Prevention of Medical Errors Home Study Course

2 CE Hours
Text and Study Guide

Presented by the:
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Center for Massage Therapy Continuing Education

It is the responsibility of the practitioner to determine the appropriateness of the principles presented in terms within the scope of practice. This information is in no way meant to diagnose or treat medical conditions.

Instructions for the Prevention of Medical Errors Home Study Course

Thank you for investing in the Prevention of Medical Errors home study course, a 2 CE hour course designed to further your knowledge in the principles and prevention of medical errors. The following will give instructions on what you will need to do to complete this course. This is a 2 CE hour course, so that means it should take you approximately 2 hours to read the text, login and complete the examination.

In this course you will be presented with information on:

- Different types of medical errors made by healthcare workers
- Updated statistics on medical errors
- How medical errors affect massage therapists
- Common medical errors made my massage therapists
- What massage therapists can do to prevent medical errors from happening

The following are steps to follow in completing this course:

1. **Read the instructions and review the text and exam.**

2. **Access the online examination in your account at www.massagetherapyceu.com.**

3. **Complete your examination and print your certificate. The exam is open book and there is no time limit for completion.**

You must pass the exam with an 80% or better to pass this home study course. You are allowed to access and take the exam up to 3 times. There is no time limit when taking the exam. Feel free to review the text while taking the test. There are no trick questions on the exam. All of the answers are clearly found in the text. The exam is also included at the end of the text for review before taking the actual online exam.

It is advised to answer the exam questions in the study guide before testing online. That way, when you are testing you do not have go back and forth through the online exam and risk losing your answered questions!

Good luck as you complete this course. If you have any questions please feel free to contact us at 866-784-5940, 712-490-8245 or info@massagetherapyceu.com. Most state boards require that you keep your "certificate of achievement" for at least four years in case of audit. Thank you for taking our Prevention of Medical Errors home study course.

Prevention of Medical Errors Text

Introduction

Healthcare in America is ever changing. Massage therapists are being looked at as healthcare professionals more and more. Massage therapists are now working closely with physicians, chiropractors, and physical therapists. It is for this reason that massage therapists must understand medical errors, how they happen, and what you can do to prevent them. We need to look at and understand the medical community and its developments in order to be looked at as healthcare professionals, now and in the future.

With the goal of preventing medical errors, we must first learn the different types of errors that healthcare professionals make and what actions we can take to correct and prevent them. The frequency and volume of medical errors has reached an unprecedented level. Medical errors are one of the Nation's leading causes of death and injury. In an article published on May 9, 2016 the Center for Disease Control was asked to list "medical error" as 3rd most common cause of death in the US.

A recent report by the Institute of Medicine estimates that as many as 44,000 to 98,000 people die in U.S. hospitals each year as the result of medical errors. This means that about 9.7% of all deaths nationwide each year are due to medical errors. The Journal of Patient Safety also reports that between 210,000 and 440,000 of people that go to the hospital for care suffer some type of preventable harm that contributes to their death (http://www.npr.org/sections/health-shots/2013/09/20/224507654/how-many-die-from-medical-mistakes-in-u-s-hospitals). This means that more people die from medical errors than from motor vehicle accidents, breast cancer, or AIDS each year. Medical errors happen in a number of healthcare settings including:

- Hospitals
- General Practitioner Clinics
- Outpatient Surgery Centers
- Doctors' Offices
- Nursing Homes
- Pharmacies
- Patients' Homes
- Chiropractic Clinics
- Physical Therapy Clinics
- Massage Therapy Practices

In 2000, The Institute of Medicine published a report titled "*To Err is Human: Building a Safer Health System"*. This report focuses on medical errors and their prevalence in American healthcare. Although this report was published 16 years ago, its impact is still being felt among the medical community. "*To Err is Human"* revealed the often startling statistics of medical errors and the disparity between the incidence of errors and the public perception of it, given many patients' expectations that the medical profession should always performs perfectly. A careful examination is made of how the surrounding forces of legislation, regulation, and market activity influence the quality of care provided by health care organizations and then looks at their handling of medical mistakes. In an effort to improve the healthcare systems in place, the report describes medical errors and makes vital suggestions for improving patient safety, in the areas of leadership, improved data collection and analysis, and development of effective systems at the level of direct patient care. You can read the full report which is still considered relevant among the healthcare profession here: http://www.nationalacademies.org/hmd/Reports/1999/To-Err-is-Human-Building-A-Safer-Health-System.aspx.

