Reduction of Medical Errors for ECPs

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Course Description: (2 hours)
This course introduces and defines Medical Errors and how it applies to the Licensed Optician. The discussion will center around learning the ways an Error can be made in the Optical World and how to make changes in their system from A to Z to correct these possible Errors.

Course Objectives

Upon completing this two-hour, home study course, the optician should:

- Be able to define a medical error.
- Be more familiar with the size and scope of the problem.
- Be able to identify causes of medical errors.
- Be aware of the prevalence of the problem, relative to other healthcare concerns.
- Be able to quantify the problem in terms of loss of life and financial effects.
- Be able to discuss the 20 suggestions that have been promulgated in order for patients to become more active players in their own healthcare.
- Be cognizant of the findings of the National Quality Forum with regard to things that healthcare workers can do to reduce the number of medical errors.
- Be more able to fully discern errors that occur in the day-to-day practice of opticianry.
- Have developed a real seriousness of purpose in terms of actively reducing the number of ophthalmic errors that occur in his/her practice of opticianry.
- Be inspired to develop specific plans for the reduction of medical errors in his/her practice of opticianry.
- Have access to outside resources to further investigate the prevention of medical errors.
- Have achieved a score of 80% on the 30-question assessment at the end of the course.

Introduction

At the dawn of the 21st century, in November 1999, the Institute of Medicine (IOM) published a report entitled *To Err is Human: Building a Safer Health System*. Submitted by the IOM's Committee on Quality of Health Care in America, it has been described as a bombshell, an awakening, and a call to action. All of those descriptions are accurate, though they all fall short in adequately describing the impact that preventable medical errors has on consumers of health care, and indeed health-care workers in America.

Certainly, *To Err is Human* was a bombshell. After all, it revealed that every year in hospitals in the United States, between 44,000-98,000 people die as a result of a preventable medical error. Beyond this unimaginable loss of human life, the committee wrote that "preventable medical errors exact other significant tolls." They were referring to the financial losses that occurred due to preventable medical errors. At a minimum, they estimated the annual financial loss at $17 billion. It may be as high as $29 billion.

Indeed, the report was also an awakening. I have been involved in opticianry as an Eye Care Professional (ECP) for nearly 30 years. For most of those years I have been licensed by the Florida Board of Opticianry, which falls under the purview of the Florida Department of Health. However, for the first 25 years I never heard the words "preventable," "medical," or "errors" uttered in the same sentence. In other words, until *To Err is Human* hit the scene, there was little, if any, emphasis placed on education or prevention of medical errors by licensing boards for their members. That all changed in 1999.

Finally, the report was, thankfully, a call to action. In the last nine years, dozens of other reports in the public and private sectors have supplemented the IOM's initial report. Medical boards, government, and health-care officials are now taking the issue more seriously. For example, each biennium, Florida opticians are required to attend two hours of continuing education focusing on recognizing and preventing errors in their practice of opticianry. (Copies of *To Err is Human: Building a Safer Health System* may be purchased from National Academy Press. Their toll-free number is 800-624-6242. Their Internet address is http://www.nap.edu.)

"With adequate leadership, attention, and resources, improvements can be made."

Case Study I:

Great-grandmother Jesse Woods arrived at her new residence, a New England nursing home, in early December. On Christmas Eve she was accidentally given a dose of morphine more than five times as strong as had been prescribed by her physician. She was dead by Christmas morning.

Case Study II:

A 45-year old father of two young children was forced to undergo bypass surgery to correct a blocked artery. Two months after the operation, the symptoms had not subsided. It was discovered that the original surgeon had bypassed the wrong artery, and another emergency operation was required to correct the problem. In his defense, the original surgeon said that the patient's artery had been "unusually situated" in his heart. The surgeon was sued for $7.5 million. The patient's name: Dana Carvey, former star of Saturday Night Live.

Case Study III:

A patient arrived at an optical dispensary with the following prescription:

O.D. + 1.00 - .75 x 120
O.S. + 0.75 - .50 x 075

The patient told the optician that her prescribing doctor had "warned" her that her prescription had drastically changed, and that it would take some time for her to adapt to the change. Sure enough, when she arrived to pick up here glasses a few days later, she had difficulty seeing. The optician double-checked the prescription. It was correct. The patient was told to wear the glasses and "try to get used to them." A week later, the patient returned with a new Rx:

O.D. -1.00 - .75 x 120
O.S. -0.75 - .50 x 075

The prescribing doctor's ophthalmic assistant had transcribed the patient's prescription from the doctor's manifest, and the doctor had signed it without noticing that the signs indicating the spherical correction were incorrect.

All of the preceding case studies are real. Do they fit the definition of what a medical error is? Were any of them preventable? Were they the result of carelessness, maliciousness, or incompetence? All of those questions are valid, and represent the essence and insidious nature of the medical errors problem.

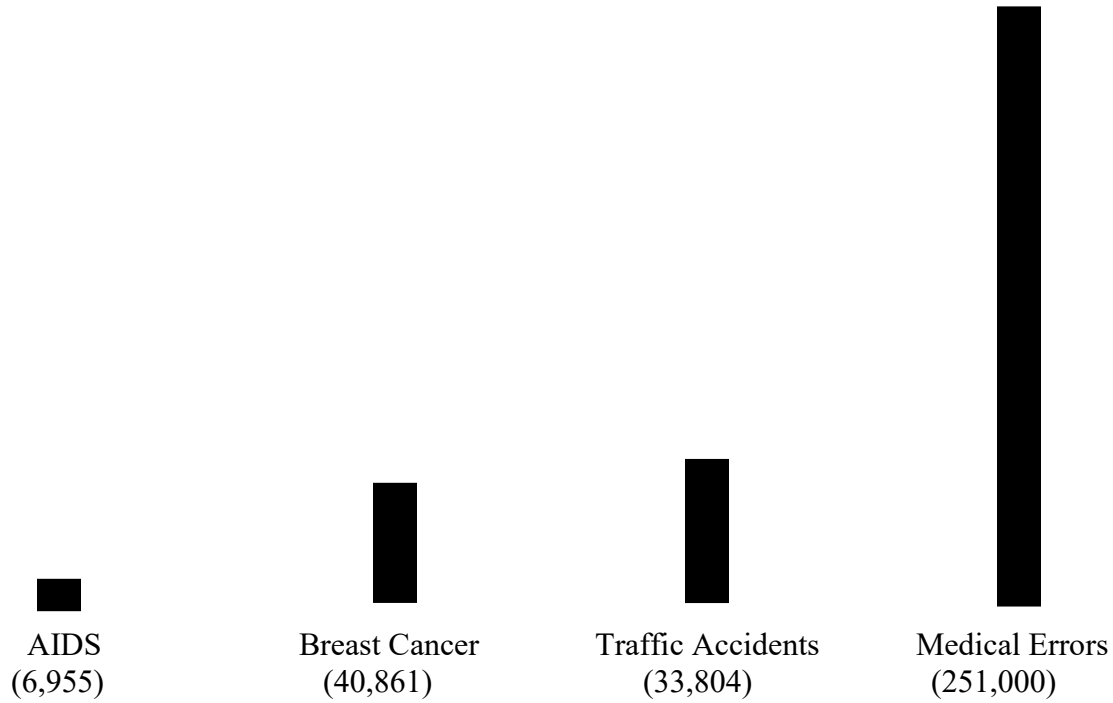
Size and Scope

As we learned earlier, the IOM's initial report estimated annual deaths due to medical errors to be somewhere between 44,000-98,000. (Remember, that is just in hospitals. It did not take into consideration deaths from medical errors that originated in nursing homes, surgical centers, pharmacies, private practices, etc.) A 2004 report from Health Grades, Inc. (a company incorporated in December 1995 that provides objective ratings of hospitals, nursing homes and home health agencies in the United States) claimed that as many as 195,000 deaths due to preventable medical errors occur each year. They also reported that over 1,000,000 people are injured due to errors.

