

Preventing Medical Errors for Massage Therapists

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The Body Mechanics/Body Balancing

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NOTES and DISCLAIMERS

This course is intended to help expand the knowledge and skills of massage therapists and bodyworkers on the subject of Preventing Medical Errors. The information in this course was obtained from various sources and through over 15 years experience as a Licensed Massage Therapist both in Florida and Pennsylvania. A list of references is included at the end of this course.

It is the responsibility of the massage therapist or bodyworker to apply this information appropriately within their practice.

The information contained in this course has been researched based on the references and listed at the end of this course and is generally accepted as factual at the time of publication. The Body Mechanics/Body Balancing and Paula J Kaprocki, LMT claim no responsibility for any contradictory data that may be corrected or changed in any subsequent releases of this course.

We will use the words patient and client interchangeably as they will sometimes change based on your practice. Additionally, massage therapist, therapist and practitioner can be interchanged.

The test contained in the back of this course must be submitted in order to receive CE credits.

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Course Instructions

How to best proceed

Relax, take your time, and go at your own pace. Since 2 CEUs are awarded after successfully completing this course, the reading of this manual and completion of the test questions should not take less than 2 hour. Only after you have successfully mastered all the material in the course should you proceed to the test questions.

Complete the test and mail your answer sheet.

Before beginning, please clearly write your name, address, zip code, and license number on your test answer card. Read each question carefully before answering. Please use a #2 pencil to fill-in your answers on the answer card by completely shading your choice. Keep in mind that each question has only one correct answer. The test consists of 15 questions. For a passing grade, you must correctly answer 12 questions.

We encourage your input and would welcome any suggestions to improve this course or the test questions. Please feel free to note your suggestions or comments on the course evaluation sheet.

Information for CEU Requirements

In order to receive your 2 hours of continuing education credit, you must submit your correct Name, address and license information for the course. Please notify us of any address or name changes as we must keep records for submission of credits to CE Broker.

Mailing Instructions

Please send your completed test answer sheet and the course evaluation to:

Body Balancing

660 Andersontown Road

Dover, PA 17315

Or email the pdf sheet to:

tbm.massage@gmail.com

If you have any questions regarding this course, please contact Paula Kaprocki via email at tbm.massage@gmail.com or call 717.818.7633

If you mail your answer sheet you will receive your certificate within 10 days of the receipt. If you email your answers you will receive a certificate that you can print for your records.

All CEUs will be submitted to CE Broker weekly.

Preventing Medical Errors for Massage Therapists

Learning Objectives

Upon completion of this course, you will be able to:

- Define the types of medical errors
- Discuss the factors that increase the risk of medical errors.
- Identify populations of special vulnerability
- Discuss responsibilities for reporting medical errors
- List ways to prevent or reduce the incidence of error

Introduction

Medical errors have become one of this country's leading causes of death and injury. In a recent report from the Institute of Medicine (IOM) it was estimated that 44,000 to 98,000 deaths occur each year as a result of medical errors. This is a hidden epidemic in the United States which equates to injury to 1 in every 25 hospital patients. Even the lower estimate makes medical errors more deadly than breast cancer (42,297), motor vehicle accidents (43,458) or AIDS (16,516). According to the IOM report, *To Err is Human: Building a Safer Health System*, medical errors cost the economy from \$17 to \$29 billion each year. And this report is from 1999!

Research funded by the Agency for Healthcare Research and Quality (AHRQ) has shown that medical errors result most frequently from systems errors, organization of health care delivery and how resources are provided in the delivery system. Only rarely are medical errors the result of carelessness or misconduct of a single individual.

As John M. Eisenberg, MD, Director of AHRQ pointed out:

"Mistakes happen in hospitals, they happen in outpatient clinics, they happen in nursing homes and home care, and they happen in self-care. We as clinicians need to acknowledge that they happen. The challenge is to avoid them, and when mistakes do occur, to prevent them from causing harm to our patients." (2000)

Errors can occur at any point in the health care delivery system. Acknowledging that errors happen, learning from those errors, and working to prevent future errors represents a major change in the culture of health care, a shift from blame and punishment to analysis of the root causes of errors and strategies to improve systems and processes. Every person on the healthcare team has a role in making health care safer for patients and workers.

In response to the IOM report, the Florida State legislature mandated that all licensees must complete a two-hour course on prevention of medical errors, which meets the criteria of Florida Statute 456.013, for initial licensure and biennial renewal.

What are Medical Errors?

Medical errors are often defined as a preventable adverse effect of care, whether or not it is evident or harmful to the patient. They can include an incomplete or wrong diagnosis, incomplete or wrong treatment of a disease, injury, syndrome, behavior, infection or another ailment. In general terms, a medical error occurs when a health-care provider provides an inappropriate method of care or chooses the right solution of care but it is administered incorrectly.

According to the AHRQ medical errors happen when something that was planned as a part of medical care doesn't work out, or when the wrong plan was used in the first place. Medical errors can occur anywhere in the health care system:

- Hospitals.
- Clinics.
- Outpatient Surgery Centers.
- Doctors' Offices.
- Nursing Homes.
- Pharmacies.
- Patients' Homes.

Errors can involve:

- Medicines.
- Surgery.
- Diagnosis.
- Equipment.
- Lab reports.

They can happen during even the most routine tasks, such as when a hospital patient on a special diet receives the food intended for someone else.

Most of these error result from our complex health care system. But others happen when patients and doctors have trouble communicating. A recent study by AHRQ found that health care providers do not do enough to help their patients make informed decisions and that uninformed, uninvolved patients are less likely to accept the providers form of treatment. They are also then less likely to do what is required to make the treatment work.