The Institute of Medicine defines an error as "Failure of a planned action to be completed as intended or use of a wrong plan to achieve an aim; the accumulation of errors results in accidents." In other words, an error occurs when an action is not carried out as planned or a wrong action is used to achieve a result. The outcome is an accident or error. Errors may be either accidental or intentional and in the healthcare field they can have

minimal consequences or fatal results. It is up to us, as healthcare professionals, to look to correct and prevent medical errors on a daily basis to serve and protect our clients'/patients' health and wellbeing.

In response to the above Institute of Medicine's report, the Patient Safety and Quality Improvement Act of 2005 was signed into law on July 29, 2005. This act is still in effect today, and has helped to identify and prevent medical errors. The goal of this act is to improve patient safety by encouraging voluntary and confidential reporting of events that adversely affect patients. It creates Patient Safety Organizations (PSOs) to collect, aggregate, and analyze confidential information reported by health care providers. Currently, patient safety improvement efforts are hampered by the fear of discovery of peer deliberations, resulting in under-reporting of events and an inability to aggregate sufficient patient safety event data for analysis. By analyzing patient safety event information, PSOs will be able to identify patterns of failures and propose measures to eliminate patient safety risks and hazards.

Many providers fear that patient safety event reports could be used against them in medical malpractice cases or in disciplinary proceedings. The Act addresses these fears by providing Federal legal privilege and confidentiality protections to information that is assembled and reported by providers to a PSO or developed by a PSO ("patient safety work product") for the conduct of patient safety activities. The Act also significantly limits the use of this information in criminal, civil, and administrative proceedings. The Act includes provisions for monetary penalties for violations of confidentiality or privilege protections.

Additionally, the Act specifies the role of PSOs and defines "patient safety work product" and "patient safety evaluation systems," which focus on how patient safety event information is collected, developed, analyzed, and maintained. In addition, the Act has specific requirements for PSOs, such as:

- PSOs are required to work with more than one provider.
- Eligible organizations include public or private entities, profit or not-for-profit entities, provider entities, such as hospital chains, and other entities that establish special components.
- Ineligible organizations include insurance companies or their affiliates.

Finally, the Act calls for the establishment of a Network of Patient Safety Databases (NPSD) to provide an interactive, evidence-based management resource for providers, PSOs, and other entities. It will be used to analyze national and regional statistics, including trends and patterns of patient safety events. The NPSD will employ common formats (definitions, data elements, and so on) and will promote interoperability among reporting systems. The Department of Health and Human Services will provide technical assistance to PSOs.

Why are Errors in the Medical System Unique?

Research done by The Agency for Health Care Research and Quality has documented that the rate of medical errors is far higher than the error rate of most other industries (http://www.ahrq.gov/qual/errorsix.htm#top). In one study of intensive care units, the correct action was taken 99.0% of the time, translating to 1.7 errors per day. 1 out of 5 of these errors was serious and/or potentially fatal. If performance levels even substantially better than those found in the intensive care unit (for example, 99.9% correct action taken, a 10-fold reduction in errors) were applied to the airline and banking industries, it would still equate to 2 dangerous landings per day at O'Hare International Airport and 32,000 checks deducted from the wrong account per hour. In these industries, such error rates would not be tolerated.

Healthcare shares a number of characteristics with these other industries. They all rely on systems which include the interaction of humans and technology to perform a number of functions leading to an outcome (e.g., a safe transcontinental flight, a check correctly deducted from the right account, a patient's recovery from breast cancer). However, healthcare is distinct in its complexity. For example, a patient in an intensive care unit is the recipient of an average of 180 different activities performed per day that rely on the interaction of monitoring, treatment and support systems. One observer noted that many medical errors can be attributed to the simple fact

that the knowledge base to effectively and safely deliver healthcare exceeds the storage capacity of the human brain.