Consider these statistics, compiled by physicians at www.justaskourdoctors.com:

- Patients win only 38% of the malpractice suits brought against physicians.
- Only 2% of documented medical malpractice resulted in a lawsuit.
- Over 125,000 annual deaths occur due to hospital medical errors.
- Patients receive "proper health care" only 50% of the time.

Consider the attention and seriousness of purpose that is (or more accurately is not) directed at the prevention of medical errors compared with other causes of death in our country, with regard to statistics that are compiled by the U.S government. Annual deaths as of 2013:



Imagine for just a moment the following scenario: On Monday morning, a commercial jet carrying 200 passengers mysteriously crashes. It would certainly be the lead story on all of the major TV networks' nightly news. The Internet would be buzzing – such a tragic loss – 200 people instantly killed. Now imagine that the next day, somewhere else in the country, another jet carrying 200 people also crashes. The amount of attention and speculation that would surround this story would be astounding: 400 people in two days! The next day, it happened again. The President would stop all air traffic and close all airports (remember 9-11) until the FAA could figure out what's going on. But what if the government didn't step in, and air traffic continued as usual. Imagine that for one full year – 365 days – each and every day a plane crashes, killing 200 people. I asked you to imagine that scenario, but truly, it is horribly unimaginable. But guess what? If that unimaginable scenario occurred, it still would not approach the lives lost in one year due to preventable medical errors.

(200 x 365 = 73,000)

So why is there so little relative attention paid to this issue? Shouldn't something that is responsible for more deaths annually than AIDS, breast cancer, and traffic accidents *combined* warrant an urgent call to action? Apparently not. AIDS has a red ribbon. Breast cancer has a pink ribbon. Traffic accidents have Mothers Against Drunk Driving. The medical errors problem has nothing like that. It is the unnoticed death of a great grandmother in New England…a young child in Florida…a homeless man in Alaska. Truly, it is a silent, if prolific, killer.

In fact, according to the Centers for Disease Control (CDC), even if we used the lowest estimate from the IOM report (44,000) medical errors is the ninth leading cause of death in the United States of America. Consider the loss of life in the United States due to each of the following causes in 2013, the most recent year for which accurate statistics have been compiled:

Heart Disease	614,348
Cancer	591,699
Medical Errors	251,000
Respiratory Disease	147,101
Accidents	136,053
Stroke	133,103
Alzheimer's disease	93,541
Diabetes	76,488
Influenza/Pneumonia	55,227

Nephritis/Kidney Failure 48,146

(Source: CDC website: www.cdc.gov/nchs/faststats.htm)

Definitions / Findings

The Institute of Medicine defines a preventable medical error as follows:

"The failure of a planned action to be completed as intended, or the use of a wrong plan to achieve an aim."

Based on the above definition, all of the real-life case studies listed above seem to qualify as a "medical error." While the high occurrence of medical errors can no longer be denied, the logical questions that follow are clear: What is causing all these problems? What can be done to reduce medical errors? If to err is human, does that mean errors simply cannot be prevented? Are they mostly caused by incompetence or maliciousness? The answers to these questions may be surprising. (Interestingly, in an effort to thoroughly consider all of the relevant issues at play, the stated definition was quickly supplemented to include the following phrase: **"Errors can include problems in practice, products, procedures, and systems.")**

While it might be tempting to leap to the conclusion that the main cause of the medical errors problem is incompetence or worse, maliciousness, that is not the case. As the head of the Center for Drug Evaluation and Research at the FDA (Food and Drug Administration), Janet Woodcock, M.D., believes that most healthcare practitioners are competent professionals who are vulnerable to error simply by virtue of being human. She and other analysts generally agree with the IOM's conclusion that, "It is not reckless individual behavior, but faulty systems, processes, and conditions that cause [otherwise good] people to make or not prevent medical errors." Dr. Woodcock further explains this conclusion when she writes, "The professionalism model –'if we train people enough, they won't make a mistake, and we'll punish them if they do'- has outlived its usefulness. People have made mistakes and been drummed out of their professions. They were the ones unfortunate enough to administer the lethal dose, but the systems were not in place to adequately support them in preventing such an error." After all, what was the very title of the IOM's report? To Err is Human! This fact is bolstered when we discover that the root causes of Jesse Woods' death (Case Study I) were due to overwork, poor lighting, and improper storage of medicines (the lethal dose of morphine was stored on the shelf right next to the less potent dose).

Another contributing factor - perhaps the most significant factor - to the occurrence of preventable medical errors is the decentralized, fragmented nature of health care in our country. A patient makes an appointment with her general practitioner. The doctor refers her to a specialist. The specialist orders an MRI at a facility that is located miles away. Blood tests are performed at a separate lab. There is no assurance that any of these physicians or technicians would have access to the patient's *entire* medical history and records each step of the way. Add HIPAA into the mix, and you see the potential nightmare in administering proper care.

Now, let us ask ourselves if this "contributing factor" to medical errors is present in the optical field. Are ECPs working in a decentralized and fragmented industry? Absolutely. A patient is examined by an optometrist and is given a written prescription for spectacles and/or contact lenses. The patient decides to purchase his eyeglasses at his local XYZ Vision Center. He also decides to buy the prescribed contact lenses from an Internet contact lens seller. Upon

receiving the glasses, the patient feels his vision is not properly corrected. The contact lenses don't seem to fit comfortably…to err is human.

The Agency for Healthcare Research and Quality (AHRQ) is the research arm of the United States Department of Health and Human Services (HHS). The agency compiles and promulgates a Patient Fact Sheet – 20 suggestions that are designed for consumers of healthcare (patients/customers) to more actively become involved in their own healthcare and to take these steps to assume the primary responsibility in reducing medical errors on their own behalf. Here are the latest suggestions (as of September 2011) and some applications of relevance in the optical field. Below are the 20 suggestions,divided into four categories: Medicines, Hospital Stays, Surgery, and General. Remember, these are suggestions aimed for our patients.

Medicines:

1. **Make sure that all of your doctors know about every medicine you are taking**.
   This includes prescription and over-the-counter medicines and dietary supplements, such as vitamins and herbs. (Expect more inquisitive, involved patients.)

2. **Bring all of your medicines and supplements to your doctor visits**.
   "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 and help you get better quality care.

3. **Make sure your doctor knows about any allergies or adverse reactions you have had to medicines.**
   This can help you to avoid getting a medicine that could harm you.

4. **When your doctor writes your prescription, make sure you can read it.**
   If you cannot read your doctor's handwriting, your pharmacist might not be able to either. You may not know what the words are, but you should be able to make out each letter. Many physicians and ever optometrist have gone to typed or computer-generated prescriptions.