William Greenberg, a former chair of the American Massage Therapy Association (AMTA) Grievance Committee, states:

"Nearly every one of the complaints that we receive [involves] the lack of communication between the parties. ... Many of the grievances begin because there was not clear communication between therapist and client."

As massage therapists we need to practice good listening skills and good client communication. We need to know why our clients have come to us and also know how to communicate what we can provide as massage therapists.

Types of Medical Errors

The IOM report defines an error as "the failure of a planned action to be completed as intended (i.e., error of execution) or the use of a wrong plan to achieve an aim (i.e., error of planning)."

An adverse event is an injury caused by medical management rather than the underlying condition of the patient. An adverse event attributable to error is a preventable adverse event, also called a sentinel event, because it signals the need to ask why the error occurred and make changes in the system.

Research on why humans make errors (Reason, 1990) has identified two types of errors: active errors and latent errors. Active errors tend to occur at the level of the individual and their effects are felt almost immediately. Latent errors are more likely to be beyond the control of the individual, that is, errors in system design, faulty installation or maintenance of equipment, or ineffective organizational infrastructure. The effects of latent errors may not appear for months or even years but they can lead to a cascade of active errors, ending in catastrophe. For example, an undetected design flaw in an airplane (a latent error) may cause the pilot to lose control of the plane (an active error) years after the aircraft was built, and cause the plane to crash.

Close calls or near misses are potential adverse events, errors that could have caused harm but did not, either by chance, or because something or someone in the system intervened. For example, a nurse who recognizes a potential drug overdose in a physician's prescription and does not administer the drug but instead calls the error to the physician's attention has prevented an adverse drug event (ADE). Close calls provide opportunities for developing preventive strategies and actions, and should receive the same level of scrutiny as adverse events.

Surgical Errors

Surgical errors, or surgical adverse events, may account for a high percentage of adverse events. A study of hospitals in Colorado and Utah (Gawande, et al, 1999) found that surgical adverse events accounted for two-thirds of all adverse events and 1 of 8 hospital deaths.

A review by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO, 1998) found that wrong-site surgery was most common in orthopedic procedures. Risk factors contributing to the error included more than one surgeon involved in the case, multiple procedures performed during a single operating room visit, and unusual time pressures, particularly pressure to speed up preoperative procedures.

Surgical errors such as wrong-site surgery are not the sole responsibility of the operating surgeon, however. All operating room personnel have a role in ensuring patient safety by verifying the surgical site and pointing out a possible error. Admittedly, this can be difficult in the presence of an attitude that the surgeon should never be questioned.

To reduce the risk of wrong-site surgeries, JCAHO recommends the following strategies:

1. Clearly mark the operative site, involving the patient (or the family when appropriate) in the marking process
2. Require oral verification of the correct site in the operating room by each member of the surgical team
3. Develop a verification checklist that lists all documents referencing the intended surgical procedure and site

Diagnostic Inaccuracies

An accurate diagnosis is the first requirement for correct and effective treatment. Inaccurate diagnosis may delay treatment or result in incorrect, ineffective treatment or unnecessary tests, which can prove costly and invasive. Inexperience with a difficult diagnostic procedure can affect the accuracy of the results. For example, a study of colposcopy, a test used to follow up on abnormal Pap smear results, showed that physicians who performed 100 or more colposcopies annually had more accurate findings than those who performed the procedure less often (Gordon, 1996).

Misdiagnosis is a major factor contributing to delays in treatment, according to JCAHO (2002). Hospital emergency departments accounted for just over one-half of all sentinel event cases of patient death or permanent injury due to delays in treatment. However, these serious events also happen in other healthcare settings, including intensive care units, medical-surgical units, inpatient psychiatric hospitals, the operating room, and in the home care setting. Of the 55 reported cases of delays in treatment, 52 resulted in patient death.

Medication Errors

Medication-related error is one of the most common types of error, and of primary concern to nurses who administer medications, as well as to the practitioner who prescribes medications, and the pharmacist who dispenses medications. Medication errors are called preventable adverse drug events (ADEs).

According to the U.S. Pharmacopeia (USP) (2000), the three most frequently reported types of medication errors were:

1. Omission errors (failure to administer an ordered medication dose).
2. Improper dose/quantity errors (any medication dose, strength or quantity that differs from that prescribed).
3. Unauthorized drug errors (the medication dispensed and/or administered was not authorized by the prescriber); this category includes dispensing or administering the wrong drug.

Other findings of the USP report included:

- Of the five phases of the medication process, errors reported originated primarily in administering and documenting. (The other phases include ordering, dispensing, and monitoring.)
- The primary contributing factors to medication errors were distractions and workload increases, many of which may result from efforts at cost containment.
- Insulin, heparin and warfarin were the medications most often associated with errors.

- In 32% of the records where documented action was taken due to a medication error, the personnel involved with initiating or perpetuating the error were reportedly not informed of their involvement in the medication error event.

One study funded by AHRQ in two tertiary care hospitals (Bates, et al, 1995) found that errors in ordering medications accounted for 56 percent of preventable ADEs, while errors in administering medication accounted for 34 percent of preventable ADEs. A second study (Leape, 1995) showed that dosage errors, in particular, were primarily due to the physician's lack of knowledge about the drug or about the patient for whom it was prescribed.

A later study attempting to identify risk factors for preventable ADEs among patients admitted to medical and surgical units at two large hospitals (Bates, et al, 1999), found few such factors, suggesting that focusing on improving medication systems would prove more effective.