The decentralized nature of the American healthcare industry contributes to the problem of errors, and will make it a challenge to implement the kind of comprehensive strategy to reduce errors and increase patient safety that the Institute of Medicine recommends. Prescription and delivery of medications provides a dramatic example. It requires the successful completion of at least five interdependent steps: ordering, transcribing, dispensing, delivering, and administering. The system design leads to numerous opportunities for error in any one of these steps. One study on adverse drug events showed that 78 percent of adverse drug events were due to system failures and errors.

Organizational factors are also a distinct challenge in addressing medical errors. Within many hospitals, departments are only loosely linked, and communications between primary care doctors and medical specialists are infamously poor. As a result, information on problems, as well as improved practices to reduce errors and enhance safety, in one department or one facility does not migrate quickly to others. The variety of settings in which health care is provided (e.g. hospitals, nursing homes, clinics, ambulatory surgery centers, private offices, and patients' homes) and the transitions of patients and providers among them provide additional challenges.

Errors may be particularly difficult to recognize in health care because variations in an individual's response to treatment is expected. In addition, medical professionals may not recognize that a particular product or procedure may have contributed to or caused the problem because the patient is already ill, the product is not expected to work perfectly at all times or the event appears unrelated to the product or procedure. Lack of recognition of a service's role in adverse events reduces reporting and the opportunity to learn from previous experiences with the product or service. Because medical errors usually affect only a single patient at a time, they are treated as isolated incidents, and little public attention is drawn to these problems when compared with aviation or nuclear power accidents. Healthcare errors are also under-reported due to liability and confidentiality concerns. These factors explain, in part, the ongoing "invisibility" of medical errors despite the existence of research which has documented their high prevalence.

Classes of Medical Errors
There are different types of medical errors made in the healthcare industry. These can be classified into the following categories:

- Diagnostic errors
- Equipment failure
- Misinterpretation of medical orders
- Medication errors
- Surgical errors

Diagnostic Errors
Diagnostic errors account for a substantial fraction of all medical errors, and strategies for their prevention have been explored. Diagnostic errors stem from an initial misdiagnosis of a condition. This can happen in several ways, including failure to perform a necessary diagnostic test, misinterpretation of test results or failure to diagnosis abnormal test results. If an incorrect diagnosis is given, improper treatment will definitely follow. Misdiagnosis of a condition by a physician resulting in erroneous treatment happens for many reasons, including:

- Physician inexperience
- Failure of physician to receive lab report
- Lab report filed in the incorrect chart
- Physician/nurse communication errors

- Outdated testing equipment
- Delays in testing procedures

Historically, a diagnostic error was seen at an individual level as a failure of the physician. Good diagnostic skills in physicians were equated with clinical expertise and experience. But that may not always be the case. For the most part, physicians' knowledge deficits are relatively uncommon, and it is rare that a physician would be unaware of a particular diagnostic entity except in the most mysterious of cases.

No-fault diagnostic errors can occur when the patient's disease is silent, appears in an uncharacteristic fashion or mimics another, more common disease. These errors will inevitably decline as medical science advances, new syndromes are identified and diseases can be detected more accurately or at earlier stages. These errors can never be eradicated, unfortunately, because new diseases emerge, tests are never perfect, patients are sometimes noncompliant and physicians will inevitably, at times, choose the most likely diagnosis over the correct one, illustrating the concept of imperfection and the probabilistic nature of choosing a diagnosis.

System failure diagnostic errors play a role when a patient's diagnosis is delayed or missed because of underlying imperfections in the healthcare system and its procedures. These errors can be reduced by organization improvements, but can never be eliminated because these improvements lag behind and degrade over time, and each new fix creates the opportunity for new errors. Solid standardized systems in healthcare are the best way to prevent systems errors. For example, the specialty of anesthesia has reduced its error rate by nearly sevenfold, from 25 to 50 per million to 5.4 per million, by using consistent, uniform guidelines and protocols, standardizing equipment, etc. In standardizing systems, healthcare workers are able to reduce errors significantly because they carry out the same action each time.

Overall, diagnostic errors happen as a result of both physician errors and system errors, such as testing procedures or mechanical failure of equipment. They also happen as "no fault" errors because of the patient's condition or disease. It is in research, prevention and problem solving that we can strive to identify these errors and create ways to stop them from happening in the future.