5. **Ask for information about your medicines in terms you can understand.**
   a. What are these glasses to be used for?
   b. When should I wear them and for how long?
   c. What side effects are likely?
   d. How long will it take it for me to get used to this prescription?
   e. Is there much difference between this prescription and my old one?
   f. Are there any activities that I should refrain from?

6. **When you pick up your medicine from the pharmacy, ask: Is this the medicine that my doctor prescribed?**

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 times daily" means taking a dose every 6 hours arund the clock or just during regular waking hours.

8 **Ask your pharmacist for the best device for measuring liquid medicines.**
For example, many people use household teaspoons, which often do not hold a true teaspoon of liquid. Special devices, like marked syringes, help people measure the right dose.

9 **Ask for written information about possible side effects of medications.**
If you know what might happen, you will be better prepared if it does or if something unexpected happens.

Hospital Stays:

10 **If you are in a hospital, consider asking all health care workers who will touch you whether they have washed their hands.**
Hand washing can prevent the spread of infections in hospitals, Again, I have optical clients ask if I had washed my hands after helping a previous client.

11 **When you are being discharged from the hospital, ask your doctor to explain the treatment plan you will follow at home**.
This includes learning about your new medicines, making sure you know when to schedule follow-up appointments, and finding out when you can get back to your regular activities. It is important to know whether or not you should keep taking the medicines you were taking before your hospital stay. Getting clear instructions may help prevent an unexpected return trip to the hospital.

Surgery:

12 **If you are having surgery, make sure that you, your doctor, and your surgeon all agree on exactly what will be done.**
Having 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. Surgeons are expected to sign their initials directly on the site to be operated on before the surgery.

13 **If you have a choice, choose a hospital where many patients have had 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.

Other General Steps:

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 the hospital

16 **Make sure that all your doctors have your important health information.**
Do not assume that everyone has all the information they need.

17 **Ask a family member or friend to go to appointments with you**
Even if you do not 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, do not assume that no news is good news.**
Ask how and when you will get the results.

20 **Learn about your condition and treatments by asking your doctors and nurse and by using other reliable sources.**
For example, treatment options based on the latest scientific evidence are available from the Effective Health Care Website. Ask your doctor if your treament is based on the latest evidence.

These 20 suggestions were developed by the United States Department of Health and Human Services. To view the list in its entirety and in more detail, follow the following URL:
http://arc hive.ahrq.gov/patients-consumers/care-planning/errors/20tips/index.html

Additionally, with support from the AHRQ, the National Quality Forum (NQF) has developed 30 Safe Practices for Better Health Care. The goal is to deliver the safest healthcare possible in the United States. Unlike the 20 suggestions listed above (which were aimed at patients/consumers), these 30 safe practices are aimed at healthcare workers. Listed below are 12 of the 30. These are listed because they represent things that ECPs could integrate into their practices for the purpose of reducing errors.

1. Create a culture of safety in your practice. Whether you are the practice owner, department manager, or simply the licensed optician on duty, you are the licensed professional and need to take the lead by placing a serious emphasis on safety. You can encourage staff members and business owners to develop policies and procedures that reduce errors, rewarding staff members whose suggestions are implemented. We must encourage the reporting of policies and procedures that are already in place that endanger or potentially endanger patients. Create the kind of culture that encourages, rather than discourages, the discovery of these faulty systems and practices.

2. Verbal orders should be recorded whenever possible, and immediate read-back and verification should be implemented.

3. Use standardized abbreviations. Although we have "traditional" abbreviations, acronyms, etc., you should print specific lists, and educate staff members on their implementation.

4. Ensure that care information and patient records are updated in a timely and legible manner.

5. Ask patients and/or their advocates to repeat verbal instructions. Be careful here. The purpose of this suggestion is to ensure that the patient *truly* understands what the optician *thinks* he or she has communicated to the patient. For example: Imagine that you are completing an Insertion and Removal session with a new contact lens wearer. Many opticians might conclude the session by asking the patient, "So, do you have any questions about anything we have discussed? Do you understand the wearing schedule?" These are dangerous questions. Why? Those questions allow, and perhaps even encourage, the patient to simply reply, respectively, "No"…and "Yes." Thus, the optician *assumes* the patient understands and has no questions. That is a dangerous assumption. If you are serious about ensuring a real meeting of the minds, I would encourage you to eliminate those two phrases (Do you understand? and Do you have any questions?) from your optical vocabulary. You would be better to say something like, "So John, I want to make sure I explained myself clearly – when will you be taking your contacts out today?" The patient replies, "Well, you said I could wear them all my waking hours, so I guess I'll take them out right before I go to bed tonight." "No John, see…I did not explain myself very well. I said after your follow-up exam next week, and assuming everything is okay, I said then, MAYBE you could eventually wear them most of your waking hours. But today is the first day you've had these pieces of plastic in your eye, and you have to build up your wearing time. I said four hours today…five tomorrow…six on Thursday. So what time will you take them out tonight?" "I guess around 7:30." "You got it!" Now we have a reasonable right to assume our instructions have been *truly* understood. I would also encourage the patient and/or guardian to sign a written instruction sheet as well.

6. Ensure that patient preferences are prominently displayed on their records. For example: "PATIENT HAS DEMONSTRATED UNUSUAL 'ALLERGY' TO POLYCARBONATE – USE TRIVEX, HIGH-INDEX OR CR-39 ONLY."

7. Implement a computerized data entry and ordering system.

8. Implement standardized protocols to eliminate mislabeling, misfiling, etc.

9. Implement standardized protocols to eliminate wrong-patient errors. For example, always require two or three "identifiers" before assuming you have the correct patient record. Perhaps last name, phone number, and last four digits of the social security number.

10. Decontaminate hands with either a hygienic hand rub or by washing with a disinfectant soap prior to, and after, direct contact with the patient or objects immediately around the patient after each patient encounter.

11. Vaccinate health care workers against influenza to protect both them and patients.

12. Keep workspaces where medications, contact lenses, lens solutions, ophthalmic lenses, etc. are prepared clean, orderly, well lit, and free of clutter, distraction, and noise.

For more in-depth information about these 12 suggestions, or to view all 30, access the following URL: http://www.ahrq.gov/research/findings/factsheets/errors-safety/30safe/index.html

Why Do Errors Occur?

Why do medical errors occur? There are many factors that increase the likelihood of medical error occurrence. It would be most accurate to say that the real cause is complex and not yet fully understood. Unfortunately, some healthcare organizations still attempt to "blame" errors solely on healthcare workers. But research shows that about 85% of medical errors are the result of systems failure, and only 15% are the result of job performance errors, this according to a patient safety training handbook, *HCPro*, published by Marblehead in 2003.

Current research indicates that physical and mental illness, fatigue, working conditions, and communication among colleagues contribute to the occurrence of medical errors. The following factors are associated with an increased rate of errors and compromised patient safety**:**

- **Hours worked:** Research shows that when healthcare professionals work more than 12 hours per day, the rate of medical errors increases. Scheduled shifts that are more than 12 hours long and the use of overtime contribute to conditions that jeopardize patient safety. The practice of working extended shifts can lead to fatigue and sleep deprivation. Research indicates that adults who sleep fewer than 5 out of 24 hours experience impaired mental acuity.

- **Shift rotation:** According to various studies, the timing and speed of shift rotation affect job performance and, ultimately, patient safety. It would be unwise for an optician to be scheduled to work back-to-back 12-hour shifts, even though this is standard practice in many corporate dispensaries.