Even though nurses do not write the prescription or dispense the drug from the pharmacy, they are in a position to identify potential errors in prescribing and dispensing and thereby protect the patient. Nurses administering medication should observe the following six "rights:"

- Right patient
- Right drug
- Right dose
- Right dosage form
- Right route
- Right time

In 1999, The National Patient Safety Partnership, a coalition of healthcare organizations, released a list of 16 best practices in medication safety. (Box 1) If hospitals implemented all of these practices, it could markedly reduce medication errors.

Box 1: Best Practices for Medication Safety

To reduce the occurrence of adverse drug events (events that can cause, or lead to, inappropriate medication use and patient harm),

Patients can:

- Tell physicians about all medications they are taking and responses/reactions to them
- Ask for information in terms they understand before accepting medications

Providing Organizations and Practitioners can:

- Educate patients
- Put allergies and medications on patient records
- Stress dose adjustment in children and older persons
- Limit access to high hazard drugs
- Use protocols for high hazard drugs

- Computerize drug order entry
- Use pharmacy-based IV and drug mixing programs
- Avoid abbreviations
- Standardize drug packaging, labeling, storage
- Use "unit dose" drug systems (packaged and labeled in standard patient doses)
- Use "unit dose" drug systems (packaged and labeled in standard patient doses)

Purchasers can:

- Require machine-readable labeling (barcoding)
- Buy drugs with prominent display on name, strength, warnings
- Buy "unit of use" packaging ("unit dose")
- Buy IV solutions with two sided labeling

To reduce the potential for taking a medication that was not prescribed for them or cannot be safely taken by them, patients should ask the following five sets of questions before accepting prescription drugs.

- Is this the drug my doctor (or other health care provider) ordered? What is the trade and generic name of the medication?
- What is the drug for? What is it supposed to do?
- How and when am I supposed to take it and for how long?
- What are the likely side effects? What do I do if they occur?
- Is this medication safe to take with other over-the-counter or prescription medications, or dietary supplements, that I am already taking? What food, drink, activities, dietary supplements or other medication should be avoided while taking this medication?

-- National Patient Safety Partnership, May 12, 1999

System Failures

Analysis of medical errors continues to show that human fallibility is only part of the picture; system failures are also guilty. A major study (Leape et al, 1995) showed that failures at the system level - in disseminating pharmaceutical information, in checking drug dosages and patient identities, and in making patient information available - were the real culprits in more than 75 percent of adverse drug events.

Cost containment is a system-level factor that can affect medical errors. For example, inadequate staffing levels of nurses increased the incidence of postoperative adverse events, such as urinary tract infections, pneumonia, thrombosis, and pulmonary compromise (Kovner and Gergen, 1998).

Research on system failures that have led to major industrial disasters (Peterson, 1996) found that the systems had nine characteristics in common:

- Diffuse responsibilities
- Underestimation of the severity of risks
- Belief that compliance with the rules was sufficient to achieve safety
- Lack of ability for team members to speak up

- Failure to share and implement lessons learned in other facilities
- Subordination of safety to other performance goals
- Persistence of flawed design features
- Failure to use risk management techniques
- Poorly defined responsibility for safety within the organization
- Healthcare systems with these characteristics create an unsafe environment for both patients and staff.

Factors and Situations that Increase the Risk of Errors

As the IOM acknowledges, "to err is human." However, research has shown that certain factors can increase the error rate (Reason, 1990), such as:

- **Fatigue** - Working a double shift, for example, can increase the likelihood of errors. Medical residents on call for 36 hours or more are also at high risk for errors.
- **Alcohol and/or other drugs** - Use of alcohol and/or drugs is incompatible with competent, professional safe patient care. Unfortunately, the combination of high stress and easy access to medications has led to substance abuse by physicians, nurses, and other health professionals.
- **Illness** - Coming to work when you aren't well jeopardizes your health and the health and safety of patients.
- **Inattention/Distracton** - A noisy, busy emergency department can make it difficult to concentrate on one patient's care, especially if you know that other patients are waiting to see you.
- **Emotional states** - Anger, anxiety, fear and boredom can all impair job performance and lead to errors. A heavy workload, conflict with other staff or with patients, and other sources of stress increase the likelihood of errors.
- **Unfamiliar situations or problems** - Nurses who "float" from one hospital department to another may not have the expertise needed for all situations.
- **Equipment design flaws** - Here again, training and experience with equipment are key to avoiding errors.
- **Inadequate labeling or instructions on medication or equipment** - Look-alike or sound-alike drugs can lead to errors. Incomplete or confusing instructions on equipment can result in inappropriate use.
- **Communication problems** - Lack of clear communication among staff or between providers and patients is one of the most common reasons for error.
- **Hard-to-read handwriting** - Doctors' handwriting has long been criticized for its illegibility, particularly on prescriptions. Fortunately, computerized medication ordering has eliminated this problem in many healthcare organizations.
- **Unsafe working conditions** - Poor lighting and/or slippery floors can lead to errors, especially falls, a costly hazard in every hospital.

Focusing on the multi-causal nature of errors does not alter the role of individual accountability for safe practice. In fact, the National Council of State Boards of Nursing has testified as follows:

"Both systems liability for mistakes and individual accountability are important to protect the public. Absent individual accountability standards, practitioners who leave organizations after

serious errors occur and are employed elsewhere will never receive necessary remediation or education to address human factors, thus compromising the safety of the patient." (Ridenour, 2000)

Populations of Special Vulnerability

The safety of all patients is of paramount concern for all care providers. However, some patients - for example, the very young and the very old - are particularly vulnerable to the effects of medical errors, often due to their inability to participate actively as a member of the health care team, most commonly related to communication issues. Nurses and other care providers need to recognize the special needs of these patients and act accordingly.

