disclosure of medical errors.

Overlap with

MSOP (Medical School Objectives Project of the AAMC):

Graduates Must be Altruistic and Demonstrate:

Knowledge of the theories and principles that govern ethical decision-making, and of the major ethical dilemmas in medicine.

Compassionate treatment of patients, and respect for their privacy and dignity.

Honesty and integrity in all interactions with patients' families, colleagues and others with whom physicians must interact in their professional lives.

An understanding of, and respect for, the roles of other healthcare professionals, and of the need to collaborate with others in caring for individual patients and in promoting the health of defined populations.
A commitment to advocate at all times for the interests of one’s patients over one’s own interests.

The capacity to recognize and accept limitations in one’s knowledge and clinical skills, and a commitment to continuously improve one’s knowledge and ability.

Graduates must be Knowledgeable and Demonstrate:

An understanding of the importance of the scientific foundation upon which medicine is based and a recognition of the needs for lifelong learning and the scholarly practice of medicine.

**Required Competencies (from the ACGME):**

Professionalism
- Respectful, altruistic
- Ethically sound practice

Patient Care
- Informed decision-making

Systems-Based Practice
- Understand interaction of their practices with the larger system

**Other Curricular areas:**
- Medical Ethics
- Professionalism
- Analysis of the health care system
- Medical – legal issues
- History of Medicine

**Major references:**


An anonymous case and commentaries by Singer PA, Wu AW, and Fazel S and McMullan J.


MSJAMA (Medical Student JAMA) September 5, 2001. Rajendran PR. Ethical issues involved in disclosing medical errors. *JAMA* 2001; 286: 1078

Fost N. Ethical issues in whistle blowing. *JAMA* 2001; 286: 1079.

Wusthoff CJ. Medical mistakes and disclosure: the role of the medical student. *JAMA* 2001; 286:1080-1081.


“Explores physicians’ responsibilities to patients who are involved in medical errors.”

“Discusses the professional ethics involved in disclosing and preventing medical errors.”


Attachment

“Contrasting Characteristics of the Culture of Physicians and Medicine in the 20th and 21st Centuries”

<table>
<thead>
<tr>
<th>20th Century Characteristics</th>
<th>21st Century Characteristics</th>
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<tbody>
<tr>
<td>Autonomy</td>
<td>Teamwork/Systems</td>
</tr>
<tr>
<td>Solo practice</td>
<td>Group practice</td>
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<tr>
<td>Continuous learning</td>
<td>Continuous improvement</td>
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<tr>
<td>Infallibility</td>
<td>Multidisciplinary problem solving</td>
</tr>
<tr>
<td>Knowledge</td>
<td>Change</td>
</tr>
</tbody>
</table>

CHAPTER 3

RECOMMENDED MANAGEMENT OF MEDICAL ERRORS

PART I OVERVIEW OF MANAGEMENT

“Why are we so reluctant to own up to errors in medicine? If we expect perfection, error is humiliating and potentially costly. But expecting perfection is foolish; we must move away from this false and unattainable standard. If we don’t accept the inevitability of our own errors and those of everyone on the healthcare team we cannot honestly put patients first. We also risk becoming the villains in the growing “patient safety movement” instead of leaders in it. Our experience of admitting errors at Sturdy [hospital] has taught us how positive an experience it can be.”


Objectives:

With training on this content area, the trainee should be able to:

- List the steps in managing an error or NEAR MISS (see attachments)
- Define and discuss:
  - Purposes of ERROR REPORTING SYSTEMS, MANDATED vs. VOLUNTARY
  - Reporting mechanism for reporting an error in your institution.
  - SENTINEL EVENTS and ROOT-CAUSE ANALYSIS
  - The barriers to widespread reporting
  - HUMAN FACTORS ENGINEERING
  - Identifying the “bad apple” practitioners vs. identifying system failures.
- Discuss how error reporting is part of continuous quality improvement expected of all practitioners and institutions.
Overlap with

MSOP (Medical School Objectives Project of the AAMC):

Graduates Must be Altruistic and Demonstrate:

Honesty and integrity in all interactions with patients' families, colleagues and others with whom physicians must interact in their professional lives.

An understanding of, and respect for, the roles of other healthcare professionals, and of the need to collaborate with others in caring for individual patients and in promoting the health of defined populations.

The capacity to recognize and accept limitations in one’s knowledge and clinical skills, and a commitment to continuously improve one’s knowledge and ability.

Graduates Must be Knowledgeable and Demonstrate:

An understanding of the power of the scientific method in establishing the causation of disease and efficacy of traditional and non-traditional therapies.

An understanding of the importance of the scientific foundation upon which medicine is based and a recognition of the needs for lifelong learning and the scholarly practice of medicine.

Graduates must be Skillful and Demonstrate:

The ability to communicate effectively, both orally and in writing, with patients, patients’ families, colleagues and others with whom physicians must exchange information in carrying out their responsibilities.

Graduates must be Dutiful and Demonstrate:

The ability to retrieve (from electronic databases and other resources), manage, and utilize biomedical information for solving problems and making decisions that are relevant to the care of individuals and populations.

Knowledge of various approaches to the organization, financing and delivery of health care.
Required Competencies (from the ACGME):

System-Based Practice
- Understand interaction of their practices with the larger system
- Knowledge of practice and delivery systems

Practice-Based Learning and Improvement
- Analyze own practice for needed improvements

Other curricular areas:
Quality Improvement

Key References


Leape LL. Reporting of adverse events. NEJM 2002; 347: 1633-38.

Attachments:

“Process for responding to a mistake.” from Wu, McPhee, and Christensen book chapter.

“Nine steps to Respond to Unintended Outcomes” from NORCAL Mutual Insurance Company of San Francisco, CA (used with permission).
Process for responding to a mistake

From: Wu AW, McPhee SJ, and Christensen JF. Chapter 32 in Behavioral Medicine in Primary Care. Appleton and Lange, Stamford, CT.
Nine Steps\(^1\) To Respond To Unanticipated Outcomes\(^2\)

1. **CARE: Take Care of the Patient**
   - Address Current Health Care Needs
   - Obtain Necessary Consults
   - Assign Primary Responsibility for Care and Communicate the Identity of the Primary Physician and the Physician's Contact Information to Family\(^3\) and Health Care Team

2. **PRESERVE: Preserve the Evidence**
   - Sequester Machinery (Pumps, Anesthesia Machines) and Preserve Settings
   - Sequester Equipment (Syringes, IV Tubing, Medication Vials)
   - Inform Hospital Risk Manager
   - Inform Maintenance Department or Supplier
   - Acquire Back-up Equipment

3. **DOCUMENT: Document in the Medical Record**
   - **What to Include:**
     - "Known Facts"\(^4\) About Unanticipated Outcome
     - Care Given in Response
     - Disclosure Discussion and Names of Witnesses (see Step 6 below).
     - Treatment and Follow-up Plans

---

\(^1\) The order in which these steps are completed may vary depending on the individual situation and/or the relevant institutional policies in effect at the time. In every instance, however, caring for the patient's immediate needs should always come first.

\(^2\) By "unanticipated outcome," we mean a negative or unexpected result stemming from a diagnostic test, medical judgment or treatment, surgical intervention, or from the failure to perform a test, treatment or intervention. The unanticipated outcome may or may not be the result of error or negligence.

\(^3\) By "family," we mean family members, significant others, domestic partners, and close friends with whom a patient chooses to share health information.

\(^4\) Many more facts may eventually be known than can be disclosed. By "known facts," we refer to those objective facts, known to date, which are either documented in the medical record or learned through the event analysis (see footnote 5), and which can be disclosed without violating "confidentiality." See footnote 6 below for a discussion of what might be "confidential."
• What Not to Include:
  o Subjective Feelings or Beliefs
  o Speculation or Blame
  o References to Incident Report Forms or Event Analysis
  o “Confidential” Information

• Begin the Event Analysis by Completing An Incident Report
  o Communicate “Known Facts”
  o Avoid Speculation or Blame
  o “Confidential” Document
    • Do Not Place in Medical Record or Discuss in Medical Record
    • Do Not Photocopy

4. REPORT: Complete Mandatory Reports If Required
• Inform Hospital Risk Management, Department Chief, Peer Review as Needed or If Required
• Inform FDA if Medical Device or Medication Involved
• Inform Coroner
• Inform Public Health Department and/or Other Governmental Agencies

5. NOTIFY: Notify Claims Department of Your Malpractice Carrier
• Report Any Incident That Could Lead to Claim, Settlement Demand, or Lawsuit
• Do NOT Use Report Form to Notify Carrier

5 The “event analysis” includes any activity designed to evaluate the causes of unanticipated outcomes and improve patient outcomes in the future. Any incident with the potential to cause harm, including “near misses” and “close calls,” should be analyzed. Event analysis activities include: completing and analyzing incident reports, peer review, quality assurance and performance improvement, risk management, and morbidity and mortality conferences. Depending upon state and/or federal law, documents and discussions produced during the event analysis may be legally confidential. For that reason, care should be taken to limit discussions to a “need to know” basis for the purposes of the event analysis, to avoid photocopying documents, and to refrain from referring to the analysis in the medical record.

6 Laws determining what discussions and documents are considered legally confidential – and thus not discoverable as evidence – vary from state to state; federal laws may also apply. We refer to such information as “confidential.” You may want to contact the Claims Department of your professional liability carrier for assistance. An attorney in your state should be consulted if you need legal guidance.
6. DISCLOSE: The Initial Disclosure Discussion

- **Why, Who, When, Where?**

  - **Why Disclose Unanticipated Outcomes?**
    - Patient Has Right to Know Condition and Make Health Care Decisions
    - Improves Doctor/Patient Relationship
    - Rebuilds Trust
    - Quality of Care
    - AMA Professional Code of Ethics
    - JCAHO Standards on Patient Safety and Error Reduction
    - May Be Required by Hospital Staff By-Laws, Medical Group Policies and Procedures, Health Plans, and Health Care Organizations

  - **Who Will Inform Patient?**
    - Health Care Provider(s) Involved in the Unanticipated Outcome
    - Provider(s) With Responsibility for Ongoing Care
    - Person(s) With Ability to Answer Questions
    - Persons Involved in Disclosure Discussion May Need Assistance in Preparing, Coordinating or Conducting Discussion, Depending Upon:
      - Communication Skills
      - Rapport with Patient and Family
      - Language Barriers

  - **When to Inform Patient and Family?**
    - As soon as Practicable After Immediate Health Care Needs Addressed
    - Consider Patient’s Physical and Emotional Readiness
    - Patient’s Permission Needed to Discuss Care with Family

  - **Where to Hold Discussion**
    - Consider Privacy and Health Needs

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How To Disclose Unanticipated Outcomes

Express Empathy
- Convey Compassion for Patient’s and Family’s Pain and Suffering
  - “I’m sorry that you…” of “I am sorry for your…”
  - Focus on Patient’s and Family’s Needs
  - Avoid “I am sorry that I…”
- Extend Sympathy to Family of Deceased Patient
- May Express Verbally or In Writing
- May Send Flowers
- May Attend Funeral

Communicate Only “Known Facts”
- What To Communicate
  - Objective Information
    - Documented in Medical Record
    - Learned Through the Event Analysis UNLESS “Confidential”
    - Adequate to Ensure Patient’s Understanding of Unanticipated Outcome and Prognosis
  - If Event Analysis Reveals Systems Errors and/or Involvement of Multiple Healthcare Team Members
    - Contact Event Analysis Team for Advice on Individual vs. Group Discussion and Appropriate Participants
    - Clarify What is “Confidential” and Who Will Discuss What With the Patient/Family

- What Not To Communicate
  - Subjective Information
  - Conjectures or Beliefs
  - “Confidential” Information, Determined by State and/or Federal Law.
- POSSIBLE Examples Include:
  - Results of Protected Peer Review, Quality Assurance, Performance Improvement, or Risk Management Committees
  - Information Provided in Confidence by a Third Party
  - Confidential Information About a Health Care Organization or Its Operations
  - Health or Employment Information About a Provider or Employee
• If Asked to Disclose “Confidential” Information
  o Inform Patient/Family That Certain “Confidential” Information Cannot Be Disclosed
    • “I know how important it is to you to understand what happened. Some information is confidential and can’t be disclosed. What I can tell you is…”
• If Asked to Comment on Role/Responsibility of Other Health Care Team Members and/or Possible Systems Errors
  o Inform Patient Can Only Comment on Your Own Care.
    • “I’m not knowledgeable enough to discuss that aspect of your care…”
  o Contact Event Analysis Team/Risk Manager/Malpractice Carrier for Guidance on What is “Confidential” and Who Will Disclose Specific Information About the Other Provider’s Care or Systems Issues.