- **Increased fragmentation and specialization in healthcare:** Already discussed.

- **Manufacturing errors:** Blood products, medicine, medical devices, contact lenses, ophthalmic lenses are all subject to mislabeling and defects. Many opticians have had events occur within their practice of contact lens fitting, where the only reasonable explanation for a poor fit is mislabeling. An optician re-orders the exact same lens in terms of base curve, diameter, power, and brand, and all symptoms and complaints are resolved.

- **Equipment failure:** Among medical and hospital professionals, the most commonly cited example of this error is an intravenous valve faulty pump. As a professional optician, dedicated to eliminating as many errors as you can, when is the last time you checked the calibration of your digital CRP (Corneal Reflex Pupilometer), Geneva Lens Measure (Lens clock), or thickness gauges, to name a few.

- **Diagnosis errors:** A misdiagnosis will cause a physician to prescribe incorrect medicines – and the medical error dominoes start to fall. Although as opticians it is out of our scope of practice to diagnose diseases and refractive errors of the eye, in a sense we "diagnose" every day: Which segment style would be best for a

patient – lined or progressive? Should we suggest Transitions® lenses? If progressives are called for, which brand would best fit the patient's needs? All of these decisions are, arguably, diagnostic in nature. If an optician makes an error in "diagnosing" a patient's needs, he will suggest or allow the patient to purchase things that will not achieve the desired aim – and the optical medical error dominoes start to fall.

- **Poorly designed facilities, building, and offices:** In hospitals, hallways that end or meet at right angles increase the likelihood that people or gurneys will collide. The design of offices and office space in the optical field – with regard to reducing the incidence of errors – is something I have never heard discussed or even considered in the last 30 years.

- **Communication among healthcare professionals:** Research shows that disruptive communication events such as verbal abuse between colleagues, embarrassing co-workers, or refusal to acknowledge the importance of a colleague's assessment findings (however embarrassing) lead to high turnover, emotional distress, job dissatisfaction, and reluctance to clarify doctor's orders. This, in turn, increases the risk for medical errors.

In an article entitled, "Shrinking Medical Errors Down to Size" (*Nursing Management*, 2001), six specific reasons were identified as to why healthcare workers are reluctant to report medical errors:

1. "If it isn't my fault, it isn't an error."
2. "If the doctor knows, it's not an error.'
3. "If I corrected the problem, it's not an error."
4. "If an issue more important occurred, an error was not committed."
5. "Documentation 'errors' don't count as real medical errors."
6. "If I prevented a worse problem, the original event was not an error."

Regardless of these assumptions or rationalizations, errors have still occurred.

Reporting Responsibility and Florida Law; Additional Information

Several Florida laws specifically relate to the topics of patient safety and medical error prevention. Healthcare workers should be aware of the following provisions:
Health Care Entity Reporting Requirements. Chapter 395 of title XXIX of the Florida statutes provide for mandatory risk management programs for hospitals.
Section 395.0197 states,

(1) Every licensed facility shall, as a part of its administrative functions, establish an internal risk management program that includes all of the following components:

(a) The investigation and analysis of the frequency and causes of general categories and specific types of adverse incidents to patients.

(b) The development of appropriate measures to minimize the risk of adverse incidents to patients . . .

Full text of the law is available at: http://www.flsenate.gov/statutes. The law provides a definition of adverse events and specific requirement for reporting. It also provides a training requirement for staff members who are not licensed healthcare providers. Chapter 641 of Title XXXVII makes similar provisions for an internal risk management program for HMOs. Some reports must be provided within 24 hours ("24 hour reports") while others may be reported within 15 days ("Code 15 reports").

Many Medical Errors continuing education courses also delve more deeply into other information such as the four different specific classifications of medical errors, including other areas such as what constitutes an adverse effect, a sentinel event, etc. If the optician would like more information regarding these and other esoteric items with regard to medical errors that apply to and affect physicians, nurses, hospitals, etc. there is no shortage of information on the Internet. It is our intent to now more closely turn our attention to the medical errors issue as it directly relates to and affects opticianry.

Errors in Opticianry – The Rx Form

We now turn our attention specifically to the practice of opticianry. Our purpose herein is to identify systems, practices, and errors that potentially endanger patients, decrease patient satisfaction, and degrade optical professionals' morale. In the process, we will hopefully discover specific solutions to these problems, thereby reducing the incidence of errors and dissatisfaction.

To begin, consider the Rx order form that appears below as "Exhibit A." Take a few minutes to "study" it. In an informal survey I conducted with over 1,000 licensed opticians in 2007, 53% still use some form of handwritten order forms in their practice. There are fewer Opticians using handwritten order forms every year. As of 2013 the number has gone down to 44%. When asked to include doctor prescriptions that are filled, over 85% of respondents say

they encounter written Rxs on a daily basis. Now review the Rx form one more time, this time listing below as many items that you may find problematic – things that might be considered "errors."
Lets try to find at least 20:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

(Exhibit A)

Last Name SCHMIDT Rx 2730

First Name TERRY

Address 14830 BLUE HERON

City, State, ZIP NEW PORT RICHEY, FL

Phone # 1 846-3280 Phone # 2

E-Mail TSCHMIDT @ NETZERO .

Date of Order 11-24 Due Date 12-1 FEE

XYZ Optical Company
PO BOX 0000
Any Where, Fl 32000
800-555-5555
XYZ@

Total $343.00

Deposit $170.00

☐Cash ☐Check # ☐Charge

Balance $163.00

Paid

☐Cash ☐Check # ☐Charge

Optician LS | Delivered By | Delivery Date

Prescribing Doctor | Referred By | Approval

	SPHERE	CYLINDER	AXIS	PRISM	↕↔	ADD	DIST PD	NEAR	BASE CURVE
R	+75	-150	170			+2.75	33	32	
L	-75	+50	180			+2.75			

Bifocal Type: VARILUX | Seg. Ht. R / L: 14 | Tinting Instructions: TRANSITIONS

UV-400 | Scratch Warranty | Edge Polish | Blue Blocker | Anti-Reflection

POLYCARBONATE | TRIVEX | (CR-39) | HI-INDEX | (TRANSITIONS) | POLARIZED | GLASS | PGX

Frame Mfg. / Name ~~FGF~~ PILOT | Size 56 B ED | Color | ☒ Enclosed ☐ Supply | ☐ To Come ☐ Special Order

Special Instructions / Fee Breakdown:
FRAME 129
VARILUX 149
TRANS 85
343.

Patient / Customer Notice - Lenses Returned ☐

Frames are guaranteed against manufacturing defects for one year. Titanium frames are guaranteed for two years. Lenses are guaranteed to be made exactly to your doctor's prescription or to be accurately duplicated from your present glasses. Prescriptions changed by your doctor within 60 days will be remade at a 50% discount. Scratch-resistant, Trivex, polycarbonate, and A/R lenses are guaranteed against scratching for one year, and can be replaced ONE TIME at no-charge.

Trivex or polycarbonate lenses were recommended for maximum eye protection and impact resistance.