Older Patients

The normal aging process commonly includes some degree of impairment in vision and hearing. Older people may also suffer varying degrees of cognitive impairment. Alone or in combination, these problems contribute to difficulties in communication between patients and care providers. Serious illness, accidents or trauma, such as surgery, that require hospitalization, add another layer of anxiety and possible confusion that can further interfere with communication between patients and care providers, potentially leading to errors.

Older patients are at special risk for medication errors, which can have life-threatening or even fatal effects, due to the declining ability of the aging body to metabolize drugs. Visual, hearing or cognitive problems may lead to misunderstanding of instructions or failure to question an incorrect or unfamiliar drug. When caring for older patients, communication with a responsible family member or other patient advocate is essential.

Older patients are also at high risk of falling. Reasons include medication effects, existing health problems such as arthritis, confusion or other cognitive deficit, or postural hypotension. Many older people need to use the bathroom during the night and need assistance to avoid falls.

Infants and Children

The younger the patient, the greater the risk of serious medication errors with devastating effects. Weight-based dosing is required for almost all pediatric drugs, and pharmacists often must dilute stock solutions.

One research study in two urban teaching hospitals found that errors occurred in 5.7 percent of medication orders during the care of 1,120 pediatric patients admitted during 1999 (Kaushal, et al, 2001). In addition, the rate of potential adverse drug events - close calls/near misses - was three times the rate of potential ADEs found in a similar study of hospitalized adults.

The researchers noted that physicians at both hospitals handwrote medication orders, copies of which were sent to the pharmacy. According to the researchers, computerized medication order entry and decision support (with automatic checks on patient drug allergies, drug dosage, and drug-drug interaction) could have prevented 93 percent of potential ADEs, as could the participation of ward-based clinical pharmacists in ward rounds. Nearly 80 percent of potential ADEs occurred in drug ordering, and 34 percent involved incorrect dosing.

Infants and young children do not have the communication abilities needed to alert clinicians about potential drug errors or adverse effects that they experience. Infants, particularly newborns, are physiologically ill equipped to deal with drug errors. Parents of infants and children need to be fully informed and involved in their child's care during hospitalization and must be educated to question caregivers about medications and procedures.

Persons with Limited English Language Skills and/or Limited Literacy

Meeting the healthcare needs of Florida's culturally and ethnically diverse population may require bilingual care providers, translators or interpreters, or other communication experts. Without these experts available, communication of vital information between patient and provider can lead to misunderstanding and errors.

Many hospitals have translators or interpreters available for non-English speaking patients. If translation assistance is not available, communicating with a family member or other support person is essential. It is important to keep your words simple and concrete, and to use pictures or diagrams to explain procedures.

General guidelines to assist nurses caring for patients from 23 different cultural groups can be found in *Culture and Nursing Care: A Pocket Guide* (Lipson, Dibble, and Minarik, 1996). Each chapter outlines issues related to health and illness, symptom expression, self-care, birth, death, religion, family participation in care, and other topics.

When caring for patients whose verbal abilities are limited either by education, development, or neurological impairment, assistive devices such as an alphabet board, a picture board or magic slate may prove helpful. Patients who are unable to speak because of a tracheostomy or other surgical procedure should also have these devices available along with pencil and paper (Adkins, 1991).

Fall Risk

Falls are a commonly reported sentinel event and can be fatal. Older patients are not the only population at risk. Any patient who has had excessive blood loss may experience postural hypotension, increasing the risk of falling. Maternity patients or other patients who have epidural anesthesia are at risk for falls due to decreased lower body sensation. Factors that increase the risk of falls are summarized in Box 2.

Box 2: Risk Factors for Falls

- Age 65 or over
- History of falling
- Impaired mobility or difficulty walking
- Need for assistance in getting out of bed or transferring to and from a chair
- History of dizziness or seizures
- Impaired vision, hearing, or speech
- Need for mobility assistive devices (cane, walker, wheelchair, crutches or braces)
- Weakness or fatigue
- Confusion, disorientation, impaired cognitive function
- Use of medications such as diuretics, laxatives, or consciousness-altering drugs, including sedatives, analgesics, hypnotics, anti-depressants, tranquilizers.

-- Harkreader, H. (2000) Fundamentals of Nursing: Caring and Clinical Judgment. Philadelphia: W. B. Saunders Company.

Reporting Errors

Improving patient safety begins with prompt reporting of errors followed by analysis of the root causes and contributing factors and developing a plan of action to prevent similar errors in the future. Only in this way can a health care organization assess the safety of care delivered and whether safety is improving.

The mistaken attitude in healthcare that errors are solely the fault of individual practitioners has proved a major barrier to reporting. Instead of analyzing the multiple factors that contribute to errors, efforts have focused almost entirely on making providers more careful, reinforced by fear of punishment when they fail. Until the mid-1990s, this punitive attitude severely limited the reporting of errors. In fact, research shows that when the fear of punishment is removed, reporting of errors increases by as much as 10 to 20 fold (Leape, 2000).

Joint Commission on Accreditation of Healthcare Organizations

Each accredited healthcare organization must have two systems in place for reporting errors: an internal system and an external system. The Joint Commission on Accreditation of Healthcare Organizations, whose mission is "to continuously improve the safety and quality of care provided to the public," requires that healthcare organizations:

- Have a process in place to recognize sentinel events;
- Conduct thorough and credible root cause analyses that focus on process and system factors, not on individual blame;
- Document a risk-reduction strategy and internal corrective action plan within 45 days of the organization becoming aware of the sentinel event.

JCAHO defines a sentinel event as any unexpected occurrence involving death or serious physical or psychological injury, or the risk thereof. Including the words "or the risk thereof" broadens the

definition to include potential sentinel events (close calls/near misses). In other words, if similar circumstances recurred, a serious adverse outcome would be likely. Reportable JCAHO sentinel events are summarized in Box 3.