• Avoid Speculation and Blame
  o Cause(s) of Unanticipated Outcome May Not Yet Be Known
  o Unanticipated Outcome Not Always Preventable
    • May Be Result of Disease Process or Risky Life-Saving Treatment, or Not Preventable (e.g., Some Falls)
  o Unanticipated Outcome Not Always Due to Negligence
  o Error, if One Occurred, May Not be Cause of Unanticipated Outcome

• Solicit and Respond to Patient’s/Family’s Feelings and Questions
  o Contain Your Own Emotional Response
    • Focus on Patient’s Needs
  o Convey Receptive Attitude
    • Open Posture: Arms Uncrossed, Concerned Expression, Eye Contact, Empathetic Listening
  o Name and Validate Patient’s Concerns and Feelings (“I can understand your anger…”)
  o Avoid Defensive or Accusatory Reaction if Care Questioned

• Respond to Patient’s Complaints
  o Assure Patient that the Health Care Providers are Dedicated to Quality Care and Take Patients’ Complaints Seriously
  o Depending on Size of Practice/Organization, Refer to Patient Relations Department or Other Responsible Person in Practice
  o Explain How to Lodge Complaint and Provide Forms if Available

NORCAL Risk Management
- Do Not Offer Opinion on Need for Lawsuit or Worth of Injury

**Respond to Patient’s Questions About Remedies and Refer Settlement Demands**
- Discuss Immediately With Organization’s Risk Manager and With Malpractice Carrier
- Inform Patient Not In Charge of Claim Resolution Process But Will Contact Appropriate People

- **Verify Patient’s/Family’s Understanding of Outcome and Prognosis**
  - “This is upsetting news. I want to make sure that I have clearly communicated what we know so far. What is your understanding of what happened? about your current condition?”
  - Address Misunderstandings, Confusion, Information Gaps As Needed.

- **Plan for Follow-up Care and More Discussions and Communicate the Plan**
  - If Cause of Unanticipated Outcome or Prognosis Not Yet Known, Assure Patient/Family Additional Facts Will Be Shared When Available
  - Give Estimate of How Long Analysis Process May Take
    - Patient Expectations May Not Be Realistic
    - If Expectations Not Met, Can Lead to Breakdown of Trust, Fear of Abandonment or Cover-up, Patient Dissatisfaction, Lawsuit
  - Make Appointment for Phone Call and/or Visit to Update Patient
    - “I will call you in two weeks (for example) to give you an update.”
  - Encourage Patient/Family to Call if Have Questions or Haven’t Heard Back From Provider
  - Give Name of Contact Person in Hospital or Practice

7. **ANALYZE: Analyze Unanticipated Outcome to Prevent Recurrence and/or Improve Outcome**
- Patient Safety Goal: Make it Hard for Unanticipated Outcome to Occur, Easy to Detect, Easy to Respond and Report
- Conduct Event Analysis. If in Group, Hospital, or Clinic, Refer to Individual or Committee Responsible For Analysis
- Identify All Causes of Event or “Near Miss”
- Develop and Implement Corrective Action Plan (CAP) or Refer To Individual/Committee Responsible for CAP
- Keep Event Analysis Documents and Discussions “Confidential”
  - “Need to Know” Basis
  - Do Not Include or Refer to in Medical Record

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9 “When an error contributed to the injury, the patient and the family or representative should receive a truthful and compassionate explanation about the error and the remedies available to the patient.” The National Patient Safety Foundation’s “Talking to Patients About Health Care Injury: Statement of Principle.” See www.npsf.org.
8. FOLLOW THROUGH: Subsequent Disclosure Discussion(s)

- **Goal:** Meet Ongoing Health Care Needs and Continue to Address Patient’s/Family’s Questions, Concerns
- **Keep Promises:** Call Back As Promised or As Needed
- **Keep Promises:** Hold Subsequent Disclosure Discussion(s) As Promised or As Needed
  - Determine the “Who, When, and Where” of the Disclosure Discussion Based on Current Patient Needs and Latest Results of Event Analysis
  - Begin Subsequent Disclosure Discussion(s) By Informing Patient/Family That Care Patient’s/Family’s Questions, Concerns
  - Follow Guidelines on Disclosure Above (Step 6)

- **Don’t Make Promises That Cannot Be Keep**
- Cannot Provide Event Analysis Documents
- Cannot Disclose “Confidential” Information
- Cannot Discuss Others’ Roles and Responsibilities Unless Authorized to Do So By Event Analysis Team: Don’t Speculate or Blame

9. HEAL: Heal the Health Care Team

- **Acknowledge Effect on Health Care Team Members**
  - Unanticipated Outcomes Disturbing to All Involved
  - Recognize Need to Discuss Feelings About Outcome with Your Family, Friends, and Colleagues
  - Identify Resources to Help in Healing
  - Allow Time for Resolution of Feelings
  - View NORCAL Video, “Surviving the Malpractice Suit: Physicians Tell Their Story”
  - Participate in Litigation Stress Workshop or Group

- **Distinguish Between Discussion of Your Feelings And Facts of Case**

- **Discuss Facts of Case Only With:**

NORCAL Risk Management
- Other Members of Patient’s Health Care Team On “Need to Know” Basis for Provision of Care
- Patient/Family UNLESS “Confidential”
- Participants in Event Analysis, Peer Review, Quality Assurance, Risk Management and Other Activities Designed to Improve Quality of Care
- Malpractice Carrier
- Defense Attorney In Event of Litigation

- Avoid Informal Discussions Of Facts of Case With Colleagues, Family, Friends

**FOR Further Information Or Help**

- To discuss how to disclose a **specific unanticipated outcome**, call our Claims Department.
- For help on developing policies and procedures on disclosure, for education and training, or to give us feedback on these guidelines, contact our Risk Management Department at:

  560 Davis Street  
  San Francisco, CA  94111  
  (800) 652-1051, x2244

This article is reprinted with the permission of NORCAL Mutual Insurance Company. NORCAL Mutual Insurance Company. **Nine Steps to Respond to Unanticipated Outcomes.**

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"I will focus somewhat more on the ethical and emotional implications of medical errors…..However, I would point out that fear of malpractice litigation certainly permeates the emotional responses of physicians, as well as ethical debates pertaining to medical mistakes. In a survey of patients given hypothetical situations of physician mistakes, 98 percent of patients indicated that they would desire some acknowledgment of even minor errors. Patients said that they were more likely to consider litigation if the physician did not disclose the error. Truth-telling and apologizing to patients has been described as healing for both physician and patient.”

From: Brazeau C. Am Fam Phys 1999: 60; page 1013.

“Even though the principle of “forgive but remember” is embedded in medical training, it is not the attending doctor’s prerogative to conceal a mistake. There is too much self interest, particularly when one shares responsibility for the mistake. In many cultures there is an ethical and professional consensus that doctors are obliged to disclose medical errors partly because it is in the patient’s best interest and partly because it is the physician’s duty towards the patient. Surveys of patients confirm that most of them would want to be informed if a mistake had been made in their care. A simple test of whether concealment is justified is to ask: does it pass the headline test? – that is, is this something a doctor would be willing to defend in public?…..As supervising doctors, what should we say to a trainee who tells us about a mistake? The basic principles are to encourage a description of what happened, to acknowledge the gravity of the mistake, and to empathize with the emotions it elicits before embarking on a more objective analysis.”

From: Wu AW BMJ 2001; 322:1238
Objectives:

With training on this Content Area, the medical student/resident should be able to:

- Discuss the issues of medical error with and without an injury to a patient and the effect of a bad outcome on the decision to disclose, referring to the JCAHO standards.
- Communicate a medical error to a patient;
- Demonstrate empathic understanding for the patient receiving the news of an error;
- Discuss the issue of trust between a patient and physician and the effect the error may have had on this relationship;
- Attend to the patient’s verbal and non-verbal reactions to the disclosure of an error; and
- Discuss remedies and next steps for the patient’s treatment.

Overlap with

MSOP (Medical School Objectives Project of the AAMC):

Graduates Must be Altruistic and Demonstrate:

Compassionate treatment of patients, and respect for their privacy and dignity.

Honesty and integrity in all interactions with patients’ families, colleagues and others with whom physicians must interact in their professional lives.

A commitment to advocate at all times the interests of one’s patients over one’s own interests.

The capacity to recognize and accept limitations in one’s knowledge and clinical skills, and a commitment to continuously improve one’s knowledge and ability.

Graduates must be Skillful and Demonstrate:

The ability to communicate effectively, both orally and in writing, with patients, patients’ families, colleagues and others with whom physicians must exchange information in carrying out their responsibilities.
Required Competencies (from the ACGME):

Professionalism
- Respectful, altruistic
- Ethically sound practice

Patient Care
- Caring and respectful behaviors
- Interviewing
- Informed decision-making

Interpersonal and Communication skills
- Creation of therapeutic relationship with patients

Other curricular areas:
Communication skills
Ethics
Professionalism
Giving bad news
Forgiveness in medicine

Major references:


Joint Commission on Accreditation of Health Care Organizations. 2002 Hospital Accreditation Standards.

Liang BA. A system of medical error disclosure. *Qual Saf Health Care* 2002; 11: 64-68.


Wu AW et al. To tell the truth: ethical and practical issues in disclosing medical mistakes to patients. JGIM 1997; 12: 770-775.

**Teaching Resources:**

- “Talking to Patients about Health Care Injury” a Statement of Principle from the National Patient Safety Foundation.

- Two Tables listing suggested formats for disclosure.

- One hospital’s official POLICIES on Patient Safety:
  - “Adverse Events”
  - “Non-Punitive Reporting”

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**Table 4-1. Talking to Patients About Health Care Injury Statement of Principle**

When a health care injury occurs, the patient and the family or representative are entitled to a prompt explanation of how the injury occurred and its short- and long-term effects. When an error contributed to the injury, the patient and the family or representative should received a truthful and compassionate explanation about the error and the remedies available to the patient. They should be informed that the factors involved in the injury will be investigated so that steps can be taken to reduce the likelihood of similar injury to other patients.