Patient Signature Optician Signature

What did you notice about this written Rx form? Before you started to identify specific "errors," did you notice that overall, it is very **legible**? Traditionally, medical professionals have been given a "pass" when it comes to legibility. (We've all heard the tongue-in-cheek, "Oh, he writes like a doctor.") Not so funny when you consider that according to the NQF nearly 7,000 deaths occur annually due to illegibility and/or misinterpreted prescriptions. Pharmacists often "guess" as to the prescribed medication. If you have sloppy or illegible handwriting – you have chosen to accept that in yourself. I know that, because I used to have extremely sloppy penmanship. But after several months of "practicing" and applying conscious attention, you will notice that I now print like a diligent third-grader. I believe you should train yourself and insist that your staff also write clearly and legibly when it comes to all written communication that relates to patient care.

Before we discuss actual "errors" on the form, how did you approach its analysis? Did you simply "scan" it, identifying a problem here…an omission there…or did you approach it systematically, starting at the first line, and analyzing it line by line? If you did the latter, I guarantee you identified more problems than someone who simply scanned it. Although there were only 18 spaces to identify errors, careful analysis reveals 32 areas of concern:

1. First name – is it a man or woman?
2. Address – is it Street, Lane, Drive?
3. Zip code is missing.
4. Phone number – where is the area code?
5. E-mail address – missing an extension; is it .com, .net?
6. Date – Year is missing.
7. Total – Error in subtraction.
8. Method of payment not noted.
9. Balance is incorrect.
10. Prescribing doctor's name is omitted.
11. Referred by box is empty.
12. Approval is missing.
13. Right sphere power is ambiguous.
14. Cylinder sign is missing.
15. Axis is ambiguous.
16. Left sphere power is ambiguous.
17. Cylinder sign is missing.
18. Axis is ambiguous.
19. Different sphere signs not verified.
20. Different cylinder signs unusual.
21. Add power is ambiguous. Do we assume O.U.?
22. PDs are ambiguous.
23. Should we have specified base curve?
24. Varilux type omitted (Is it Comfort, Physio, Ellipse, etc.?)
25. Transitions – is it gray or brown?
26. Frame manufacturer information is missing.
27. Size is ambiguous.
28. Color is missing
29. Addition is wrong.
30. Patient signature is missing
31. Optician signature is missing.
32. Form itself should probably include some other unique identifier (DOB, SSN, etc.)

Consider the following optical situations or scenarios. For each one described, decide first, based on the stated definition of a medical error (failure of a planned action to be completed as intended, or the use of a wrong plan to achieve an aim) does it qualify as a medical error? Second, list some possible root causes for the event. Third, think of the possible negative consequences. Finally, and perhaps most importantly, come up with a few steps that you and your staff could implement for the purpose of reducing or eliminating the error's reoccurrence in your practice. (Use your own separate notebook paper to make notes and answer the questions.)

Errors in Opticianry – Case Studies

Scenario # 1: Patient Rx:

O.D. – 5.25 – 2.00 x 010
O.S. – 3.75 – 2.50 x 01
Add: +2.50 O.U.

Your apprentice optician measures the patient's monocular, distance PDs using your older model, non-digital CRP and inputs that information into the computer-based order form as O.D. = 31, and O.S. = 34. Unfortunately, the pupilometer was set for near, not distance. Additionally, the apprentice entered the information eye-for-eye (right-eye measurement was actually for the left eye, and vice-versa).

- Does this scenario satisfy the definition of a medical error? □ Yes □ No
  If yes, explain why, if not, explain why not._____
- List the possible causes of this error._____
- List the possible negative consequences of the error._____
- What are some steps you could take to reduce or eliminate the reoccurrence of this error in your practice?_____

Scenario # 2: Same patient and patient Rx as listed in Scenario #1. However, this time the patient simply wants a pair of single-vision, distance glasses for driving a taxi at night. The patient prefers an older style, pilot-shaped frame, with an A measurement of 58mm.The same apprentice measures the PD in exactly the same manner as before, but since the computer only accepts a binocular measure for distance PD, it is "accurately" entered as 65mm. Because of the patient's relatively high degree of myopia, the apprentice suggests (and the patient accepts the suggestion) the new, super lightweight, Trivex® lenses, with a slight amber tint. The job is accurately interpreted and fabricated by lab employees, who finish the job in less than 24 hours and return the finished job to the store. It is now ready to be dispensed.

- Does this scenario satisfy the definition of a medical error? □ Yes □ No
  If yes, explain why. If not, explain why not. _____
- List the possible causes of this error._____
- List the possible negative consequences of the error._____
- What are some steps you could take to reduce or eliminate the reoccurrence of this error in your practice?_____

Scenario # 3: Patient Rx:

O.D. – 2.50 8.7 14.0 Acuvue 2
O.S. – 3.50 8.3 14.0 Acuvue 2

You accidentally input the base curve information eye-for eye, ordering an 8.3 -2.50 for the right eye and an 8.7 -3.50 for the left eye. Even though you usually get overnight service for CL delivery, you tell the patient you will call when the lenses arrive – probably 2-3 days. The lab fills the prescription exactly how you ordered it, and you receive it the next day. Upon arriving at your office, your apprentice optician (while "checking in" the jobs) compares the lens boxes that have arrived to the doctor's original prescription. She discovers the error, re-ordering the correct configuration, which arrives the next day. The patient is called and picks up the correct order later that afternoon.

- Does this scenario satisfy the definition of a medical error? □ Yes □ No
  If yes, explain why. If not, explain why not. _____
- List the possible causes of this error._____
- List the possible negative consequences of the error._____
- What are some steps you could take to reduce or eliminate the reoccurrence of this error in your practice?_____

Scenario # 4: Patient Rx:

O.D. - 1.00 sphere
O.S. - 1.25 – 0.50 x 025
Add +2.50 (Progressive lenses)

All measurements were made correctly and the glasses were made exactly to specifications. However, the female patient is 5'1" tall, and requires a temple length of @ 125mm. She insisted on a three-piece, drill mounted frame, even though you explained to her that the shortest available temple length was 145mm.

- Does this scenario satisfy the definition of a medical error? □ Yes □ No
  If yes, explain why. If not, explain why not. _____
- List the possible causes of this error._____
- List the possible negative consequences of the error._____
- What are some steps you could take to reduce or eliminate the reoccurrence of this error in your practice?_____

Scenario # 5: Your practice has not yet computerized its order entry or patient data base. Everything is still done the "old-fashioned" way, in terms of paperwork. A patient named Michael Jones arrives at your dispensary and announces that he wants to order a pair of prescription, polarized sunglasses. Because of the "common" last name, you verify that he is the Michael Jones who lives "at 723 Blue Heron Drive, in Spring Hill." He replies, "Yes," so you transcribe the prescription, PD, and base curve information to the new order. The job is fabricated exactly as you order it. However, when you attempt to dispense the job a week later, he strongly rejects the glasses, protesting that something is wrong. You double-check the glasses against the order and they check out perfect, so you ask them to try them a few days. "No way!" he says, "This prescription ain't right!" Finally, you compare them to the clear pair he is wearing and you discover the prescriptions are different. Upon further discussion and "investigation" you

discover you had originally pulled the file of Michael Jones, Jr., who also resides at 723 Blue Heron Drive. You will have to re-make the glasses.

- Does this scenario satisfy the definition of a medical error? □ Yes □ No
  If yes, explain why. If not, explain why not. _____
- List the possible causes of this error._____
- List the possible negative consequences of the error._____
- What are some steps you could take to reduce or eliminate the reoccurrence of this error in your practice?_____

Scenario # 6: Patient Rx:

O.D. Plano – 0.50 x 120
O.S. +0.25 sphere
Add +2.00 O.U.