Box 3: JCAHO Reportable Sentinel Events

Unanticipated death or major permanent loss of function, unrelated to the natural course of the patient's illness or underlying condition, or one of the following:

- Suicides
- Infant abduction or discharge to the wrong family
- Rape
- Transfusion reaction
- Surgery on the wrong body part

Accredited facilities are to report not only actual sentinel events but potential sentinel events, the close calls/near misses that afford valuable learning opportunities for prevention of future errors. JCAHO also encourages facilities to submit the findings of their root cause analyses and corrective action plans. This information can be included in JCAHO's review of sentinel events, helping track national trends and develop strategies for improving patient safety.

Since 1995, JCAHO has reviewed 1,609 sentinel events. Of these, the most common are patient suicide (16.7percent), operative/postoperative complications (12.2 percent), medication errors (11.4 percent), and wrong-site surgery (11.3 percent).

JCAHO published an online newsletter, *Sentinel Event Alert*, which identifies specific sentinel events, describes their common underlying causes and suggests actions to prevent these occurrences. Accredited organizations are expected to:

- Review and consider relevant information, if appropriate to the organization's services, from each Sentinel Event Alert.
- Consider information in an alert when designing or redesigning relevant processes.
- Evaluate systems in light of information in an alert.
- Consider standard-specific concerns.
- Implement relevant suggestions or reasonable alternatives or provide a reasonable explanation for not implementing relevant changes.

Florida Law

Reporting sentinel events to JCAHO is voluntary. However, Florida law makes such reporting mandatory. Florida's Comprehensive Medical Malpractice Reform Act of 1985 (F.S.395.0197) mandates that each licensed hospital implement a risk-management program with state oversight and an internal incident-reporting system. State oversight is provided by the Florida Agency for

Health Care Administration (AHCA). Each licensed facility is required to hire a risk manager, licensed under F.S. 395-10974, who is responsible for implementation and oversight of the risk management program.

Statute 395.0197 mandates internal reporting of any adverse incident (event) "over which health care personnel could exercise control, and which is associated in whole or in part with medical intervention, rather than the condition for which such intervention occurred, and which:

(a) Results in one of the following injuries:

1. Death;
2. Brain or spinal damage;
3. Permanent disfigurement;
4. Fracture or dislocation of bones or joints;
5. A resulting limitation of neurological, physical, or sensory function which continues after discharge from the facility;
6. Any condition that required specialized medical attention or surgical intervention resulting from non-emergency medical intervention, other than an emergency medical condition, to which the patient has not given his or her informed consent; or
7. Any condition that required the transfer of the patient, within or outside the facility, to a unit providing a more acute level of care due to the adverse incident, rather than the patient's condition prior to the adverse incident;

(b) Was the performance of a surgical procedure on the wrong patient, a wrong surgical procedure, a wrong-side surgical procedure, or a surgical procedure otherwise unrelated to the patient's diagnosis or medical condition;

(c) Required the surgical repair of damage resulting to a patient from a planned surgical procedure, where the damage was not a recognized specific risk, as disclosed to the patient and documented through the informed-consent process; or

(d) Was a procedure to remove unplanned foreign objects remaining from a surgical procedure."

The risk-management reporting system must:

- Investigate and analyze the frequency and causes of adverse incidents to patients
- Educate facility staff and agents
- Analyze patient grievances related to patient care

All incident reports must be filed with the risk manager of the healthcare organization or his or her designee within 3 days after the event occurred. Following receipt of the report, the risk manager in turn must report the event to the Florida Agency for Health Care Administration (AHCA). Certain adverse incidents (sentinel events), referred to as Code 24 events, must be reported to AHCA within 24 hours of the occurrence (See Box 4).

Box 4: Code 24 Sentinel Events

Report to AHCA within 24 hours of occurrence:

- Death of a patient
- Brain or spinal damage to a patient
- Performance of a surgical procedure on the wrong patient
- Performance of a wrong-site surgical procedure
- Performance of a wrong surgical procedure

In addition to their internal reporting system, Florida hospitals and ambulatory surgical centers also must submit to the Florida Agency for Health Care Administration (ACHA) an annual report of all adverse incidents and malpractice actions (new, pending, and closed). They are also required to report any injuries of which they are aware that occur through any health care service, including nursing homes, home health organizations, doctors' offices, dentists' offices, or any other purveyor of health care service. Florida Statute 641.55 requires similar reporting of patient injury incidents by HMOs.

Three types of reports are required by ACHA:

1. The Annual Report, which includes all adverse incidents that occur in the facility in the course of a calendar year. These reports are due after the first of each year for the previous year.
2. 24-Hour Urgent Issue Report, a preliminary report of serious patient injuries of a more complicated nature, within 24 hours of the occurrence of the injury. (See Box 4)
3. Code 15 Reports, which report in detail on each serious patient injury, the facility's investigation of the injury, and whether the factors causing or resulting in the adverse incident represent a potential risk to other patients. The findings of that investigation must be reported to AHCA within 15 days of an adverse incident. Failure to comply with this mandate may result in fines of as much as \$25,000.

Moving Beyond Blame: Improving Patient Outcomes

"The medical imperative is clear: to make health care safe we need to redesign our systems to make errors difficult to commit, and create a culture in which the existence of risk is acknowledged and injury prevention is recognized as everyone's responsibility." (Leape et al, 1998)

Root Cause Analysis (RCA)

JCAHO requires that a thorough, credible root cause analysis (RCA) be performed for each reported sentinel event. The goal of a Root Cause Analysis is to find out:

- What happened
- Why did it happen
- What do you do to prevent it from happening again

VA National Center for Patient Safety (www.patientsafety.gov/tools.html)

Root Cause Analysis (RCA) is a tool for identifying error prevention strategies. It is a process for discovering basic and contributing causes of error with the continuing goal of preventing recurrence.