Health care professionals and institutions that accept this responsibility are acknowledging their ethical obligation to be forthcoming about health care injuries and errors.

The National Patient Safety Foundation urges all health care professionals and institutions to embrace the principle of dealing honestly with patients.

Table 4-2. Telling Patients

Malpractice attorneys may urge you to keep our mistakes to yourself, but experts increasingly suggest that erring doctors come clean with patients and their families. As David Hiliker, M.D., writes in a New England Journal of Medicine article titled “Facing our mistakes,” “The only real answer for guilt is spiritual confession, restitution and absolution.”

Indeed, physicians who disclose mistakes to patients describe it as a cathartic experience, one that not only reduces their guilt, but may also reduce the chance that patients or their families (presumably grateful for the honesty) will sue.

But how do you admit to a patient that you’ve cut off the wrong leg or failed to correctly diagnose breast cancer? John F. Christensen, Ph.D. director of behavioral medicine training in the Department of Medicine at Legacy Portland Hospitals in Portland, OR, recommends treating the disclosure as if you were breaking bad news, such as a terminal illness to a patient.

1. Say that you regret you’ve made an error or mistake.
2. Describe the decisions that were made along the way, especially those made with the patient or family.
3. Describe the course of events using non-technical language.
4. State the nature and consequences of the mistake to the patient’s health and the corrective action to be taken.
5. Express personal regret and apologize.
6. Elicit questions/concerns from the patient and answer them.
7. Ask if there is anyone else in the family with whom you should speak.


Table 4-3. Disclosing Error to Patients

- Notify your professional insurer and seek assistance from those who might help you with disclosure (e.g., unit director, risk manager)
- Disclosure promptly what you know about the event. Concentrate on what happened and the possible consequences.
- Take the lead in disclosure; don’t wait for the patient to ask.
- Outline a plan of care to rectify the harm and prevent recurrence.
- Offer to get prompt second opinions where appropriate.
- Offer the option of a family meeting and the option of having lawyers present.
- Document important discussions.
- Offer the option of follow-up meetings.
- Be prepared for strong emotions.
- Accept responsibility for outcomes, but avoid attributions of blame.
- Apologies and expressions of sorrow are appropriate.

From: Hébert PC, Levin AV, and Robertson G. CMAJ 2001: 164, 509-513
### PATIENT SAFETY:

Saint Joseph's Medical Center is committed to providing quality medical care to its patients and the community it serves. Despite constant and committed efforts to provide and improve patient care, it happens from time to time that patients are harmed rather than helped by health care. While sometimes these poor outcomes of care are unavoidable, at other times they result from preventable mistakes or errors in the provision of care. Saint Joseph's Medical Center analyzes such events to prevent the recurrence of such events ("adverse events," AEs). We are also committed to respecting the right of patients and their families to be informed about such events.

### STAFF SAFETY:

Saint Joseph's Medical Center seeks to provide an atmosphere of teamwork that is committed to the overall safety of our staff. Within the culture of safety, a program has been developed that serves to function proactively to prevent staff injuries. When an injury has occurred, the program design provides for assessment of the circumstances, immediate care for the staff member, education to prevent recurrence, and methods to facilitate a rapid return to work, when applicable.

### PURPOSE

1. To address the issue of the disclosure of AEs to patients/families.
2. To create a standardized mechanism for identifying, reporting, investigating, trending and resolving adverse events.
3. To educate providers and patients/families concerning the many aspects of patient safety.
4. To provide a consistent mechanism for improving the patient care process.

### SCOPE

This policy applies to all patients cared for at Saint Joseph's Medical Center and its ambulatory services.

### DEFINITIONS

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tr>
<td><strong>Adverse Event</strong></td>
<td>An unplanned or unusual deviation in the patient care process.</td>
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<tr>
<td><strong>Error</strong></td>
<td>An unintended act, either of omission or commission.</td>
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**Effective Date:** October 8, 2001

**Distribution:** Directors of Clinical Service, Dept. Heads, Management Council

**Policy No:** 005-303

**Sheet:** 1 of 5
<table>
<thead>
<tr>
<th>POLICY</th>
<th>Adverse Events</th>
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<tbody>
<tr>
<td>DEFINITIONS (Cont'd)</td>
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<tr>
<td>Sentinel Event</td>
<td>An event which has resulted in an unanticipated death or major permanent loss of function, not related to the natural course of the patient's illness or underlying condition. The following events are also considered sentinel events even if the outcome was not death or major permanent loss of function: suicide of a patient in a setting where the patient receives around-the-clock care (e.g., hospital, residential treatment center, crisis stabilization center); infant abduction or discharge to the wrong family; rape; hemolytic transfusion reaction involving administration of blood or blood products having major blood group incompatibilities; and surgery on the wrong patient or wrong body part.</td>
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<tr>
<td>Hazardous Condition</td>
<td>Any set of circumstances (exclusive of the disease or condition in which the patient is being treated) which significantly increases the likelihood of a serious adverse outcome.</td>
</tr>
<tr>
<td>Near Miss</td>
<td>Used to describe any process variation which did not affect the outcome, but for which a recurrence carries a significant chance of a serious adverse outcome.</td>
</tr>
<tr>
<td>SEVERITY OF EVENT</td>
<td></td>
</tr>
<tr>
<td>Level 1:</td>
<td>An event occurred, but the patient was not harmed.</td>
</tr>
<tr>
<td>Level 2:</td>
<td>An event occurred that resulted in the need for increased patient assessments, but no change in vital signs and no patient harm.</td>
</tr>
<tr>
<td>Level 3:</td>
<td>An event occurred that resulted in the need for treatment and/or intervention and caused temporary patient harm.</td>
</tr>
<tr>
<td>Level 4:</td>
<td>An event occurred that resulted in initial or prolonged hospitalization, and caused temporary patient harm.</td>
</tr>
<tr>
<td>Level 5:</td>
<td>An event occurred that resulted in permanent patient harm or near death event, such as anaphylaxis.</td>
</tr>
<tr>
<td>Level 6:</td>
<td>An event occurred that resulted in patient death.</td>
</tr>
</tbody>
</table>

*Levels 3 through 6 shall be discussed with patient or families.*
1. What events ought to be disclosed?
Incidents in which patients are harmed, including Severity Levels 3 through 6. For example: unexpected admission to intensive care, unexpected patient death, unnecessary treatment with burdensome impact on the patient, return to the O.R.

Errors that do not harm patients and do not have the potential to do so (insignificant or minor incidents) do not require disclosure to the patient. If there is a question concerning disclosure, contact Risk Management and Quality Improvement. After hours, inquiries should be directed to the nursing supervisor. The Administrator on call will be notified, as well.

2. To whom should the disclosure be made?
Disclosure of AEs should be made to the affected patient and, when appropriate, the patient's family or designated decision-maker.

3. When should disclosure take place?
Disclosure of the AE should take place as soon as practical after the AE has occurred or been identified. Disclosure to the patient should occur when the patient is stable and/or able to comprehend the information. Disclosure to the patient's family or decision-maker may occur sooner depending on the incident's severity and his/her need to know this information.

4. Who ought to disclose events to patients?
There are several ways in which an AE may be disclosed, depending upon the event. The responsibility usually rests with the Attending Physician. In some circumstances, further investigation will be required to determine which individual(s) should be involved. The Attending Physician and the Vice President for Risk Management will consider involving representatives from
5. How to disclose an event

The nature, severity and cause (if known) of the AE should be presented in a straight-forward and non-judgmental fashion. An expression of sorrow is often appropriate and not an admission of guilt. Speculation should be avoided and focus placed on what is known at the time of discussion. Answer questions and provide assurance that unanswered questions will be investigated further. Describe what, if anything, can be done to correct the consequences of the AE. Offer a second opinion, the involvement of outside assistance, or transfer of care to another practitioner.

6. How is disclosure documented?

Relevant information and the medical record should be on hand. A summary of the disclosure should be noted in the medical record. A notation of attendees should also be retained.

**TRENDING AND RESOLUTION**

**Trending:**

Trending of events is an interdisciplinary process which may be done by Performance Improvement Teams, Department Heads, Department Directors, the Safety Officer, or Risk Management. Whichever mechanism is used, a trending tool must be in place. (See back of the Occurrence Report form.)

**Resolution:**

Initiatives will focus primarily on processes, but human factors will also be considered.

<table>
<thead>
<tr>
<th>a. Processes</th>
<th>Consultant Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication flow changes</td>
<td></td>
</tr>
<tr>
<td>Organization structure changes</td>
<td>Inventory changes</td>
</tr>
<tr>
<td>Staffing adjustments</td>
<td>Revision of job descriptions</td>
</tr>
<tr>
<td>Equipment changes</td>
<td>New/revised policies &amp; procedures</td>
</tr>
<tr>
<td>Business process redesign</td>
<td>Work flow/structure/ergonomic change</td>
</tr>
<tr>
<td>Signage</td>
<td>Establishment of a process improvement team</td>
</tr>
</tbody>
</table>

POLICY NO: 005-303

SHEET: 4 OF 5
### Saint Joseph's Medical Center

<table>
<thead>
<tr>
<th>POLICY</th>
<th>Adverse Events</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PROCEDURE (Cont'd)</strong></td>
<td><strong>b. Human Factor</strong></td>
</tr>
<tr>
<td>Staff meeting discussion</td>
<td>Educational training programs</td>
</tr>
<tr>
<td>Counseling/guidance</td>
<td>Adjustment in clinical duties, clinical privileges or staff status</td>
</tr>
<tr>
<td>Employee improvement plan</td>
<td></td>
</tr>
</tbody>
</table>

**POLICY NO: 005-303**

**SHEET: 5 OF 5**
“It was an emergency—not life threatening, but something needed to be done. All the monitoring equipment was attached, and, with words like, “Don’t worry, everything will be fine,” we began. But everything was not fine, and it got worse, and after half an hour my patient was dead. At my hands...Immediately after the event I was a wreck. I vaguely remember talking to the family; I don’t know if I was much use to them.....That night I got drunk. It was the only way I could sleep. A sensitive colleague came and sat with me. I didn’t realize until later that this was to ensure that I didn’t go and kill myself. By the next day I had reassured myself that it wasn’t “my fault.”.....Then the medical examiner rang. The necropsy did not absolve me from blame. Perhaps I might have been at fault.....It was time to move on. My thoughts about the incident changed with time. Regardless of the actual events, I realized that it was my fault.....It was two months before the dreams stopped. It was three months before I spent a day and did not think about the events. It was six months before my heart stopped leaping at letters marked “private and confidential”.....I do not presume this to be a blueprint of what to do in these circumstances. But I know that this will happen again to someone else, and they should know that they are not alone.”

From “Looking back...”  
BMJ: 320: 812

Objectives:

With training on this Content Area, the medical student/resident should be able to:

- List the common emotions felt by anyone who makes a serious or potentially serious error and common reactions by physicians who make an error.

- Discuss the methods that help physicians cope with feelings following a medical error.

- Describe how you know when you are personally feeling nervous or upset.

- Discuss your own usual reaction to dealing with a person or patient who displays strong emotion (e.g., anger, sadness)
Major references:


Ely JW. Physicians’ Mistakes: will your colleagues offer support? Arch Fam Med 1996; 5: 76-77.