You are completing the order for the patient's eyeglasses, and just as he is about to exit the office, you realize you have forgotten to take the patient's PD. Embarrassed, you say nothing, and before you submit the order to the lab you simply guess, and estimate the patient's PD. Considering that the patient's distance prescription is basically plano, you figure that even if you are "off" by a few millimeters, little or no prism would be induced, and the lenses would still be well within ANSI tolerance. In fact, you guess the patient's monocular PDs to be 32 O.U.. They are, in fact, O.D. 30; O.S. 30.

- Does this scenario satisfy the definition of a medical error? □ Yes □ No
  If yes, explain why. If not, explain why not. _____
- List the possible causes of this error._____
- List the possible negative consequences of the error._____
- What are some steps you could take to reduce or eliminate the reoccurrence of this error in your practice?_____

Scenario # 7: Patient Rx:

O.D. +0.50 – 1.00 x 008
O.S. +0.25 – 0.75 x 011
Add +2.50 O.U. (add +.25 if progressive)

While engaged in your lifestyle dispensing, you discover that the pair of glasses this patient is purchasing is actually a *second* pair that according to the patient is "just a second pair of reading glasses only - that I can use by the pool." Upon further discussion he also informs you that he absolutely wants "transitions lenses." You ask about his sensitivity to light, showing him a sample lens so that he realizes that the Transitions® lenses don't get as dark as some people like. "Oh, the sun doesn't really bother me…as long as they have protection against the UV I don't care how light or dark they are." You agree on gray as opposed to brown lenses. You place the order and it is fabricated to your specifications. When the patient arrives to pick up his glasses he is upset that he cannot see beyond the dispensing table. "But you said you wanted these for reading glasses only…you're only going to focus between 12-16 inches with these." The patient becomes more upset, "Then how the hell am I going to be able to watch my kids in the pool or water when I go to the beach. I said I wanted transitions lenses like these." At which point he hands you a pair of clear, Varilux Comfort lenses. A remake or refund is definitely on the horizon.

- Does this scenario satisfy the definition of a medical error? □ Yes □ No
  If yes, explain why. If not, explain why not. _____
- List the possible causes of this error._____
- List the possible negative consequences of the error._____
- What are some steps you could take to reduce or eliminate the reoccurrence of this error in your practice?_____

Scenario # 8: Patient Rx:

O.D. +2.50 +0.50 x 045
O.S. +3.00 – 0.25 x 135
Add +2.50 O.U.

The patient arrives wearing an old Rx that is very similar to the new one, and in fact tells you that her ophthalmologist told her there was only a "slight change" in her prescription. She is wearing FT-28 bifocals. You notice that the signs noting the cylinder are different so you examine the old glasses and discover that the old axes, when transcribed in plus-cylinder form, are 042, and 139 respectively. You therefore, "correct" the patient's Rx by turning the minus (-) sign into a plus (+) sign, with a single stroke of your pen.

As you begin to talk to the patient, she complains that most of her work time is spent on the computer, and she constantly has to raise her neck and position the computer monitor uncomfortably close in order to function at her job. Of course you explain the features and benefits of progressive lenses, especially how they would focus at that "intermediate" distance that has become problematic. The patient orders a pair of Varilux Ellipse lenses and is looking forward to wearing her cool, smaller frames, and being able to move her computer monitor a couple of feet back where it belongs. When she picks her glasses up she loves them! But she arrives back at your dispensary a few days later, saying they've made everything else at work WORSE than it was before. You are at a loss. What to do? What's going on here?

- Does this scenario satisfy the definition of a medical error? □ Yes □ No
  If yes, explain why. If not, explain why not. _____
- List the possible causes of this error._____
- List the possible negative consequences of the error._____
- What are some steps you could take to reduce or eliminate the reoccurrence of this error in your practice?_____

Scenario # 9: A patient returns to your office complaining that the Next Generation Transitions® gray lenses he purchased a few weeks earlier, never get very dark when he is driving the car. He mentions something about a refund, or remaking them. You explain that the reason they don't turn dark in the car is because it is not ambient light or heat that make them turn dark – it is exposure to UV. The patient grumbles something unintelligibly under his breath and storms out the door. You have successfully avoided a nearly $500 refund.

- Does this scenario satisfy the definition of a medical error? □ Yes □ No
  If yes, explain why. If not, explain why not. _____
- List the possible causes of this error._____
- List the possible negative consequences of the error._____
- What are some steps you could take to reduce or eliminate the reoccurrence of this error in your practice?_____

Scenario # 10: You have just finished your third day of working 9:00 am to 9:00 pm, and are looking forward to a couple of days off, when the optician who is supposed to work the following day calls in sick. Your manager asks you to fill in for the ill optician and reluctantly, you agree. The next day, you duplicate a pair of glasses for a patient, and come up with the following reading:

O.D. -1.00 sphere
O.S. -4.00 – 0.50 x 053

Upon picking up the glasses a few days later, the patient complains that her vision seems distorted. You double-check the prescription, but it is an exact match. You examine the glasses a bit closer, and you realize that the original pair you duplicated has base curves of +4.25 and +2.25 respectively. Although the power of the lenses is accurate, you had failed to specify a base curve, and the new pair was made with O.U. curves of +4.25.

- Does this scenario satisfy the definition of a medical error? □ Yes □ No
  If yes, explain why. If not, explain why not. _____
- List the possible causes of this error._____
- List the possible negative consequences of the error._____
- What are some steps you could take to reduce or eliminate the reoccurrence of this error in your practice?_____

Scenario # 11: Patient Rx:

O.D. -2.25 – 1.00 x 045 = 20/50-
O.S. -3.00 – 1.75 x 123 = 20/60+

After discussing all her frame and lens options with her optician, the patient chooses a standard zyl frame, with CR-39 lenses. Two weeks after she picks up her glasses, she returns to the dispensary, very upset because she did not pass her eye test at the DMV (Department of Motor Vehicles) and her license was not renewed. She is upset because she paid nearly $400 for a pair of single vision glasses and she still can't drive.

- Does this scenario satisfy the definition of a medical error? □ Yes □ No
  If yes, explain why. If not, explain why not. _____
- List the possible causes of this error._____
- List the possible negative consequences of the error._____
- What are some steps you could take to reduce or eliminate the reoccurrence of this error in your practice?_____

Scenario # 12: Patient Rx:

O.D. +2.00 +2.00 x 090
O.S. +3.50 +0.75 x 80
ADD +2.75 O.D.
ADD +2.50 O.S.

After phoning the prescribing optometrist to verify the different add powers (indeed it is two separate adds) you discover that the patient works a fairly dangerous, blue-collar, construction job. You emphatically suggest polycarbonate or Trivex® lenses for maximum safety and impact resistance. He refuses to pay the additional charge over CR-39 lenses. You insist he

sign your "Duty to Warn" form, which he does. You allow the glasses to be made in CR-39 lenses.