RCA is an interdisciplinary process involving:

- Experts from all services involved
- Those who are the most familiar with the situation
- Asking why at each level of cause and effect
- Identification of changes needed
- As great a degree of impartiality as possibility

According to the VA National Center for Patient Safety (2002), a thorough RCA must include:

- Determination of human and other factors
- Determination of related processes and systems
- Analysis of underlying cause and effect systems through a series of WHY questions
- Identification of risks and their potential contributions*
- Determination of potential improvement in processes or systems

*One step in the RCA of both actual adverse events and close calls is determining the Safety Assessment Code (SAC) score of the event. The Severity and Probability Categories and the SAC Matrix are shown in Figure 3. (VHA Handbook 1050.1, Appendix D-1 and D-2).

A credible RCA must:

- Include participation by the leadership of the organization and those most closely involved in the processes and systems.
- Be internally consistent.
- Include consideration of relevant literature.

In July 2001, the Agency for Healthcare Research and Quality released a report outlining evidenced-based clinical recommendations for improving patient safety. Titled "Making Health Care Safer: A Critical Analysis of Patient Safety Practices," the report reviews 79 practices to prevent adverse events and improve patient safety, based on current research. The 11 most highly rated practices are listed in Box 5. The authors of this report emphasized that this list should not be considered complete, and that it was weighted toward care of the very ill, rather than the mildly or chronically ill. Other measures to improve patient safety are summarized in Box 1.

A complete summary of the AHRQ report is available at <http://www.ahrq.gov/clinic/ptsafety/summary.htm>

Box 5 - Clinical Opportunities for Safety Improvement

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

In July 2002, The Joint Commission on the Accreditation of Healthcare Organizations (JCAHO) issued new mandatory goals and recommendations to improve patient safety, to take effect in January 2003. Hospitals and other organizations will be evaluated by accreditation representatives to see whether these recommendations or acceptable alternative measures are being implemented. Failure to implement the recommendations could result in loss of accreditation and federal funding. The 2003 National Patient Safety Goals and Recommendations are summarized in Box 6.

Box 6. 2003 National Patient Safety Goals and Recommendations

Goal 1. Improve the accuracy of patient identification.

Recommendations:

- Use at least two patient identifiers (neither of which is the patient's room number) whenever taking blood samples or administering medications or blood products.
- 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

Goal 2. Improve the effectiveness of communication among caregivers.

Recommendations:

- Implement a process for taking verbal or telephone orders that requires a verification "read-back" of the complete order by the person receiving the order.
- Standardize the abbreviations, acronyms and symbols used throughout the organization, including a list of abbreviations, acronyms and symbols not to use.

Goal 3. Improve the safety of using high-alert medications.

Recommendations:

- Remove concentrated electrolytes (including, but not limited to, potassium chloride, potassium phosphate, sodium chloride >.9%) from patient care units.
- Standardize and limit the number of drug concentrations available in the organization.

Goal 4. Eliminate wrong-site, wrong-patient and wrong-procedure surgery.

Recommendations:

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

Goal 5. Improve the safety of using infusion pumps.

Recommendations:

- Ensure-free-flow protection on all general-use and PCA intravenous infusion pumps used in the organization.

Goal 6. Improve the effectiveness of clinical alarm systems.

Recommendations:

- Implement regular preventive maintenance and testing of alarm systems.
- Assure that alarms are activated with appropriate settings and are sufficiently audible with respect to distances and competing noise within the unit.

Source: Joint Commission on the Accreditation of Healthcare Organizations

Public Education Measures Related to Patient Safety

Making the patient and the family part of the health care team is an important strategy in improving patient safety and reducing medical errors. Several organizations have materials available to help educate patients about their role on the health care team. The Agency for Healthcare Research and Quality (AHRQ) has developed a comprehensive patient fact sheet (See Table 1), which hospitals are encouraged to make available to patients.

The single most important way you can help to prevent errors is to be an active member of your health care team. That means taking part in every decision about your health care. Research shows

that patients who are more involved with their care tend to get better results. Some specific tips, based on the latest scientific evidence about what works best are listed in Table 1.

Table 1: 20 Tips to Help Prevent Medical Errors - Patient Fact Sheet

Medicines

1. Make sure that all of your doctors know about everything you are taking. This includes prescription and over-the-counter medicines, and dietary supplements such as vitamins and herbs.
2. At least once a year, bring all of your medicines and supplements with you to your doctor. "Brown bagging" your medicines can help you and your doctor talk about them and find out if there are any problems. It can also help your doctor keep your records up to date, which can help you get better quality care.
3. Make sure your doctor knows about any allergies and adverse reactions you have had to medicines. This can help you avoid getting a medicine that can harm you.
4. When your doctor writes you a prescription, make sure you can read it. If you can't read your doctor's handwriting, your pharmacist might not be able to either.
5. Ask for information about your medicines in terms you can understand-both when your medicines are prescribed and when you receive them. What is the medicine for? How am I supposed to take it, and for how long? What side effects are likely? What do I do if they occur? Is this medicine safe to take with other medicines or dietary supplements I am taking? What food, drink, or activities should I avoid while taking this medicine?
6. When you pick up your medicine from the pharmacy, ask: Is this the medicine that my doctor prescribed? A study by the Massachusetts College of Pharmacy and Allied Health Sciences found that 88 percent of medicine errors involved the wrong drug or the wrong dose.
7. If you have any questions about the directions on your medicine labels, ask. Medicine labels can be hard to understand. For example, ask if "four doses daily" means taking a dose every 6 hours around the clock or just during regular waking hours.
8. Ask your pharmacist for the best device to measure your liquid medicine. Also, ask questions if you're not sure how to use it. Research shows that many people do not understand the right way to measure liquid medicines. For example, many use household teaspoons, which often do not hold a true teaspoon of liquid. Special devices, like marked syringes, help people to measure the right dose. Being told how to use the devices helps even more.
9. Ask for written information about the side effects your medicine could cause. If you know what might happen, you will be better prepared if it does-or, if something unexpected happens instead. That way, you can report the problem right away and get help before it gets worse. A study found that written information about medicines can help patients recognize problem side effects and then give that information to their doctor or pharmacist.