Levinson W and Dunne PM. Coping with fallibility. JAMA 1989; 261: 2252.


Overlap with

MSOP (Medical School Objectives Project of the AAMC):
Not specifically addressed.

Required Competencies (From the ACGME):
Not specifically addressed.

Other Curricular areas:
Behavioral Sciences
Physician self-awareness
Physician health and impairment

Attachments:
Two tables on physician coping.
TABLE 5-1. Potential Strategies For Coping With Medical Mistakes.

<table>
<thead>
<tr>
<th>APPROACH</th>
<th>STRATEGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem-focused</td>
<td>Acceptance of responsibility</td>
</tr>
<tr>
<td></td>
<td>Consultation to understand nature of mistake</td>
</tr>
<tr>
<td></td>
<td>Consultation to correct mistake</td>
</tr>
<tr>
<td></td>
<td>Planned problem-solving (e.g., obtaining extra training)</td>
</tr>
<tr>
<td>Emotion-focused</td>
<td>Pursuance of social support</td>
</tr>
<tr>
<td></td>
<td>Disclosure to colleague, friend, or spouse</td>
</tr>
<tr>
<td></td>
<td>Disclosure to patient</td>
</tr>
<tr>
<td></td>
<td>Emotional self-control (e.g., repressing one’s emotional response)</td>
</tr>
<tr>
<td></td>
<td>Escape-avoidance</td>
</tr>
<tr>
<td></td>
<td>Distancing</td>
</tr>
<tr>
<td></td>
<td>Reframing of mistake (e.g., recognizing it as inherent in practicing medicine)</td>
</tr>
</tbody>
</table>

TABLE 5-2. Common changes in practice following mistakes.

<table>
<thead>
<tr>
<th>Constructive Changes</th>
<th>Defensive Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increasing information-seeking</td>
<td>Being unwilling to discuss the error</td>
</tr>
<tr>
<td>- Asking advice</td>
<td>Avoiding patients with similar problems</td>
</tr>
<tr>
<td>- Reading</td>
<td>Ordering additional but unnecessary tests</td>
</tr>
<tr>
<td>Increasing vigilance</td>
<td></td>
</tr>
<tr>
<td>- Paying more attention to detail</td>
<td></td>
</tr>
<tr>
<td>- Confirming data personally</td>
<td></td>
</tr>
<tr>
<td>- Changing data organization</td>
<td></td>
</tr>
<tr>
<td>- Ordering additional tests as appropriate</td>
<td></td>
</tr>
<tr>
<td>- Improving screening for disease</td>
<td></td>
</tr>
<tr>
<td>- Improving communication with patients</td>
<td></td>
</tr>
<tr>
<td>Improving self-pacing</td>
<td></td>
</tr>
<tr>
<td>Improving communication with staff</td>
<td></td>
</tr>
<tr>
<td>Supervising others more closely</td>
<td></td>
</tr>
</tbody>
</table>

Both Tables From: Wu AW, McPhee SJ, and Christensen JF. Chapter 32 in Behavioral Medicine in Primary Care. Appleton and Lange, Stamford, CT.
CHAPTER 6

PREVENTION OF MEDICAL ERRORS

PART I  OVERVIEW

“High-reliability industries share a simple set of ideas and practices. First, they understand that complex systems make it difficult for even the best-trained and motivated workers to do a good job. They understand and prepare for the most common kinds of errors people make, and they design systems that anticipate and either prevent errors or compensate for them before they do harm…..Health care systems rely heavily on near-perfect performance by people. Our quality assurance processes emphasize finding the one person to blame for an error and punishing that individual in the expectation that better individual performance will result in fewer errors.”

From: Becher EC and Chassin MR
Health Affairs, May/June 2001; page 75.

Objectives:

With training on this Content Area, the medical student/resident should be able to:

Explain and discuss how each of the following can be used to help PREVENT future errors:

• effective REPORTING systems
• ANALYSIS of these reported events
• improved SYSTEMS of care
• Learning from the SAFETY SCIENCES (including HUMAN FACTORS ENGINEERING)
• TECHNOLOGY, including information technology, physician order entry, design of medical devices, etc.
• need for EVIDENCE on what works to prevent errors and AHRQ and NQF type recommendations on safe practice.
(See Tables 6-2 and 6-3)
• TEAM-TRAINING and improved COMMUNICATION
• PATIENT EMPOWERMENT
• a change in the “CULTURE OF MEDICINE” to embrace patient safety
• JCAHO NATIONAL PATIENT SAFETY GOALS (See Table 6-1)

Overlap with

MSOP (Medical School Objectives Project of the AAMC):

Graduates Must be Altruistic and Demonstrate:

Honesty and integrity in all interactions with patients’ families, colleagues and others with whom physicians must interact in their professional lives.

An understanding of, and respect for, the roles of other healthcare professionals, and of the need to collaborate with others in caring for individual patients and in promoting the health of defined populations.

The capacity to recognize and accept limitations in one’s knowledge and clinical skills, and a commitment to continuously improve one’s knowledge and ability.

Graduates must be Knowledgeable and Demonstrate:

An understanding of the power of the scientific method in establishing the causation of disease and efficacy of traditional and non-traditional therapies.

An understanding of the importance of the scientific foundation upon which medicine is based and a recognition of the needs for lifelong learning and the scholarly practice of medicine.

Graduates must be Skillful and Demonstrate:

The ability to communicate effectively, both orally and in writing with patients, patients’ families, colleagues and others with whom physicians must exchange information in carrying out their responsibilities.

Graduates must be Dutiful and Demonstrate:

The ability to retrieve (from electronic databases and other resources), manage, and utilize biomedical information for solving problems and making decisions that are relevant to the care of individuals and populations.
Knowledge of various approaches to the organization, financing and delivery of health care.

**Required competencies (from the ACGME):**

**Patient Care**
- work within a team

**Practice-Based Learning and Improvement**
- Analyze own practice for needed improvement
- Use of evidence from scientific studies
- Use of information technology
- Facilitate learning of others

**Systems-Based Practice**
- Understand interaction of their practices with the larger system
- Knowledge of practice and delivery systems

**Other curricular areas:**
- Quality Improvement
- Working with other healthcare disciplines

**Major references:**


**Resources:**

Quality of Health Care: “Q-pack” from the Agency for Healthcare Research and Quality.

   Easily accessible, contains about 5 very good patient fact sheets in English and Spanish including: “20 Tips to Help Prevent Medical Errors” and “5 Steps to Safer Health Care”.
   Available at [http://www.ahcpr.gov/consumer/pathqpack.htm](http://www.ahcpr.gov/consumer/pathqpack.htm)

**Attachments**

Four tables listing goals, opportunities, endorsed practices and research priorities in patient safety as examples of specific information being used to move institutions to make health care safer.
1. Improve the accuracy of patient identification.
   a) Use at least two patient identifiers (neither to be the patient’s room number) whenever taking blood samples or administering medications or blood products.
   b) Prior to the start of any surgical or invasive procedure conduct a final verification process, such as a “time out,” to confirm the correct patient, procedure and site, using active – not passive – communication techniques.

2. Improve the effectiveness of communication among caregivers.
   a) Implement a process for taking verbal or telephone orders or critical test results that require a verification “read-back” of the complete order or test result by the person receiving the order or test result.
   b) Standardize the abbreviation, acronyms and symbols used throughout the organization, including a list of abbreviations, acronyms and symbols not to use.

3. Improve the safety of using high-alert medications.
   a) Remove concentrated electrolytes (including, but not limited to, potassium chloride, potassium phosphate, sodium chloride >0.9%) from patient care units.
   b) Standardize and limit the number of drug concentrations available in the organization.

   a) Create and use a preoperative verification process, such as a checklist, to confirm that appropriate documents (e.g., medical records, imaging studies) are available.
   b) Implement a process to mark the surgical site and involve the patient in the marking process.

5. Improve the safety of using infusion pumps.
   a) Ensure free-flow protection on all general-use and PCA (patient controlled analgesia) intravenous infusion pumps used in the organization.

6. Improve the effectiveness of clinical alarm systems.
   a) Implement regular preventive maintenance and testing of alarm systems.
   b) Assure that alarms are activated with appropriate settings and are sufficiently audible with respect to distances and competing noise within the unit.

7. Reduce the risk of health care-acquired infections.
   a) Comply with current CDC hand hygiene guidelines.
   b) Manage as sentinel events all identified cases of unanticipated death or major permanent loss of function associated with a health care-acquired infection.

Table 6-1: National Patient Safety Goals Required by JCAHO

From:
(Accessed 9/13/03)
Table 6-2: NQF-Endorsed Set of Safe Practices*

1. Create a healthcare culture of safety.
2. For designated high-risk, elective surgical procedures or other specified care, patients should be clearly informed of the likely reduced risk of an adverse outcome at treatment facilities that have demonstrated superior outcomes and should be referred to such facilities in accordance with the patient’s stated preference.
3. Specify an explicit protocol to be used to ensure an adequate level of nursing based on the institution’s usual patient mix and the experience and training of its nursing staff.
4. All patients in general intensive care units (both adult and pediatric) should be managed by physicians having specific training and certification in critical care medicine (“critical care certified”).
5. Pharmacists should actively participate in the medication-use process, including, at a minimum, being available for consultation with prescribers on medication ordering, interpretation and review of medication orders, preparation of medications, dispensing of medications, and administration and monitoring of medications.
6. Verbal orders should be recorded whenever possible and immediately read back to the prescriber—i.e., a healthcare provider receiving a verbal order should read or repeat back the information that the prescriber conveys in order to verify the accuracy of what was heard.
7. Use only standardized abbreviations and dose designations.
8. Patient care summaries or other similar records should not be prepared from memory.
9. Ensure that care information, especially changes in orders and new diagnostic information, is transmitted in a timely and clearly understandable form to all of the patient’s current healthcare providers who need that information to provide care.
10. Ask each patient or legal surrogate to recount what he or she has been told during the informed consent discussion.
11. Ensure that written documentation of the patient’s preference for life-sustaining treatments is prominently displayed in his or her chart.
12. Implement a computerized prescriber order entry system.
13. Implement a standardized protocol to prevent the mislabeling of radiographs.
14. Implement standardized protocols to prevent the occurrence of wrong-site procedures or wrong-patient procedures.
15. Evaluate each patient undergoing elective surgery for risk of an acute ischemic cardiac event during surgery, and provide prophylactic treatment of high-risk patients with beta blockers.
16. Evaluate each patient upon admission, and regularly thereafter, for the risk of developing pressure ulcers. This evaluation should be repeated at regular intervals during care. Clinically appropriate preventive methods should be implemented consequent to the evaluation.
17. Evaluate each patient upon admission, and regularly thereafter, for the risk of developing deep vein thrombosis (DVT)/venous thromboembolism (VTE). Utilize clinically appropriate methods to prevent DVT/VTE.
18. Utilize dedicated anti-thrombotic (anti-coagulation) services that facilitate coordinated care management.
19. Upon admission, and regularly thereafter, evaluate each patient for the risk of aspiration.
20. Adhere to effective methods of preventing central venous catheter-associated blood stream infections.
21. Evaluate each pre-operative patient in light of his or her planned surgical procedure for the risk of surgical site infection, and implement appropriate antibiotic prophylaxis and other preventive measures based on that evaluation.
22. Utilize validated protocols to evaluate patients who are at risk for contrast media-induced renal failure, and utilize a clinically appropriate method for reducing risk of renal injury based on the patient’s kidney function evaluation.
23. Evaluate each patient upon admission, and regularly thereafter, for risk of malnutrition. Employ clinically appropriate strategies to prevent malnutrition.
24. Whenever a pneumatic tourniquet is used, evaluate the patient for the risk of an ischemic and/or thrombotic complication, and utilize appropriate prophylactic measures.
25. Decontaminate hands with either a hygienic hand rub or by washing with a disinfectant soap prior to and after direct contact with the patient or objects immediately around the patient.
26. Vaccinate healthcare workers against influenza to protect both them and patients from influenza.
27. Keep workspaces where medications are prepared clean, orderly, well lit, and free of clutter, distraction, and noise.
28. Standardize the methods for labeling, packaging, and storing medications.
29. Identify all “high alert” drugs (e.g., intravenous adrenergic agonists and antagonists, chemotherapy agents, anticoagulants and anti-thrombotics, concentrated parenteral electrolytes, general anesthetics, neuromuscular blockers, insulin and oral hypoglycemics, narcotics and opiates).
30. Dispense medications in unit-dose or, when appropriate, unit-of-use form, whenever possible.