- Does this scenario satisfy the definition of a medical error? □ Yes □ No
  If yes, explain why. If not, explain why not. _____
- List the possible causes of this error._____
- List the possible negative consequences of the error._____
- What are some steps you could take to reduce or eliminate the reoccurrence of this error in your practice?_____

Scenario # 13: Patient Rx:

O.D. -3.00 sphere
O.S. -2.75 – 1.00 x 069

The patient wishes to purchase a pair of Transitions® lenses. While discussing her lifestyle, you discover the patient is an avid boater and loves to fish. You of course inform her of the superior performance of polarized sunglasses over Transitions® lenses, and she accepts your suggestion. She purchases two separate pairs of glasses. She returns a few weeks later complaining that the instrumentation panel on her boat is obliterated by the polarized lenses. She also complains about the "rainbow" that appears on the rear window of some cars and vans when she drives. She requests a refund, or that you remake the lenses into Transitions® lenses.

- Does this scenario satisfy the definition of a medical error? □ Yes □ No
  If yes, explain why. If not, explain why not. _____
- List the possible causes of this error._____
- List the possible negative consequences of the error._____
- What are some steps you could take to reduce or eliminate the reoccurrence of this error in your practice?_____

Scenario # 14: Patient Rx:

O.D. -7.50 sphere
O.S. -3.25 sphere

Your patient is a 14-year old girl who plays basketball at her high school. You provide polycarbonate 1.0 lenses to balance cosmetics and safety. She wears the glasses for a few days and returns to your dispensary with vague complaints that wearing the glasses make her feel uncomfortable. You check her acuity and she sees 20/20 in the right eye and 20/15 in the left eye! You ask her to "work with them" another few days or so. A week later she returns with the same complaints. Her mother remembers that she had similar "problems" with glasses she had purchased at your store a few years ago. As you delve deeper into her patient file you discover that the first time you had provided glasses for her (about five years ago), the job had to be remade due to a hyper-sensitivity to polycarbonate lenses. You redo the lenses in a high-index 1.71 with a 3.0 center thickness and the problems go away.

- Does this scenario satisfy the definition of a medical error? □ Yes □ No
  If yes, explain why. If not, explain why not. _____
- List the possible causes of this error._____
- List the possible negative consequences of the error._____

- What are some steps you could take to reduce or eliminate the reoccurrence of this error in your practice?_____

Scenario # 15: Patient Rx:

- 3.00 – 0.50 x 1
- 2.50 -1.75 x 015

The 25-year old, male patient chooses to accept your recommendation of A.R. lenses, You convince her to go with the "high-end" A.R. brand, even though it adds $125 to her bill. When you dispense the glasses, you make sure of the fit, vision, and specifically ask her if she knows the proper care of A.R. lenses. She assures you that she does, and she leaves – a happy patient. Six months later, she returns to your office. She is upset. The lenses are defective, she claims. As you examine the lenses, you discover that the lenses are "cracked and crazed" over 90% of their surface. She claims she has cared them "just the way you told me." In order to keep the patient happy, you remake the lenses. Upon picking up the new pair, you remind her once again to "be careful" with the lenses, as the warranty expires in a few months. She assures you she will.

- Does this scenario satisfy the definition of a medical error? □ Yes □ No
  If yes, explain why. If not, explain why not. _____
- List the possible causes of this error._____
- List the possible negative consequences of the error._____
- What are some steps you could take to reduce or eliminate the reoccurrence of this error in your practice?_____

Scenario # 16: A prospective patient enters your dispensary and explains that he has just moved here and is looking to establish a relationship with a good, honest optician. He shows you his glasses that he purchased in his old hometown 18 months before. His Varilux, Transitions, Crizal lenses are "cracked and crazed," much like the patient's lenses in scenario 15. He explains that his insurance doesn't "kick in" for another six months, and asks "is there something you can do to take the scratches out of these lenses?" You say, "No. There is nothing you can do to remove scratches from lenses – but we could make you new lenses for $430." He says, "I just can't afford that kind of money. I have to wait until my insurance will pay." You apologize…he says good bye…and leaves your office…disappointed.

- Does this scenario satisfy the definition of a medical error? □ Yes □ No
  If yes, explain why. If not, explain why not. _____
- List the possible causes of this error._____
- List the possible negative consequences of the error._____
- What are some steps you could take to reduce or eliminate the reoccurrence of this error in your practice?_____

Scenario # 17: A patient new to contact lens wear has just finished her initial examination/fitting with the independent optometrist who rents space from the corporation where you are employed. As the doctor leads the patient toward the dispensary, he hands you the patient's spectacle prescription and informs you, "This is Christine Johnson. Here's her glasses Rx. Order her some trial Acuvue 2 lenses and schedule an I&R so you can teach her how to put them in and out. I want to see her back a week later." The spectacle Rx the doctor hand you reads:

O.D. – 2.00 sphere
O.S. – 2.25 sphere
Acuvue 2/14.0

You notice that the doctor had failed to write down the base curve of the prescribed lenses, and you ask him about the omission, to which he replies, "Oh sorry…it's 8.3." You order the lenses to those specifications. During the I&R session, Christine is a champ. She has no trouble placing or removing the lenses, and seems to truly understand the cleaning regimen. However, she complains that the lenses "hurt a bit, and feel scratchy." You tell her that's not an uncommon phenomenon, and that as she wears them the uncomfortable feeling should subside. Unfortunately, she returns to your store the next day – adamant. She protests that, "The lenses felt fine in the doctor's exam room – these just don't seem right." You tell her that everything is as the doctor ordered, but sometimes (rarely) lenses can be defective. You give her a new set of trial lenses and tell her to take them home and give them a try. That afternoon she returns again, this time very upset. "I want to see the doctor!" she demands. The doctor happens to be there, overhears the commotion, and takes Christine into the exam room. Less than five minutes later, the doctor storms out of the room and says to you, "The problem is you ordered the wrong damn lenses for her! I prescribed 8.7 and you gave her 8.3." You tell him he told you 8.3, but he points to the patient record and sarcastically says, "Does that look like 8.3?" Sure enough, the notes from her original exam clearly say 8.7. You apologize to the doctor and the patient, and to "make up" for the error, give her *two* sets of 8.7 trial lenses. Christine seems happy as she leaves your store.

- Does this scenario satisfy the definition of a medical error? □ Yes □ No
  If yes, explain why. If not, explain why not. _____
- List the possible causes of this error._____
- List the possible negative consequences of the error._____
- What are some steps you could take to reduce or eliminate the reoccurrence of this error in your practice?_____

Scenario # 18: A 53 year-old male patient presents you with a "traditional" spectacle Rx that was written for him by his optometrist. "Traditional" meaning it's basically a small piece of paper that has the doctor's name, address, license number, date, and signature. Everything else (patient name, date of exam, prescription, etc.) is handwritten. Patient Rx reads:

+ 2.75 – 2.00 x 105
+ 1.75 – 1.00 x 104
+ 2.50 add
+ 8.25 BC
A/R Lenses

As you discuss the frames and lenses with your patient, you inform him that the doctor has suggested A.R. lenses. After explaining what it is and the additional cost involved ($59 for "standard" A.R. and $129 for "premium" A.R.), the patient informs you that he is living on disability income and a part-time job driving a taxi on the graveyard shift to make ends meet. He says he simply cannot afford even the extra $59, so he declines the A.R. treatment. Nine months after he picks up his glasses you receive a certified letter from a local attorney requesting all medical and retail records that relate to your patient. Reluctantly, you comply. A few days later, you find out that the patient is suing you, your practice, the city, and the lab that made his glasses. Why? He was in a serious car accident while driving his cab. It injured himself, his passengers, and someone in another vehicle. He claims the accident was caused by "blinding reflections" from street lights. He is suing the city because the lights are owned by the city. He is suing you,

your practice, and the lab because you deviated from the prescription. The doctor clearly indicated "A.R. lenses," which you did not provide.