Equipment Failure

Examples of equipment failure include defibrillators with dead batteries or intravenous (IV) pumps whose valves are faulty, causing increased doses of medication over too short a time period. The implications of equipment failure errors can be deadly, mainly because the equipment being used is in place to keep patients alive. If the equipment fails, so can the patient's life.

Equipment failure errors can occur in a healthcare for a few reasons. These include:

- Outdated equipment
- Equipment defects
- Mechanical failure

Equipment failure will happen regardless of the actions of healthcare workers. The malfunction is in the equipment, not what system is in place or how the healthcare worker operates the equipment. Prevention of equipment errors lies in the implementation of policies and procedures to check equipment on a regular basis and regulations on manufacturing companies to check and produce reliable equipment. Keeping updated equipment in healthcare facilities is another way of preventing equipment errors.

Misinterpretation of Medical Orders

Misinterpretation of medical orders happens when someone (a nurse, med aid, volunteer or healthcare worker) fails to comprehend and follow through with medical orders given by the physician. An example of this would be a worker failing to give a patient a salt-free meal, as ordered by a physician.

Another common example of misinterpretation of medical orders can happen when a physician uses abbreviations for dosage amounts and ordered procedures. Problematic abbreviations include "U" for "units" and "µg" for "micrograms." When "U" is handwritten, it can often look like a zero. There are numerous case reports where the root cause of medical errors related to insulin dosage has been the interpretation of a "U" as a zero. Using the abbreviation "µg" instead of "mcg" has also been the source of errors because when handwritten, the symbol "µ" can look like an "m". The use of trailing zeros (e.g., 2.0 vs. 2) or use of a leading decimal point without a leading zero (e.g., .2 instead of 0.2) are other dangerous order writing practices. The decimal point is sometimes not seen when orders are handwritten using trailing zeros or no leading zeros. Misinterpretation of such orders could lead to a 10-fold dosing error.

Suggestions for improvement on misinterpreting physician orders are to standardize systems for electronic, not hand written physician orders. Though new technologies are being introduced into health care, it is estimated that currently less than 5 percent of American physicians utilize computerized order entry systems and write their prescriptions electronically.

Medication Errors

Medication errors are one of the leading causes of medical errors in the American healthcare industry. They go hand in hand with misinterpretation of medical orders. Verbal or handwritten medication orders are easily misinterpreted by healthcare workers. As described above, the use of abbreviations in handwritten orders can cause fatal dosage errors.

The National Coordinating Council for Medication Error Reporting and Prevention defines a medication error as: *"any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the health care professional, patient, or consumer. Such events may be related to professional practice, health care products, procedures, and systems, including prescribing; order communication; product labeling, packaging, and nomenclature; compounding; dispensing; distribution; administration; education; monitoring; and use."*

In an effort to reduce error rates, The American Hospital Association defines why different medication errors occur and groups them into the following categories:

- Incomplete patient information (not knowing about patients' allergies, other medicines they are taking, previous diagnoses, and lab results, for example)
- Unavailable drug information (such as lack of up-to-date warnings)
- Miscommunication/misinterpretation of drug orders, which can involve poor handwriting, confusion between drugs with similar names, misuse of zeroes and decimal points, confusion of metric and other dosing units, and inappropriate abbreviations
- Lack of appropriate labeling as a drug is prepared and repackaged into smaller units
- Environmental factors, such as lighting, heat, noise, and interruptions, that can distract health professionals from their medical tasks

In defining different types of medication errors and why they happen, we can formulate steps to prevent them. The Food and Drug Administration (FDA) along with the Institute for Safe Medication Practices (ISMP) have launched a campaign to eliminate the use of ambiguous medical abbreviations that are frequently misinterpreted and lead to mistakes that result in patient harm. The campaign seeks to promote safe practices among those who communicate medical information. One of the recommendations from this campaign is the use of standardized electronic and bar coding of medications. Another recommendation is to implement a system of checks and balances in healthcare organizations to check and double check medications given to patients and dosages they receive.