*See full report for applicable care settings for each practice, detailed specifications, and additional background and reference material.


New York Medical College Department of Family Medicine MEDICAL ERRORS AND PATIENT SAFETY
Table 6-3: “Clear Opportunities for Safety Improvement”

“The following 11 patient safety practices were the most highly rated (of the 79 practices reviewed in detail…) in terms of strength of evidence supporting more widespread implementation”

- Appropriate use of prophylaxis to prevent venous thromboembolism in patients at risk;
- Use of perioperative beta-blockers in appropriate patients to prevent perioperative morbidity and mortality;
- Use of maximum sterile barriers while placing central intravenous catheters to prevent infections;
- Appropriate use of antibiotic prophylaxis in surgical patients to prevent perioperative infections;
- Asking that patients recall and restate what they have been told during the informed consent process;
- Continuous aspiration of subglottic secretions (CASS) to prevent ventilator-associated pneumonia;
- Use of pressure relieving bedding materials to prevent pressure ulcers;
- Use of real-time ultrasound guidance during central line insertion to prevent complications;
- Patient self-management for warfarin (Coumadin™) to achieve appropriate outpatient anticoagulation and prevent complications;
- Appropriate provision of nutrition, with a particular emphasis on early enteral nutrition in critically ill and surgical patients; and
- Use of antibiotic-impregnated central venous catheters to prevent catheter-related infections.

Adapted from:

Table 6-4: Patient Safety Research areas (identified in the September 2000 summit)

- Epidemiology of errors
- Infrastructure to improve patient safety
- Information systems
- Performance shaping factors
- Evidence based interventions
- Safety cultural tools
- Educational tools

CHAPTER 7

PREVENTION OF MEDICAL ERRORS

PART II  MEDICATION ERRORS

“I have a regular medication regimen, a big one, because I’m HIV-positive. So I rely on my medications and have to get prescriptions every month. I picked up the medication. I didn’t look in the bag for about a week. When I opened the bag, I had 2 completely wrong medications. One was an ulcer medication and one was a tranquilizer, but they were supposed to be antiretroviral medications…..It was very frustrating because I count on these people to do it right and count on having the right medicines. The aggravation of having to go through that process again is like contacting City Hall. I think that you have to be an informed consumer of the medical system. I didn’t lose confidence in the system – I always thought it was poorly run. I go to the hospital because the doctors are very good, but the system is very poor. If I ran a business the way the hospital is run, I would be out of business.”


KEY POINTS:

• The differences between a MEDICATION ERROR, an ADVERSE DRUG EVENT (ADE), and a PREVENTABLE ADVERSE DRUG EVENT.

• List the types and possible causes of medication errors.

• Discuss the importance of improvements in SYSTEMS and TECHNOLOGIES as ways to prevent some medication errors and give examples.

• Discuss the ROLES OF OTHER HEALTH PROFESSIONALS in both making medication errors and in preventing medication errors.

• Discuss the ROLE OF THE PATIENT in helping to prevent medication errors.
Overlap with

MSOP (Medical School Objectives Project of the AAMC):

Graduate Must be Altruistic and Demonstrate:

An understanding of, and respect for, the roles of other healthcare professionals, and of the need to collaborate with others in caring for individual patients and in promoting the health of defined populations.

Graduate must be Knowledgeable and Demonstrate:

An understanding of the power of the scientific method in establishing the causation of disease and efficacy of traditional and non-traditional therapies.

Required Competencies (from the ACGME):

- Systems-Based Practice
  - Understand interaction of their practices with the larger system
  - Knowledge of practice and delivery systems

- Patient Care
  - Work within a team

- Medical Knowledge
  - Investigatory and analytical thinking

Other curricular areas:

- Pharmacology
- Therapeutics
- Drug Interactions

Major references:


Attachments:
Attached are four tables on definitions, types, and causes of medication errors.

<table>
<thead>
<tr>
<th>Table 7-1. DEFINITIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Medication misadventures</strong></td>
</tr>
<tr>
<td>ADE (Adverse drug events): injury resulting from medical intervention related to a drug.</td>
</tr>
<tr>
<td>Preventable</td>
</tr>
<tr>
<td>Unavoidable</td>
</tr>
<tr>
<td>ADR (Adverse drug reactions)</td>
</tr>
<tr>
<td>Type A – known and need to be better quantified; usually predictable and dose dependent.</td>
</tr>
<tr>
<td>Type B – unknown and need to be quickly identified, quantified, and communicated; usually idiosyncratic.</td>
</tr>
<tr>
<td>Medication errors</td>
</tr>
</tbody>
</table>

### Table 7-2. Types of Medication Errors Detected

<table>
<thead>
<tr>
<th>Error Type</th>
<th>No. of Total Errors</th>
<th>% of Total Errors</th>
<th>No. of Significant Errors</th>
<th>% of Significant Errors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overdose</td>
<td>260</td>
<td>28.7</td>
<td>203</td>
<td>38.9</td>
</tr>
<tr>
<td>Missing information</td>
<td>202</td>
<td>22.3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Underdose</td>
<td>161</td>
<td>17.8</td>
<td>133</td>
<td>25.5</td>
</tr>
<tr>
<td>Wrong dose form ordered</td>
<td>66</td>
<td>7.3</td>
<td>19</td>
<td>3.6</td>
</tr>
<tr>
<td>Allergy to ordered drug</td>
<td>61</td>
<td>6.7</td>
<td>61</td>
<td>11.7</td>
</tr>
<tr>
<td>Duplicate therapies</td>
<td>50</td>
<td>5.5</td>
<td>30</td>
<td>5.7</td>
</tr>
<tr>
<td>Wrong drug ordered</td>
<td>50</td>
<td>5.5</td>
<td>38</td>
<td>7.3</td>
</tr>
<tr>
<td>Wrong route ordered</td>
<td>31</td>
<td>3.4</td>
<td>23</td>
<td>4.4</td>
</tr>
<tr>
<td>Wrong patient</td>
<td>10</td>
<td>1.1</td>
<td>10</td>
<td>1.9</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>14</td>
<td>1.5</td>
<td>5</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>905</strong></td>
<td><strong>100.0</strong></td>
<td><strong>522</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>


### Table 7-3. Reasons for Prescribing Errors

- Inadequate knowledge base
- Calculation errors
- “Sound-alike” or “look-alike” names
- Uncommon dosage regimen frequencies
- Complicated dosage regimens
- Poor patient history taking
- Use of multiple dosage forms per dose
- Use of abbreviations
- Capture errors when writing multiple prescriptions
- Mental slips
- Lack of adequate resources
- Different drug formulations available
- Excessive interruptions while involved in writing prescriptions or orders

<table>
<thead>
<tr>
<th>CAUSE OF ERROR</th>
<th>EXAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sound-alike drug names</td>
<td>Celebrex, Cerebyx, Celexa; dicloxacillin, doxycycline; nevirapine, nelfinavir; Retrovir, ritonavir; Zovirax, Zithromax</td>
</tr>
<tr>
<td>Lack of drug knowledge</td>
<td>Metformin used in patients with renal failure, B-blocker used in patients with asthma</td>
</tr>
<tr>
<td>Dose calculation errors</td>
<td>Dose for an overweight patient is mistakenly calculated with the actual body weight instead of the ideal body weight; use of standard adult doses in children or elderly patients</td>
</tr>
<tr>
<td>Decimal point misplacement</td>
<td>Digoxin 1.25 mg, instead of 0.125mg</td>
</tr>
<tr>
<td>Wrong dosage form</td>
<td>Cardizem CD is given tid</td>
</tr>
<tr>
<td>Wrong frequency</td>
<td>Gentamicin ordered tid instead of q8h</td>
</tr>
<tr>
<td>Use of abbreviations</td>
<td>Heparin, 1000 U/h, misinterpreted as 10,000/h</td>
</tr>
<tr>
<td>Overlooked drug interactions</td>
<td>Erythromycin and theophylline, metronidazole and warfarin</td>
</tr>
<tr>
<td>Failure to adjust dose</td>
<td>Imipenem-cilastatin: 1 g q6h for patients with normal renal function vs. 250 mg q6h for patients with renal dysfunction</td>
</tr>
<tr>
<td>Incomplete patient history</td>
<td>Failure to recognize food or drug allergy</td>
</tr>
</tbody>
</table>

Finch CK and Self TH. 10 Common prescribing errors: how to avoid them. Consultant May 2001: 767.
CHAPTER 8

EDUCATING MEDICAL STUDENTS AND RESIDENTS ABOUT MEDICAL ERRORS AND PREVENTION OF ERRORS.

PART I REVIEW OF THE LITERATURE

“Historically, physicians in residency have trained in a culture where disclosure to peers is a sign of weakness. Instead, skills in "roundsmanship" is valued, that is, creative and contemporaneous responses to cover deficiencies or errors when reporting to more senior physicians. Physicians who accept responsibility for errors and discuss these errors with other physicians are more likely to make constructive changes in their practice of medicine. Barriers to disclosure must be overcome and should start with physician training and role modeling.”


“Reforms based on the naming, blaming and shaming of individual practitioners may fail to engage with the 94-98% of physicians who cause the majority of errors, because they do not reflect the collegial culture and working practices of the medical profession. A more theoretically informed and longitudinal approach might be to address the genesis of medical thinking about error through reforms to the aspects of medical education and professional socialization that help to create and perpetuate the existence of avoidable error, and reinforce medical collusion of error. Further changes in the curriculum, to emphasize team working, communication skills, evidence-based practice and strategies for managing uncertainty, are therefore potentially key components in helping tomorrow’s doctors to discuss and cope with medical errors and to commit fewer of them.”

Major references:


Academic Medicine October 2002: Special theme Issue on Medical Errors.

Association of American Medical Colleges. Patient Safety and Graduate Medical Education. February 2003.


Battles JB and Shea CE. A system of analysing medical errors to improve GME curricula and programs. Acad Med 2001; 76: 125-133.