Hospital Stays

10. If you have a choice, choose a hospital at which many patients have the procedure or surgery you need. Research shows that patients tend to have better results when they are treated in hospitals that have a great deal of experience with their condition.
11. If you are in a hospital, consider asking all health care workers who have direct contact with you whether they have washed their hands. Handwashing is an important way to prevent the spread of infections in hospitals. Yet, it is not done regularly or thoroughly enough. A recent study found that when patients checked whether health care workers washed their hands, the workers washed their hands more often and used more soap.

12. When you are being discharged from the hospital, ask your doctor to explain the treatment plan you will use at home. This includes learning about your medicines and finding out when you can get back to your regular activities. Research shows that at discharge time, doctors think their patients understand more than they really do about what they should or should not do when they return home.

Surgery

13. If you are having surgery, make sure that you, your doctor, and your surgeon all agree and are clear on exactly what will be done. Doing surgery at the wrong site (for example, operating on the left knee instead of the right) is rare. But even once is too often. The good news is that wrong-site surgery is 100 percent preventable. The American Academy of Orthopaedic Surgeons urges its members to sign their initials directly on the site to be operated on before the surgery.

Other Steps You Can Take

14. Speak up if you have questions or concerns. You have a right to question anyone who is involved with your care.
15. Make sure that someone, such as your personal doctor, is in charge of your care. This is especially important if you have many health problems or are in a hospital.
16. Make sure that all health professionals involved in your care have important health information about you. Do not assume that everyone knows everything they need to.
17. Ask a family member or friend to be there with you and to be your advocate (someone who can help get things done and speak up for you if you can't). Even if you think you don't need help now, you might need it later.
18. Know that "more" is not always better. It is a good idea to find out why a test or treatment is needed and how it can help you. You could be better off without it.
19. If you have a test, don't assume that no news is good news. Ask about the results.
20. Learn about your condition and treatments by asking your doctor and nurse and by using other reliable sources.

From: 20 Tips to Help Prevent Medical Errors. Patient Fact Sheet. AHRQ Publication No. 00-PO38, February 2000. Agency for Healthcare Research and Quality, Rockville, MD.
<http://www.ahrq.gov/consumer/20tips.htm>

The Joint Commission (JCAHO) has initiated a new campaign called Speak Up, which encourages patients "to become active, involved and informed participants on the healthcare team." Accredited health care organizations can download the Speak Up brochure, which is available in both English and Spanish versions (JCAHO, 2002). For more information go to <http://www.jointcommission.org/speakup.aspx>

"The best way to systematically do no harm is to address the issues of adverse medical events and error from the larger systems perspective. Almost every health care provider eventually will be a patient and therefore has an interest in the consumer's side. No matter what perspective it is viewed from, improving patient safety is the right thing to do." (Weeks and Bagian, 2000)

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Medical Errors Test

1. According to the Institute of Medicine 1 in every 25 hospital patients are injured each year leading to:
 - a. An estimated 16,516 deaths each year.
 - b. An estimated 44,000 to 98,000 deaths each year.
 - c. An estimated 42,297 each year.
 - d. An estimated 43,458 each year.
2. An adverse event is defined as:
 - a. The failure of a planned action to be completed as intended.
 - b. The use of a wrong plan to achieve an aim.
 - c. An injury caused by medical management rather than the underlying condition of the patient.
 - d. The need to ask why the error occurred and make changes in the system.
3. Latent errors are more likely to be beyond the control of the individual. Examples of latent errors are:
 - a. Errors in system design
 - b. Faulty installation or maintenance of equipment
 - c. Ineffective organizational infrastructure
 - d. All of the above.
4. Which of the following is an example of a potential adverse event?
 - a. The improper marking of the surgical site leads to the amputation of the wrong foot.
 - b. An undetected design flaw in an airplane (a latent error) causes the pilot to lose control of the plane.
 - c. A dead battery on an automatic external defibrillator (AED) leads to the death of a patient.
 - d. A nurse recognizes a potential drug overdose in a physician's prescription and does not administer the drug but instead calls the error to the physician's attention.
5. The three most frequently reported types of medication errors are all of the following **except**:

- a. Failure to administer an ordered medication.
 - b. The medication provided by the pharmaceutical company was labeled incorrectly.
 - c. The medication dose, strength or quantity differs from that which was prescribed.
 - d. The medication dispensed and/or administered was not authorized by the prescriber.
6. All of the following factors have been shown to increase the error rate except:
- a. Coming to work when you aren't well.
 - b. Nurses who work in only one hospital department.
 - c. Look-alike or sound-alike drugs.
 - d. Lack of clear communication among staff or between providers and patients.
7. Older patients are at risk for medication errors due to all of the following factors except:
- a. Changes in the ability to metabolize drugs.
 - b. Misunderstanding due to visual, hearing or cognitive problems.
 - c. Health care providers who are inexperienced in dealing with the elderly.
 - d. Anxiety due to surgery, trauma or hospitalization.
8. Risk factors for falls include all of the following **except**:
- a. Need for assistance in getting out of bed or transferring to and from a chair.
 - b. Unable to ambulate >300 feet in 3 minutes.
 - c. Use of medications such as diuretics, laxatives, or consciousness-altering drugs, including sedatives, analgesics, hypnotics, anti-depressants, tranquilizers.
 - d. Weakness or fatigue.
9. According to JCAHO, a sentinel event is defined as:
- a. A risk-reduction strategy and internal corrective action plan.
 - b. Any unexpected occurrence involving death or serious physical or psychological injury, or the risk thereof.
 - c. An error in system design, faulty installation or maintenance of equipment, or ineffective organizational infrastructure.
 - d. An error that could have caused harm but did not, either by chance, or because something or someone in the system intervened.

10. In the state of Florida reporting of sentinel events is:

- a. Voluntary
- b. Mandatory
- c. Recommended
- d. Not required

11. All of the statements from Florida Statute 395.0197 regarding the internal reporting of an adverse event are true **except**:

- a. Internal reporting is required in the case of death, permanent disfigurement and brain or spinal cord injury.
- b. Internal reporting is required in the event of a surgical procedure on the wrong patient, a wrong surgical procedure, a wrong-side surgical procedure, or a surgical procedure otherwise unrelated to the patient's diagnosis or medical condition.
- c. Internal reporting is required for the surgical repair of damage resulting to a patient from a planned surgical procedure, where the damage was not a recognized specific risk.
- d. Internal reporting is not required for a procedure to remove unplanned foreign objects remaining from a surgical procedure.

12. In addition to their internal reporting system, Florida hospitals and ambulatory surgical centers also must submit to the Florida Agency for Health Care Administration (ACHA) which of the following reports?

- a. The Annual Report, which includes all adverse incidents that occur in the facility in the course of a calendar year.
- b. 24-Hour Urgent Issue Report, a preliminary report of serious patient injuries of a more complicated nature, within 24 hours of the occurrence of the injury.
- c. Code 15 Reports, which report in detail on each serious patient injury, the facility's investigation of the injury, and whether the factors causing or resulting in the adverse incident represent a potential risk to other patients.
- d. All of the above.

13. Root cause analysis is:

- a. A process for discovering basic and contributing causes of error with the continuing goal of preventing recurrence.
- b. A preliminary report of serious patient injuries.

c. An annual report of all adverse incidents and malpractice actions (new, pending, and closed).

d. A report on injuries caused by medical management rather than the underlying condition of the patient.

14. The single most important way a consumer can help prevent errors is to be an active member of the health care team. Which of the following are ways for patients to be actively involved in the prevention of medical errors?

a. Ask for information about your medicines in terms you can understand - both when your medicines are prescribed and when you receive them.

b. If you have a choice, choose a hospital at which many patients have the procedure or surgery you need.

c. Speak up if you have questions or concerns. You have a right to question anyone who is involved with your care.

d. All of the above.

15. As a patient you can help prevent medication errors. All of the following strategies will help prevent medication errors except:

a. Make sure that all of your doctors know about everything you are taking. This includes prescription and over-the-counter medicines, and dietary supplements such as vitamins and herbs.

b. When your doctor writes you a prescription, don't worry if you can't read it. Your pharmacist will be able to read it.

c. When you pick up your medicine from the pharmacy, ask: Is this the medicine that my doctor prescribed? A study by the Massachusetts College of Pharmacy and Allied Health Sciences found that 88 percent of medicine errors involved the wrong drug or the wrong dose.

d. Ask for written information about the side effects your medicine could cause.

Answer Sheet

Preventing Medical Errors for Massage Therapists

Name: _____ Phone #: _____

Address: _____

City, State, Zip: _____

License # _____

Directions:

1. Print your name, address and license information in the spaces provided above.
2. Record your answers by question on the form below
3. Send this sheet and the course evaluation sheet to:

Body Balancing
Paula J. Kaprocki, LMT
660 Andersontown RD
Dover, PA 17315

Or email your answers to
tbm.massage@gmail.com

1. (a) (b) (c) (d)

9. (a) (b) (c) (d)

2. (a) (b) (c) (d)

10. (a) (b) (c) (d)

3. (a) (b) (c) (d)

11. (a) (b) (c) (d)

4. (a) (b) (c) (d)

12. (a) (b) (c) (d)

5. (a) (b) (c) (d)

13. (a) (b) (c) (d)

6. (a) (b) (c) (d)

14. (a) (b) (c) (d)

7. (a) (b) (c) (d)

15. (a) (b) (c) (d)

8. (a) (b) (c) (d)

Course Evaluation Sheet

We hope that this course has provided you with valuable information as part of your continuing education. We welcome any comments or suggestions to improve your learning experience. Please take a moment to complete this course evaluation and provide us with your feedback. Thank you for choosing The Body Mechanics/Body Balancing for your continuing education.

Please evaluate **Preventing Medical Errors for Massage Therapists** based on the criteria listed.

	Excellent	Good	Fair	Poor
Ease of Reading	4	3	2	1
Applicable Information	4	3	2	1
Content	4	3	2	1
Clear Instructions	4	3	2	1
Quality of Information	4	3	2	1
Quality based on price	4	3	2	1

Please list any course improvements you would make to any of the above-mentioned criteria

Would you recommend this course or The Body Mechanics/Body Balancing to others? _____

Why or why not? _____

What further classes would you like to see online? _____

Please make any comments and sign your name if we may use them in future advertisings for this course

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