An example of computerized bar coding of medications in order to reduce errors can be seen in a hospital in the Department of Veterans Affairs. They use hand held, wireless computer technology and bar coding of medication. This has cut overall reports of hospital medication error rates by 70 percent. This system is soon to be implemented in all VA hospitals. This shows that solid systems, such as the use of wireless computers can create a safer environment for every patient.

Surgical Errors

Many people have heard of horror stories in operating rooms such as the doctor removing the incorrect organ or the doctor leaving medical instruments in the patient after the surgery has been completed. Although these are indeed true, there are many other errors that can happen during a surgical procedure that can be just as serious.

During a surgical procedure, doctors, nurses, anesthesiologists and other healthcare providers must make split-second decisions that could mean the difference between life and death, or between a serious injury and a full recovery for their patients. Unfortunately, sub-par medical training, long hours and a high level of workplace stress can all lead to these professionals committing critical errors during surgery.

Surgical errors include (some of these are more common than others, but it is important to recognize and be aware that all of these can potentially occur):

- Anesthesiology errors, such as administering too much or too little medication, allergic reactions or other drug reactions
- The creation of an incorrect incision
- Failure to sterilize equipment properly resulting in infection
- Performing a surgical procedure on the wrong patient or the wrong site
- Failure to correctly monitor the patient during and after surgery
- Amputating the wrong limb
- Retained surgical equipment in the patient
- Performing unnecessary surgery
- Organ perforation, or accidentally cutting an organ or vein during a surgical procedure

Once again, strategies for reducing surgical errors are being researched and formulated by agencies such as the US Department of Health and Human Services, the Committee on Quality of Health Care in America, The Institute of Medicine, National Coordinating Council for Medication Error Reporting and Prevention and the Agency for Health Care Policy and Research. Evidence and research has supported that by implementing computerized standardized systems for things such as instrument tracking, checks and balances and protocols for procedures may significantly reduce errors in hospitals.

Proposals for Improvement

Current proposals for reducing the rate of medical errors in the American healthcare system include the following:

- Adopt stricter standards of acceptable error rates. One reason that industrial manufacturers have made great strides in product safety and error reduction is their commitment to improving the quality of the work process itself.
- Standardize medical equipment and build in mechanical safeguards against human error. Anesthesiology is the outstanding example of a medical specialty that has cut its error rate dramatically by asking medical equipment manufacturers to design ventilators with standardized controls and valves to prevent the oxygen content from falling below that of room air. These changes were the result of studies that showed that many medical errors resulted from doctors having to use unfamiliar ventilators and accidentally turning off the oxygen flow to the patient.

- Improve the working conditions for nurses and other hospital staff. Recommendations in this area include redesigning hospital facilities to improve efficiency and minimize falls and other accidents, as well as reducing the length of nursing shifts.
- Make use of new technology to improve accuracy in medication dosages and recording patients' vital signs. Innovations in this field include giving nurses and residents handheld computers for recording patient data so that they do not have to rely on human memory for so many details. Another innovation that helped Veterans Administration (VA) hospitals cut the rate of medication errors was the introduction of a handheld wireless bar coding system. After the system went into operation at the end of 1998, the number of medication errors in VA hospitals dropped by 70%.
- Develop a nationwide database for error reporting and analysis.
- Encourage patients to become more active participants in their own healthcare. This recommendation includes asking more questions and requesting adequate explanations from health care professionals, as well as reporting medical errors.
- Address the fact that both patients and physicians have emotional as well as knowledge-related needs around the issue of medical errors.

What Can Patients Do?

Patients are an important resource in lowering the rate of medical errors. The Quality Interagency Coordination Task Force has put together some fact sheets to help patients improve the safety of their healthcare. One of these fact sheets, entitled *Five Steps to Safer Health Care* gives the following tips:

- Do not hesitate to ask questions of your healthcare provider and ask him or her for explanations that you can understand.
- Keep lists of all medications you take, including over-the-counter items as well as prescribed drugs.
- Ask for the results of all tests and procedures and find out what the results mean for you.
- Find out what choices are available to you if your doctor recommends hospital care.
- If your doctor suggests surgery, ask for information about the procedure itself, the reasons for it, and exactly what will happen during the operation.

How Do Medical Errors Affect Massage Therapists?