Croskerry P, Wears RL, and Binder LS. Setting the educational agenda and curriculum for error prevention in emergency medicine. Acad Em Med 2000; 7: 1194-1200.


Dubovsky SL and Schrier RW. The mystique of medical training: is teaching perfection in medical house-staff training a reasonable goal or a precursor of low self-esteem? JAMA 1983; 250: 3057-3058.


Sorokin R et al The near miss resident conference: understanding the barriers to confronting medical errors. Seminars in Medical Practice 2002; 5: 12-19.


CHAPTER 9

EDUCATING MEDICAL STUDENTS AND RESIDENTS ABOUT MEDICAL ERRORS AND PREVENTION OF ERRORS.

PART II CURRICULUM RESOURCES

“What and how we teach students may require reexamination in light of the great need to increase reporting of errors. Teaching students to feel empowered to engage in, and feel morally responsible for, reporting errors is contingent on the curriculum in the academic institutions that are educating our future healthcare workers.”

From Grube J
Journal for Healthcare Quality

“None of the panelists (to my recollection) discussed their own mistakes. They only talked about other physician’s mistakes. This seemed to reinforce the idea that it is not OK to discuss one’s mistakes!”

Comment by a student noted by
Barbara A. Meyer, M.D.
In “A student teaching module: physician errors.”

- Training should teach and support an active exploratory approach. Trainees should be encouraged to develop their own mental models of the system.
- Error training should form an integral part of the overall training process. Trainees should have the opportunity to both make errors and recover from them.
- The heuristics of error should be changed from “mistakes are undesirable” to “it is good to make mistakes; they help learning.”
- Error training should be introduced at the appropriate point, midway through a training program. Early in the learning process, trainees are struggling with every step and are unlikely to benefit from error feedback. Later, they are better equipped to learn from such feedback.

Comments by James Reason as noted in Jt Comm Jt Qual Improv 1998; 24:175-86.
**Educational Resources Attached:**

9-1 Overall Goals of a Curriculum for Medical Students

9-2 Goals and Objectives for Family Practice Residents

9-3 Small Group Lecture – Discussion
   Paper Copy of Power Point presentation slides attached;
   (slides with notes also on the disc).

9-4 Larger Group Introductory Lecture (e.g., Grand Rounds)
   Paper Copy of Power Point presentation slides attached;
   (slides with notes also on the disc).

9-5 Talk to Faculty on Teaching About Patient Safety and Medical Errors
   Paper Copy of Power Point presentation slides attached;
   (slides with notes also on the disc).

9-6 Useful Introductory Readings for Medical Students/Residents; brief
   annotated list.

9-7 Other Conference Formats

9-8 Communicating about Medical Errors; A videotape exercise using
   simulated patients.
   - Goals, Handouts, Cases, Evaluation Materials from the New
     York Medical College Curriculum

We have two other general recommendations for teaching strategies:

- Use small groups of trainees (10-20) and encourage them to share their
  experiences. In our experience, telling stories and sharing real life
  experiences is more powerful than reviewing data.

- In teaching medical students, if curriculum time is limited (when isn’t it?),
  provide the training in the third year because students are beginning to
  have the clinical experiences that help them relate to a discussion on
  medical errors. In addition, this is also the stage at which they most
  rapidly incorporate the values of the medical culture, many of which are
  valuable; however, students need to hear the climate surrounding medical
  errors questioned.
OVERALL GOALS OF A CURRICULUM FOR MEDICAL STUDENTS

KNOWLEDGE

- Definition of a Medical Error
- Epidemiology of Medical Errors
- Major sources of error
- Ethical and professional issues
- Medico-Legal Issues

SKILLS

- Communication
  Disclosure to Patient/Family
  Disclosure among Colleagues
  Disclosure to the Public

- Management of Errors
  Voluntary and/or mandated reporting

- Analysis of Incident reports/errors/near misses
  Root Cause Analysis
  Improved Systems
  Human Factors Engineering

- Use of Technology to Reduce Potential Error

- Communication among health professionals and Teamwork Training

ATTITUDES

- Honesty as a Guiding Principle of Medicine
- Affects on the Physician
- Role Modeling by Attendings
- Systems Error vs. “Bad Apple” Theories
- Shift in the Culture of Medicine
GOAL:

It is clear that errors in medicine are a frequent and, unfortunately, inevitable occurrence in a human system; however, the outcome can be a huge tragedy for the patient, the family, and the physician.

The overall goal of training on Error in Medicine and Patient Safety is to give future physicians the attitudes, knowledge and skills to work with other professionals within the health care system to make it safer and to be prepared to identify and manage errors when they do occur.

Or as Lucian Leape, M.D., one of the leaders in Patient Safety, has said: training for health professionals should address:

- Training for safety
- Training for teamwork
- Training for errors

OBJECTIVES:

I. ATTITUDES

The learner should develop attitudes that support:

A. Honesty as a guiding principle of medicine,

B. Professionalism and altruism (putting the patient ahead of one's self),

C. Accepting fallibility in self and others,

D. Patient-centeredness,

E. The value of other health professionals as Team members and the lessening of hierarchies in medicine,

F. The Tavistock principles and especially the commitment to constantly strive to improve quality of healthcare,
G. An awareness that most errors are the result of problems in systems and not due to incompetence,

H. Appreciation of the devastating effects of errors on patients/families and on physicians,

I. The value of research/evidence to guide improvement in quality and safety, and

J. The importance of self-awareness for physicians.

II. KNOWLEDGE

IIA. Introductory Material, Definitions, History, Theory

1. Definitions of
   - Medical Error
   - Near Miss / Near Hit
   - Adverse events
   - Types of quality problems:
     - overuse
     - underuse
     - misuse
   - Types of errors:
     - Slips
     - Lapses
     - Mistakes

2. Epidemiology of Medical Errors

   Data on which IOM (Institute of Medicine) report was based
   Common Causes of Errors
   Common Types of Errors (e.g., medication errors)
   Common Sites of Errors (e.g., Surgery, Pediatric ICU, ER)

3. History of the Patient Safety Movement at the end of the 20th century

4. Major Organizations and Reports
   - IOM – Institute of Medicine
   - AHRQ – Agency for Healthcare Research and Quality
   - NQF – National Quality Forum

5. Driving forces of the Patient Safety Movement
6. Comparison to high reliability organizations with emphasis on
   - Aviation Reporting System
   - Team Training
   - Crew Resource Management
   - Six Sigma Quality

IIB. Ethical Legal, Professional Issues and “Culture of Medicine”

1. Ethical principles including:
   - Honesty
   - Non-malfescence
   - AMA Code of Ethics
2. Legal and malpractice issues
3. “Culture of Medicine”
   - expectations of perfection/infallibility
   - intolerance of error
   - hierarchies and power

IIC. Management of Errors

1. Recommended steps in handling an error
2. Reporting, Mandatory vs. Voluntary
3. Methods for analysis of error, injury, near miss
   - Root Cause Analysis
4. Disclosure principles

IID. Prevention of Medical Errors

A. Design of systems and redundancy
   - “Swiss Cheese” model of James Reason
B. Information from “Safety Sciences”
   - Human Factors Engineering
C. Effects of communication on risk for error
D. Uses of Technology
   - POE (Physician Order Entry)
   - Physician Decision Support
   - Automated prescription services
   - Bar coding of drug packaging
E. Overlap with Quality Improvement
F. Prevention analysis
   - FMEA (Failure Mode and Effects Analysis)
G. Medication errors.
   - Handwriting
   - Use of confusing abbreviations
   - Dose calculations
   - Drug-drug and drug-food interaction
   - Medication packaging
   - Role of nurses and pharmacists
H. Effects of overwork, sleep, deprivation, and understaffing on performance
I. Joint Commission on Accreditation of Health Care Organizations
   National Patient Safety Goals

III. SKILLS

A. Communication
   - with colleagues and other health care workers especially to decrease miscommunication
   - with patients and families especially around discussion of risk and disclosure of errors and/or injury.

B. Team-work
   - with other health professionals especially in critical situations.

C. Management of an error or near miss including voluntary and mandatory reporting, documenting, disclosing.

D. Analysis of an error, near miss or potential for error using tools including:
   - Root Cause Analysis
   - FMEA (failure mode and effects analysis).

E. How to keep up with patient safety literature.
RESOURCE 9-3

1 hour lecture-discussion on introductory issues in patient safety and medical error. For small groups (10-20) Medical students or residents.

Click here for PowerPoint presentation (22 slides)

Jose Martinez


We recommend you review this article and have one of the students or residents read aloud a segment. The story is made more powerful and has greater impact when read aloud.

RESOURCE 9-4

Large Group Introductory Lecture

Click here for PowerPoint presentation (42 slides)

RESOURCE 9-5

Talk to Faculty on Teaching about Patient Safety and Medical Errors”

Click here for PowerPoint presentation (29 slides)
USEFUL INTRODUCTORY READINGS FOR MEDICAL STUDENTS AND RESIDENTS

General Readings

Very good overall summary with some excellent tables that summarize the important issues by some of the leaders in the patient safety field.

A well-written one pager that emphasizes cultural issues and a call to address the issue. From the President of AAMC.

The “CLASSIC” article, from the leader in patient safety.

Madsen LE. Diesel gas, rice, and medical errors. The Pharos 2002: 4-10
Excellent article written by a medical student.

Excellent article on the physician’s obligations to patients involved in a medical error.

Still the best summary on the numbers (including a little on outpatient), types of errors, and risk factors.

Wu AW et. al.. To tell the truth: ethical and practical issues in disclosing medical mistakes to patients. JGIM 1997; 12: 770-775.
Very practical (“what to say”) discussion of disclosure.

An excellent summary of the major issues.
**Brief reports/admissions of errors:**

Brazeau C. Disclosing the truth about a medical error. *Am Fam Phys* 1999; 60: 1013-1014.
Interesting (outpatient) error and a discussion of “truth-telling.”

The author discussionss five fatal errors made over his career.

“Classic” by a rural family physician that beautifully talks about disclosure to patients and the effects of error on the physician.

Brief, nicely-written report of an error by a student that begins “I will recall the first day of my general surgery rotation as a third year medical student.”

An unfortunate, but not uncommon, mistake made by a resident. Excellent commentary by Wu.

No discussion of the actual error, but a painful revelation of the effect on the physician.

Includes an interesting case involving a “junior doctor” and commentaries.

**Web Based Resource**

AHRQ WebM&M. www.webmm.ahrq.gov
Peer reviewed web-based journal “designed to educate providers and trainees about patient safety and medical errors by using a case-based approach in an engaging, blame-free environment.”
1. Patient Safety/Near Miss Conference


A description of a unique conference developed by the Department of Medicine at Thomas Jefferson for their Internal Medicine residents. Also discusses the “barriers and lessons learned” and gives brief descriptions of some cases discussed.


Describes a 1 ½ hour Grand Rounds presentation that included a small-group format to share participants' own experiences of making medical mistakes.

3. Quality Grand Rounds, a series of case–based discussions in The Annals of Internal Medicine. The same authors are developing an educational site with the Agency for Healthcare Research and Quality: http://webmm.ahrq.gov
Each case is described in a grand rounds format with the major points highlighted. With relatively little preparation a presentor can walk a group of residents through the case, stopping to discuss “What happened? What went wrong? What systems problems, underlying issues, or latent causes allowed this to happen.” See the letter to the editor by Hirsch D, Gliatto P, and Meah Y in the 6 May 2003 issue.