While massage therapists may never have to deal with diagnostic errors, equipment failure, medication errors or surgical errors in their own private practices, there are many things to consider as being part of the healthcare system. As a massage therapist, you may encounter clients that have experienced stress or injury due to a medical error. In order to prevent going outside your scope of practice in treating clients' injuries or giving emotional support, it is important to be aware of your clients' possible experiences and needs.

Although errors made by massage therapists may not be life threatening or have a large scale effect, they are still significant. Massage therapists need to be aware of the potential errors they may make in order to correct and prevent them from happening. Therapists need to examine how making small errors can affect their business and treatment of clients. Common medical errors that massage therapists may make are:

- **Going outside your scope of practice when working on clients**. Sometimes massage therapists want to help a client so badly that they will try and treat an injury that they are not capable of helping or fixing. Other times a client will ask a therapist to treat an area that should not be treated by a massage therapist. The therapist, out of courtesy or fear of not pleasing their client, will try and perform the treatment. In either case it is your responsibility to determine when you are not capable of performing a particular technique or treating a specific injury. As a massage therapist, if you are not comfortable or knowledgeable working on a particular injury or area, it is your responsibility to refer the patient to another healthcare professional. In doing this you are protecting yourself and your client. You may be able to work with another healthcare professional to provide the best possible massage treatment for your client.

- **Failing to use proper body mechanics**. Although failing to use proper body mechanics may not be detrimental to your clients, it is an error that will be very detrimental to you as a therapist in the long run. Taking care of yourself is just as important as taking care of your clients. Improper body mechanics will lead to injury of yourself resulting in the inability to properly treat your clients in the future. If you are unsure of your body mechanics and what is proper, inquire at a local massage school or invest in textbooks or DVD's demonstrating proper body mechanics.
- **Inaccurate keeping of client charts, intake information, informed consent and SOAP notes**. Failing to acquire proper and accurate initial intake information, informed consent or client's progress throughout treatment sets you up for problems in the future. In order to formulate the best massage treatment plan for your client, you need to have proper medical history and an informed consent. In order to follow through with your treatment plan, you need to properly track your client's progress.

  If you fail to acquire thorough initial intake information (client medical history, allergies, current medications, current medical conditions), either because you don't want to ask your client to fill out a form or the client expresses that they do not wish to take the time to do paperwork, you risk treating a patient that has contraindications present. This can set the stage for several things, including a possible malpractice suit, treating an injury incorrectly and/or putting you and your client in danger. A client may be highly allergic to a certain type of oil that you use and if you do not ask before hand you may cause a serious reaction. The only way to know how to treat your clients is to ask for and document a detailed medical history, including but not limited to illnesses, medications and allergies.

  If you fail to obtain a signed informed consent from your clients you may set yourself up for a potential liability suit. Each and every client needs to be informed, verbally or written, of the risks (although minimal) and benefits associated with massage therapy. Written informed consent is the best way to protect you from potential liability problems. For example, someone comes to you for a massage that has never had one before and you do not inform them that they may be tender or sore the next day after their first massage treatment. If the client does feel tender or sore, you have set the stage for the client to never return or blame you for their body's natural reaction to a first massage therapy session.

  Finally, SOAP charting or keeping progress notes at each client's visit are imperative for your practice. If you plan to bill insurance companies for your services, documentation is the only thing you have for proving that the client was seen and what they were seen for. Keeping track of progress or lack of progress for each and every client helps protect you from potential liability issues, helps you to retain information and modify your treatment plan if necessary, and documents the client's comments and what you did to them at each visit.
- **Treating a client's injury incorrectly**. If you fail to obtain the proper initial intake information, you will inevitably treat your client incorrectly. It may also be beneficial for you to ask the client what he or she is expecting from the massage therapy session and if there is any injury or problem area present. In understanding underlying causes of pain, a specific injury and the client's needs, you will be able to formulate an educated, accurate treatment plan for each client.

  You may also treat a client incorrectly if they are a long time client and have a new injury in the acute stage. For example, a longtime client has just sprained their ankle. They are in pain and have come to you for treatment. They ask you to work on their ankle. Because you have treated them so many times before, you go ahead and work on their ankle when, in fact, the best choice would have been to either refer them to their family doctor or let them know that massage is contraindicated for an acute injury.
- **Not asking clients for feedback**. Without asking for feedback or giving attention to it when it is given to you, you are not providing the most therapeutic or relaxing bodywork session possible. By asking for feedback you show your clients that you care about them and build a trusting relationship with them. This, in turn, helps clients to feel more comfortable and provide you with genuine feedback which allows you to perform the best massage therapy session and formulate the best treatment plan.

- **Failing to refer a client to another healthcare professional**. Failing to refer a client out when necessary goes hand in hand with failing to obtain proper initial intake information. If you do not ask or know what is going on with your clients, how will you know if you need to refer them to another healthcare professional or consult with a physician regarding working on the client? If you assume that you can treat any client with massage therapy, you risk breaching your scope of practice, losing your license and harming your clients. If you are ever in doubt or uncomfortable working on a particular area or injury, it is best to refer your client to the appropriate professional before proceeding with a course of treatment.
- **Failing to have the proper education in anatomy, medical terminology and pathology**. All massage therapists need to have the proper education and training. Familiarizing yourself with anatomy and pathology will allow you to give your clients a better massage. If you know what muscles you are working on and how they work, you can formulate the best possible treatment plan. If you are familiar with medical terminology, it will improve your documentation and allow you to better communicate with other healthcare professionals. Finally, if you are knowledgeable in pathology, you will better understand disease and injury, resulting in better treatment for your clients and better judgment as a massage therapist. Proper education for massage therapists is different in each state.

    The National Certification Board for Therapeutic Massage and Bodywork (NCBTMB) sets a national standard for becoming Board Certified. The following are requirements to becoming board certified:

    - Pass the Board Certification (BCETMB) exam
    - Complete 750 hours of education, which can include:
        - Hours completed in your massage therapy program (required) from an NCBTMB Assigned School currently in good standing
        - Continuing Education taken from an NCBTMB Approved Provider
        - Any courses taken from an accredited college or university
    - Complete 250 hours of professional, hands-on experience
    - Pass a thorough criminal background check
    - Current CPR Certification
    - Agree to uphold NCBTMB's Standards of Practice and Code of Ethics
    - Agree to oppose Human Trafficking

Standardizing education for all massage therapists is a great way to ensure that therapists have the proper education in order to treat clients in many healthcare settings.

Conclusion

Each and every massage therapist needs to look at their profession and think about how they can make it better. Historically, massage therapists have not received the proper credibility that they deserve. Massage therapy is a growing profession and National associations, such as the NCBTMB, The American Massage Therapy Association (AMTA), The Associated Bodywork & Massage Professionals (ABMP) and States are working hard to ensure licensing is in effect and research is being done to identify errors and correct them in the future. Learning about medical errors and what you can do to be aware and prevent them is the best thing you can do as a licensed massage therapist.

Resources

The following sources were used to acquire statistics and information for the making of this course.

1. http://www.fda.gov/Drugs/ResourcesForYou/Consumers/ucm143553.htm

2. https://www.ahrq.gov/

3. http://www.answers.com/topic/medical-errors?cat=health

4. http://www.nccmerp.org

5. http://books.nap.edu/openbook.php?isbn=0309068371

6. http://www.cnsnews.com/news/article/barbara-hollingsworth/

7. www.ncbtmb.org

Prevention of Medical Errors Exam

1. Why is it important for massage therapists to be aware of medical errors, why they happen and what you can do to prevent them?
   a. In order to report medical errors to the appropriate healthcare board
   b. Because massage therapists are beginning to work closely with physicians, chiropractors and physical therapists
   c. Because massage therapists are recognized as healthcare professionals and it is their responsibility to understand the medical community and its developments
   d. Both B and C

2. Medical errors can happen in which of the following healthcare settings?
   a. Hospitals
   b. Nursing homes
   c. Pharmacies
   d. All of the above

3. The Institute of Medicine's report titled "*To Err is Human: Building a Safer Health System*" defines an error as:
   a. Failure of a planned action to be completed as intended or use of a wrong plan to achieve an aim; the accumulation of errors results in accidents
   b. The completion of an action in a healthcare setting which results in an accident or a wrong achievement
   c. Failure to do the right thing
   d. All of the above