*Academic Emergency Medicine* also publishes similar case studies.

4. Using role playing to teach medical students and residents about disclosure of medical errors. Developed by Mark Grabe, M.D. and Ilene Corina.

After watching a video of a real error, the group is divided into a “Family Group” and a “Medical Center Group.” Each group prepares for a joint meeting which then occurs. Followed by discussion of lessons learned. Not published. Contact: Mark.Graber@Med.VA.GOV.
Communicating about Medical Errors: A Videotape Exercise Using Simulated Patients

This three-hour exercise involves each student in a simulation of disclosing a medical error to a simulated patient and receiving feedback from the ‘patient,’ colleagues and faculty.

Exercise

The exercise includes four students, a Family Physician, and 2 Simulated Patients.

3 Hour Agenda

The Three Hour exercise is divided as follows:

- 30 minute introduction to exercise & review of cases
- 30 minute videotaping (2 at a time)
- 110 minutes – Feedback Session
- 10 minute- Summary and Evaluations
1. This is an exercise about communicating with patients. The scenarios all involve the communication of an error to a patient. This is inherently stressful.

2. There are basic communication skills that we will look for in your interview. These include the following:
   - Handshake.
   - Use of the chart.
   - Use of silence.
   - Use of medical language.
   - Eye contact with patient.
   - Non-verbal communication.
   - Empathic connection.

3. There are basic tasks that we will look for in disclosing the error. There include:
   - Apologize for the mistake.
   - Take full responsibility for the error.
   - Admit to not knowing something.
   - State the goal of repairing trust between you & patient.

4. In the feedback session, we expect you to provide feedback to your colleagues. Feedback is information about behavior that is specific and provides an observation of why or why not something was effective.
GOAL:
To introduce students to the issue of errors in medicine, the physicians’ responsibility and role in prevention of errors, and the challenges of communicating an error to a patient.

OBJECTIVES:

Knowledge

By the end of this session the student will be able to identify:

- the prevalence of medical errors;
- common origins of medical errors;
- avenues for reducing medical errors; and
- relevant bioethical principles regarding medical errors.

Skills

By the end of this session the student will have demonstrated:

- general communication skills with a patient;
- empathic communication of a medical error, to a standardized patient/physician, through discussion and/or role-playing;
- a sensitivity to the cultural, social and medical issues relevant to disclosure of a medical error to a patient; and
- an understanding of professional responsibility and medical ethics with regard to medical errors.

Attitudes

By the end of this session, the student will have had the opportunity to:

- receive constructive feedback on general communication skills with a patient;
- increase personal awareness of his/her emotional responses to medical errors;
- explore ways of coping constructively with their vulnerabilities; and
- recognize the limitations in one's knowledge and clinical skills.
Characteristics of Constructive Feedback

1. Feedback is Behavior Specific

*Give details about what specifically was done well or what might be done differently. To be told that one is “dominating” is not as useful as to be told that. “In the conversation that just took place, you did not appear to be listening to what others were saying and I felt forced to accept your arguments.”*

2. Feedback is focused on behavior rather than on the person.

*Focus on behaviors that can be changed, not personal characteristics. It is important that we refer to what a person does rather than to what we think or imagine he or she is. We might say that a person, “Talked more than anyone else in this meeting,” rather than that he is a “loud mouth.” The former allows for the possibility of change; the latter implies a fixed personality trait.*

3. Feedback is directed toward behavior, which the receiver can do something about.

*Frustration is only increased when a person is reminded of some shortcoming over which he/she has no control.*

4. Feedback takes into account the needs of both the receiver and the giver of feedback.

*Feedback can be destructive when it serves only our own needs and fails to consider the needs of the person on the receiving end. It should be given to help, not to hurt. We often give feedback because it makes us feel better or gives us a psychological advantage.*

5. Feedback is descriptive rather than evaluative.

*By describing one’s own reactions, it leaves the individual free to use or not use it as he or she sees fit. By avoiding evaluative language, it reduces the need for the individual to respond defensively.*

6. Feedback is most useful at the earliest opportunity after the given behavior.

*This also depends on the readiness of the recipient to hear it and on the mood of the provider. Excellent feedback presented at an inappropriate time may do more harm than good.*
7. Feedback involves sharing of information, rather then giving advice.

8. By sharing information, we leave a person free to decide for himself or herself, in accordance with one’s own goals and needs.

   When we give advice we tell someone what to do and to some degree take away one’s freedom to decide for oneself.

9. Feedback is brief and concise.

   Effective feedback involves the amount of information the receiver can use rather that the amount we would like to give. To overload a person with feedback is to reduce the possibility that the receiver may be able to use the feedback effectively. When we give more than can be used, we are more often than not satisfying some need of our own rather than helping the other person.

10. Feedback concerns what is said and done, or how, not why.

    The “why” takes us from the observable to the inferred and involves assumptions regarding motives or intent. Telling a person what his or her motivations or intentions are more often than not tends to alienate the person and contributes to a climate of resentment, suspicion, and distrust; it does not contribute to learning or development. It is dangerous to assume that we know why a person says or does something, or what he or she really means.

11. Feedback is balanced.

    Everyone does some things well and everyone can do things to improve. Give positive feedback to reinforce what has been learned well. Many suggest starting with something positive, and end with a positive as well (the feedback sandwich).

12. Feedback must be clearly communicated.

Adapted from handout by:

Sally Schwab, PhD, CSW
Director, Primary Care Faculty Development and Curriculum Center for Primary Care Education and Research New York Medical College

Instructions

Communicating about Medical Errors

- This exercise is designed to give you an opportunity to practice your communication skills in the course of disclosing a medical error to your patient (a standardized patient actor).

- You will be given a "case" explaining the error you are to discuss with the patient prior to entering the exam room. Remember that you already know this patient, so there is some familiarity here.

- Work with this patient as you would work with any patient in the office, except that you will not examine the patient.

- There is no need to bring notes into the exam room or take notes, as you will not have to write this case up when you are finished.

- You have 15 minutes to discuss the situation (refer to case) with your patient. Try to pace yourself. Someone will knock on the examination room door when one minute is left.

- Your interaction will be videotaped and reviewed in a small group session, with 3-5 other students, facilitated by a preceptor, immediately following the intervention.

- This is a required and evaluated component of the clerkship, however, it is not graded.

You do not have to bring your physical exam tools with you.
The following are some thoughts on how you might proceed:

- Read the case through carefully.
- Identify your reactions to the situation.
- Anticipate the response of the patient from your previous knowledge of him/her or lack of knowledge.
- Prepare your presentation of the error before addressing the patient.
- Check your preparation for sensitivity, honestly, & appropriateness.
- Following the discussion with patient, identify lessons-learned.

Setting the Stage

- Choose a comfortable place, patient should be on equal footing in your office, not on the exam table, making them feel more vulnerable.
- Position yourself so that eye contact is possible.
- Allocate adequate time for discussion.

Telling the News

- Use simple, clear language.

“Mr. Jones, I’ve discovered what made you sick last week. I regret to say that I failed to check whether you were allergic to the antibiotic before I prescribed it. You are allergic to it, and that information is clearly written in your chart. I feel awful that my not checking has caused you so much distress. I am truly sorry.”

- Avoid the temptation to minimize the error.
- Assess the patient’s emotional state.
- Express sorrow/remorse for the error and any adverse consequences it produced.

Continuing the Interview

- Assess how the patient feels after receiving the news-Ask!
- Reassure the patient of your continued availability.
- Communicate a plan for care considering the results of the interview.

(Adapted from Communicating Bad News, Coulehan & Block, p. 218)
Scenario D: Student

Mr. Grey, a 43-year-old male lawyer who is in good health, came in to see you yesterday, complaining of a sore throat. His last visit with this Health Center was 2 years ago for a preemployment physical, and the office staff could not locate his chart when you saw him yesterday. He complained of having a bad headache and sore throat for the previous two days with a fever of 101 degrees. You found that he still had a fever of 101, and his throat was red with white-yellow exudate on the tonsils. He had swollen, painful lymph nodes on his neck. He seemed to be in a big hurry, and told you he had an appointment in 45 minutes. You asked him if he ever had Strep throat before and he said yes and that he had been given antibiotics for it. You did a throat culture and wrote a prescription for “Veetids” (Penicillin), which your preceptor signed for you after asking if the patient had been treated for Strep throat before.

Today the patient has come back into the office complaining of a rash all over his body. Your office was able to locate his chart, which has an allergy alert for Penicillin on it. You realize that you didn’t ask the patient directly if he was allergic to Penicillin before writing the prescription. Before going in with the patient you discuss your plan with your preceptor. You decide what you will say to Mr. Grey and how you will manage his medical problem.

The Medical Problem Today:

The pharyngitis: the throat culture result is not back yet. You are going to tell him to stop the Penicillin. You are going to give him a new prescription for Erythromycin 250mg - 4 times a day for 7 days. Antibiotics may help the sore throat get better slightly faster than without antibiotics, but the primary reason to give antibiotics is to prevent any systemic complications of Strep pharyngitis, especially heart problems.

The rash: It is impossible to say how long the rash will be present after stopping the Penicillin. It will most likely fade and be gone in 2 – 4 days. No treatment is necessary, but if the itching bothers the patient, he can use oral diphenhydramine (Benadryl) 25mg - up to 4 times a day. This medicine will make him sleepy, and he shouldn’t drive or work while taking it. It might also decrease the redness of the rash. Less effective, but possibly effective, would be hydrocortisone cream. Both of these medicines can be purchased without a prescription for $5-$10 each.

The office does not have any samples of Erythromycin, Benadryl, or Hydrocortisone.

Life threatening allergic reactions usually happen in minutes to hours after taking the medicine.

Scenario D: Standardized Patient

MR./MS. GREY

You are a 43 year old lawyer and father of two children. You have recently joined a law office, and are under a lot of pressure there. Being sick is a major inconvenience for you. After having a sore throat, headache and fever, you decided to seek medical care, since you recall being treated for a similar illness several years ago. This was your first visit to the doctor in about a year, since you generally don’t take time out when you aren’t feeling well. You were examined by a medical student yesterday, who was poised and understanding, and he/she was able to give you a prescription for “Veetids” without delay. Now you have a rash all over your body. When you called the nurse on the phone, she asked you to come in to be rechecked and to see the rash.

You have had to stay out of work, which is a significant inconvenience as you are preparing for a trial. You are concerned about how long this rash will last and whether there is something the doctor can do to help with the discomfort and the sight of the rash all over your body. You become anxious when you realize that the rash will not go away for a few days, perhaps a week. You are aware that the last time someone came into your office with a visible rash it was revealed that he had AIDS and he left the organization soon after that.

Themes:

- Concern about what other things the medical student may have missed.
- Concern over what will be said at the office and how you will explain the rash
- Distress over future treatment and need for reassurance that you not be treated without the chart again.
Scenario F: Standardized Patient

Ms. Danielle Springer

Age: 38
Ethnicity: any
Marital Status: Married

You work as a waitress and although you don’t like the job, you need the money and it allows you to see your girls because you work 6am – 2pm, the same time they’re in school. Your husband works 3pm 11pm for a package delivery company and you hardly get to see him, but you both feel this arrangement is best for the children.

About three months ago, you had a bad case of the flu. Although you recovered, you were left with a nagging cough that you came to the doctor’s office and saw the medical student about two months ago. The medical student sent you for a chest x-ray and prescribed a cough suppressant. You started to feel better. You continued to smoke about a pack a day, a habit you’ve had for more than 10 years.

About a week ago you started to cough again and it became very bad, very quickly. You can’t sleep. You are hoping the doctor or the student can give you something for this, because your chest hurts from all this hacking.

Scenario F: Student

Mrs. Springer is a 38 year old woman who has been a patient in your continuity clinic for about four months. She has been to see you several times in the past few months with a recurring cough. Her exam was consistently unremarkable. You thought it was related to her smoking.

You recall that the last time you saw her, about two months ago, you ordered a chest x-ray but do not recall speaking with her about the results. She is back today with a similar cough and as you review the chart you note the results of her chest x-ray state a “questionable infiltrate in the right upper lobe, malignancy suspected.” Alarmed, you scan to the bottom of the report and notice that there are no signed initials at the bottom of the report. You immediately realize that the report must have been filed without your review of the results. Although such a review is standard operating procedure before filing it in the patient’s chart, you are overwhelmed with a sense of dread as you realize the possible implications of the missed results.

Before you go on to see the patient, think about whether and how you will explain the missed results of the x-ray.

Medical Plan

You are going to order a CAT scan of the chest (lungs) within the next few days. You will have the patient come back in one week for the results. If there is any abnormality, you will refer the patient to a pulmonary specialist right away.
# Student Evaluation

## Please indicate the extent to which you agree or disagree with each of the following statements.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Instructions for video-taping exercise were clear.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>The “patient” was realistic.</td>
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<tr>
<td>3</td>
<td>There was sufficient time to attend to the medical error during the interview.</td>
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<tr>
<td>4</td>
<td>The opportunity to present an error to a patient increases my confidence about discussing this issue with patients.</td>
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<tr>
<td>5</td>
<td>The orientation to medical errors, during the first day of the clerkship, provided a good introduction to the issue.</td>
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</tr>
<tr>
<td>6</td>
<td>The readings provided on this issue were helpful.</td>
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### Feedback from the Standardized Patient …

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<td>7</td>
<td>Was consistent with MY OWN assessment of my performance.</td>
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<td>8</td>
<td>Was constructive.</td>
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<td>9</td>
<td>Helped me to identify areas that I need to improve.</td>
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</table>

### Feedback from the Faculty …

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<td>10</td>
<td>Was consistent with MY OWN assessment of my performance.</td>
</tr>
<tr>
<td>11</td>
<td>Was constructive.</td>
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<tr>
<td>12</td>
<td>Helped me to identify areas that I need to improve.</td>
</tr>
<tr>
<td>13</td>
<td>Overall, the standardized patient exercise was a valuable LEARNING experience.</td>
</tr>
</tbody>
</table>

What do you think are the main strengths of this exercise?  
___________________________________________________________________________________
___________________________________________________________________________________

What do you think are the main weaknesses? Please include any suggestions for improving this exercise.  
___________________________________________________________________________________
___________________________________________________________________________________

Other Comments  
___________________________________________________________________________________
___________________________________________________________________________________
___________________________________________________________________________________

The Department of Family Medicine  
New York Medical College
Please indicate the extent to which you agree or disagree with each of the following statements.

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<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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<tbody>
<tr>
<td>1.</td>
<td>Student was concise and understandable.</td>
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<td>2.</td>
<td>Student made eye contact.</td>
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<td>3.</td>
<td>Student maintained a comfortable and appropriate distance during the interview.</td>
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<td>4.</td>
<td>Student listened to my concerns.</td>
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<td>5.</td>
<td>Student was empathic.</td>
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<td>6.</td>
<td>Student was reassuring.</td>
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<tr>
<td>7.</td>
<td>Student allowed me to ask questions.</td>
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<tr>
<td>8.</td>
<td>Student used open-ended questions.</td>
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</tbody>
</table>

What other observations you would like to share with the student about this exercise?

___________________________________________________________________________________________
___________________________________________________________________________________________
___________________________________________________________________________________________
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___________________________________________________________________________________________

The Department of Family Medicine
New York Medical College
CHAPTER 10 - For Further Information

Included are:

Two annotated lists of resources especially websites.

Index of Key Words in this Curriculum Guide.
Online resource updates

Quality and Safety in Health Care will sort through the onslaught of online articles, reports, and opinions on patient safety and healthcare quality, and periodically summarize them on our website. In addition, the print edition of QSPIC will provide summary guides to electronic resources on particular topics and themes. These may include cultural factors that promote or hinder the creation of safer health care; the potential of patient advocacy efforts to improve patient-provider communication and avoid unnecessary litigation; and lessons from non-medical research disciplines, such as organizational behavior, human factors engineering, and risk perception and communication. We will spotlight these issues using an interdisciplinary and international approach that draws on the perspectives of relevant stakeholders in different health systems: patients, their families and caregivers, nurses, pharmacists, social workers, physicians, risk managers, laboratory technicians, health services researchers, quality managers, advocates, policy makers, system and facility managers, and journalists.

Sites for sore eyes

To begin, we provide a list of selected websites featuring patient safety and healthcare quality information and documents. This list is meant to be suggestive only—a starting point for a rich journey of discovery and learning. None of these sites stands alone; each offers links to other sites and sources.


Anesthesia Patient Safety Foundation (http://www.apsf.org/) ▶ The APSF was founded in 1984 “to ensure that no patient shall be harmed by anesthesia”. Its quarterly newsletter is available online.


Bristol Royal Infirmary Inquiry (http://www.bristol-inquiry.org.uk/final_report/index.htm) ▶ This July 2001 report—an exhaustive investigation of bad outcomes in paediatric cardiac surgery—is a treasure trove of material on the professional and organizational roots of adverse medical events. Drill down into the archived testimony to find many excellent submissions from safety specialists.

British Medical Journal (http://www.bmj.com/) ▶ BMJ published its comprehensive theme issue on medical error in March 2000 (http://bmj.com/cgi/content/full/320/7237/725).

Canadian Provincial Court of Manitoba (http://www.pedicardiacinquest.mb.ca/) ▶ The November 2000 inquest report by Judge Murray Sinclair found “a failure of quality assurance and monitoring of the Health Sciences Centre Pediatric Cardiac Surgery Program” after 12 children died there in 1994. This land breaking report is a blueprint for reforming postgraduate oversight of physicians.

Critical Incidents Reporting System (http://www.anesthesia.ch/cirs/) ▶ Dr Sven Staender at the University of Basel facilitates the CIRS, “an anonymous and international forum on critical incidents in anaesthesiology”.

Department of Health (http://www.doh.gov.uk) ▶ In June 2001 the DoH released “An organization with a memory: report of an expert group on learning from adverse events in the NHS” (http://www.doh.gov.uk/argmemreport/index.htm). This document “examines the key factors at work in organisational failure and learning” and recommends “creation of a new national system for reporting and analysing adverse health care events, to make sure that key lessons are identified and learned . . .”. A follow on report “Building a safer NHS for patients” (http://www.doh.gov.uk/buildsafehns/index.htm) outlines in greater detail a “new national system for learning from error and adverse events”. The National Patient Safety Agency (http://www.npsa.org.uk/html/npsa.htm ) was launched in October 2001 to operate the new reporting system.

Institute for Healthcare Improvement (http://www.ihi.org/) ▶ IHI is a leading international healthcare quality improvement organisation. It serves as the National Programme Office for the “Pursuing perfection” initiative funded by the Robert Wood Johnson Foundation (http://www.ihi.org/pursuingperfection/Network/index.asp).

Institute for Safe Medication Practices (http://www.ismp.org/) ▶ Founded in the 1970s, ISMP focuses on helping hospitals, practitioners, and patients prevent medication related injuries and deaths. It publishes the biweekly Medication Safety Alert. ISMP has affiliates in Canada and Spain.

Institute of Medicine (http://www.iom.edu/) ▶ The massive media coverage given the IOM’s November 1999 report “To err is human: building a safer health system” (http://www.nap.edu/catalog/9728.html) helped to move patient safety well up the US (and global) policy agenda for much of 2000. The “errors” report, as it came to be known, also generated intense and sometimes acrimonious debate among safety researchers about whether estimating the annual mortality attributed to medical errors was either valid or useful. In March 2001 the IOM released a major report on quality in health care “Crossing the quality chasm: a new health system for the 21st century” (http://www.nap.edu/catalog/10027.html). The IOM’s 1998 JAMA article “The urgent need to improve health care quality” (http://jama.ama-assn.org/issues/v280n11/abs/1r80006.html) is still worth reading.


Leapfrog Group (http://www.leapfroggroup.org/) ▶ Launched in 2000 by large corporate purchasers of health benefits, the Leapfrog Group aims to advance the “business case for safety” by encouraging safer and higher quality hospital care.

National Center for Patient Safety (http://www.patientsafety.gov/) ▶ NCPS, part of the US Veterans Health Administration, is working to improve safety and quality across the system of veterans’ health facilities by applying human factors principles and research on safe operation in high reliability organisations.


National Patient Safety Foundation (http://www.npsf.org/) ▶ NPSF is an independent nonprofit organisation founded in 1997 by the American Medical Association, 3M Healthcare, CNA HealthPro, and Schering-Plough. NPSF and its partners have convened a series of influential “Annenberg” conferences; the next conference is in Indianapolis in April 2002 (http://www.mederrors.org/). The NPSF also operates an active research program (http://www.npsf.org/html/research.html); publishes Focus, a quarterly newsletter (http://www.npsf.org/html/publications.html); maintains an extensive online bibliography (http://www.npsf.org/html/bibliography.html); and hosts a popular email discussion list and current literature awareness alert with more than 1200 subscribers as of February 2002 (http://patientsafety-l@listserv.npsf.org/archives/index.html).

National Quality Forum (http://www.qualityforum.org/) ▶ NQF is a non-profit, public-private membership organisation founded in 1999 to develop and implement a national strategy for health care quality measurement and reporting.

New Zealand Ministry of Health (http://www.moh.govt.nz/moh.nsf/) ▶ Recent reports include “Adverse events in New Zealand public hospitals: principal findings from a national survey” (December 2001) and “Toward clinical excellence: learning from experience” (September 2001).


Videos
• “First, do no harm” (2000) is a dramatised case study of a healthcare system breakdown during the treatment of an obstetrics patient. (Available for purchase from Partnership for Patient Safety at http://www.p4ps.org/purchase_harm.html.)
• “Beyond blame” (1997) is a short documentary film on how medication errors affect all involved—practitioners and patients alike. (Available for purchase from Bridge Medical at http://www.mederrors.com/.)

Call for citations
This is but a beginning. Kindly help us close the gaps by submitting citations for online materials—research reports, journal articles, proposed or enacted legislation, interactive websites, archived listserve messages—which you have found to be particularly useful for improving quality, creating safety, or preventing harm to patients in some relevant context or setting. We will review these materials for possible inclusion in future updates. We especially welcome citations (preferably in English translation, where available) for materials originating outside the “developed” world. Please send your citations to Adam L Scheffler at a-scheffler-1@alumni.uchicago.edu.

A L Scheffler
Chicago, Illinois, USA
a-scheffler-1@alumni.uchicago.edu
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