4. Why are errors in healthcare difficult to recognize, track and identify?
   a. Due to the lack of centralization and standardized systems in the healthcare industry
   b. Due to the variations in individual patients' responses to treatment
   c. Due to the fact that medical errors are primarily treated as isolated incidents with little to no public attention
   d. All of the above

5. Which of the following cases is an example of a diagnostic error?
   a. An intravenous (IV) pump whose valves are faulty, causing increased doses of medication over too short a time period
   b. A misdiagnosis of a patient's condition due to misinterpretation of a lab test result
   c. A worker failing to give a patient a salt-free meal, as ordered by the physician
   d. All of the above

6. Why might an equipment failure error occur in a healthcare setting?
   a. Physician's inexperience or lack of knowledge
   b. Defects in the equipment
   c. Miscommunication between the physician and the nurse
   d. All of the above

7. Which of the following is a potential solution for misinterpretation of medical orders and medication errors?
   a. Implementing electronic standardized systems so orders for medical services and medication are computerized, not hand written
   b. Defining hand written symbols and mandating that physicians' use neater handwriting
   c. Implementing a short hand system of writing for physician's
   d. None of the above

8. Which of the following is an example of a surgical error?
   a. An anesthesiologist administering to much or too little medication before a surgical procedure
   b. Amputating the wrong limb
   c. The creation of an incorrect incision
   d. All of the above

9. According to the fact sheet titled "*Five steps to Safer Healthcare*", as a patient, what can you do to protect yourself from medical errors?
   a. Keep a list of all of the medications you take, including prescribed and over the counter medications
   b. Find out what choices are available to you for treatment
   c. Find out all possible information if your physician recommends a surgical procedure
   d. All of the above

10. Which of the following is a medical error that a massage therapist may make?
    a. Performing surgery of the wrong site
    b. Administering the incorrect dosage of medication to a patient
    c. Going outside your scope of practice as a therapist
    d. All of the above

11. Why might a massage therapist go outside of their scope of practice in treating a client?
    a. Because they want to help a client and proceed with treatment of an injury that they are incapable of helping
    b. Out of fear of losing a client
    c. Out of a courtesy for a client
    d. All of the above

12. Failing to use proper body mechanics is a potential medical error committed by massage therapists that will end up being very detrimental to the therapist over time.
    a. True
    b. False

13. Which of the following is a potential harmful consequence of failing to obtain proper initial intake information from a client?
    a. Formulating a thorough treatment plan and providing the client with the best massage possible
    b. Formulating an incorrect treatment plan and potentially harming you and your client
    c. Referring your client to their primary care physician after seeing a condition on the client's medical history that you are not qualified to treat
    d. All of the above

14. What is informed consent?
    a. Tracking a client's progress through use of SOAP charting
    b. Obtaining thorough initial intake information, including allergies and past medical history
    c. Informing the client of both the risks and benefits of massage and obtaining permission to treat them
    d. All of the above

15. Which of the following is a benefit to keeping progress notes on every client you treat?
    a. Documentation helps to protect yourself from potential liability suits
    b. Documentation helps you to remember and modify your treatment plan
    c. Documentation tracks client's comments and what you did to them on each visit
    d. All of the above

16. Why might you inadvertently treat a client's injury incorrectly?
    a. Because you have failed to obtain proper information regarding a client's injury
    b. Because you have obtained thorough intake information and decided to refer your client to another healthcare professional
    c. Because you have obtained thorough instruction in massage therapy, anatomy and pathology
    d. All of the above

17. Failing to ask your client for feedback during a massage therapy session is considered a medical error.
    a. True
    b. False

18. What are the benefits of asking your client for feedback during a massage therapy session?
    a. Building a trusting relationship with your clients
    b. Providing the most therapeutic or relaxing bodywork session possible
    c. Providing your clients with a comfortable environment where they can give genuine feedback
    d. All of the above

19. The NCBTMB requires for Board Certification that massage therapist have how many total hours of education?
    a. 250
    b. 500
    c. 750
    d. 1000

20. Standardizing education for all massage therapists is a great way to ensure that therapists have the proper education in order to treat clients in many healthcare settings.
    a. True
    b. False

This completes the Prevention of Medical Errors home study exam.