- Does this scenario satisfy the definition of a medical error? □ Yes □ No
  If yes, explain why. If not, explain why not. _____
- List the possible causes of this error._____
- List the possible negative consequences of the error._____
- What are some steps you could take to reduce or eliminate the reoccurrence of this error in your practice?_____

Scenario # 19: An 83 year-old, post-IOL patient presents with the following Rx:

O.D. Plano – 1.00 x 090
O.S. -0.25 – 0.50 x 110
Add + 2.75

Even though the patient has worn FT-28 bifocals for over 40 years, he insists on no-line bifocals. You try to talk him out of them, but he persists. The Rx is made correctly. The patient picks up his glasses and seems happy. He sees well and he seems to "adjust" to them immediately. A few weeks later he stops back to tell you he loves his new glasses.

- Does this scenario satisfy the definition of a medical error? □ Yes □ No
  If yes, explain why. If not, explain why not. _____
- List the possible causes of this error._____
- List the possible negative consequences of the error._____
- What are some steps you could take to reduce or eliminate the reoccurrence of this error in your practice?_____

Scenario # 20: Patient Rx:

O.D. – 4.00 sphere
O.S. – 6.00 sphere

Despite the highly myopic nature of his prescription, the patient prefers old-fashioned, large, pilot-shaped frames. He "doesn't care" if the lenses are thick, so he chooses a frame. The frame size is 59-21-150. His distance PD is 70 mm. The lab accidentally de-centers the lenses backwards (instead of 5 mm "in," they are de-centered 5 mm "out), and this deviation is not caught when the glasses are checked in. The patient picks up his job a few days later and seems to accept them. He leaves your dispensary, never to return.

- Does this scenario satisfy the definition of a medical error? □ Yes □ No
  If yes, explain why. If not, explain why not. _____
- List the possible causes of this error._____
- List the possible negative consequences of the error._____
- What are some steps you could take to reduce or eliminate the reoccurrence of this error in your practice?_____

* * * * * * * *

Though some of the answers, comments and thoughts listed below are subjective and merely the author's opinion, compare your opinions, comments and thoughts to the ones listed below; keeping in mind that one of the objectives of this CE course is to identify and take steps to eliminate potentially damaging errors in our day-to-day practice.

Scenario # 1:

1. Yes. The failure of a planned action to be completed as intended. The apprentice did not intend to input the information eye-for eye, nor did he plan to set the CRP on near instead of infinity.
2. Possible causes:
   - Insufficient training
   - Improper supervision
   - No double-checks or verification methods in place
   - Lack of seriousness of purpose
3. Possible negative side effects:
   - Due to the eye-for-eye mistake the patient will probably not adapt to the progressive lenses.
   - Since the pupilometer was set for near instead of distance, it will also make it probable that adaptation will not occur. Additionally, the difference in the measurement (3 or 4 mm) will induce nearly 2D of prism for each eye, causing strain and discomfort for the patient.
   - Due to all that, the patient may never try progressive lenses again.
   - All of these effects might cause frustration and dissatisfaction for both patient and professional.
4. Steps to take to reduce or eliminate the reoccurrence of the error:
   - A policy could be instituted that mandates the licensed optician "sign off" after double-checking vital things like PD, segment location, etc.
   - Until an apprentice passes specific, written proficiency exams, he/she should not be allowed to perform optical duties without licensed verification.
   - Most all progressive lens manufacturers prefer distance measurements, so the CRP could be "locked" into position and changed only when needed.

Scenario # 2:

1. Yes. The failure of a planned action to be completed as intended. Even though the distance PD is correct, the fact that it is not ordered monocularly will result in nearly 1D of prism in the left eye alone. Additionally, while the use of Trivex was well intentioned, the patient will likely be dissatisfied with the thickness of the finished lenses, as the index of refraction of Trivex is not much higher than that of CR-39.
2. Possible causes:
   - Insufficient training with regard to relative lens thickness
   - Improper supervision
   - Lack of seriousness of purpose
3. Possible negative side effects:
   - Due to the misplacement of the optical centers, strain may occur, as well as possible double vision.
   - All of these effects might cause frustration and dissatisfaction for both patient and professional.
4. Steps to take to reduce or eliminate the reoccurrence of the error:

- A policy could be instituted that mandates the licensed optician "sign off" after double-checking vital things like PD, segment location, etc., which would have alerted the optician to insist on monocular PDs.
- Until an apprentice passes specific, written proficiency exams, he/she should not be allowed to perform optical duties without licensed verification.

Scenario # 3:

1. No. The correct aim was achieved prior to the patient receiving the lenses. The patient never received the wrong Rx, therefore was never placed in any jeopardy. We are human and will always make mistakes. Hopefully, the fact that the lenses were checked against the doctor's original prescription (as opposed to the order form) was the result of a serious *policy* in the dispensary.
2. Possible causes: N/A
3. Possible negative side effects: N/A
4. Steps to take to reduce or eliminate the reoccurrence of the error:
   - Apparently, as stated above, this practice has instituted a specific *policy* that insists that staff members check contact lens *and* spectacle orders against the original prescription, not the practice order form.

Scenario # 4:

1. Yes. This seems like the use of a wrong plan to achieve an aim. Presumably, the optician intended the patient to receive a pair of glasses that actually fit – not ones that have temples that are 20mm too long.
2. Possible causes:
   - Insufficient training in the art of frame adjustments and repairs
   - Improper supervision
   - No double-checks or verification methods in place
   - Lack of seriousness of purpose
   - Laziness
3. Possible negative side effects:
   - Improper fit could cause vision to be affected, especially the use of the progressive lenses.
   - Pain and discomfort.
   - The glasses will probably not fit in a standard eyeglass case.
   - Overall patient dissatisfaction.
4. Steps to take to reduce or eliminate the reoccurrence of the error:
   - The licensed optician in charge or practice owner could train staff members on the craft of shortening temples.
   - A "check-off" box could be added to the Rx form, so there is more accountability in terms of checking specific areas of adjustment at the time of delivery.

Scenario # 5:

1. Yes. This "clerical" error seems to fit *both* criteria of a medical error.
2. Possible causes:
   - Not enough staff – optician was rushed
   - Improper filing
   - Poor lighting

- Failure to compare old Rx with new
- Laziness

3. Possible negative side effects:
   - The error "doubles" the delivery time.
   - Obvious patient dissatisfaction.
   - Cost-of-goods doubled for the dispensary.
   - Negative word-of-mouth advertising for the practice/optician.
4. Steps to take to reduce or eliminate the reoccurrence of the error:
   - Institute a "fail-safe" system that requires two unique identifiers; for example, date of birth *and* the last four digits of a social security number.
   - Staff education on the importance of ensuring proper patient identification.

Scenario # 6:

1. Yes. This seems like the use of a wrong plan to achieve an aim.
2. Possible causes:
   - Insufficient training
   - Improper supervision
   - Lack of experience or confidence on the part of the optician
   - Lack of seriousness of purpose
   - Laziness
3. Possible negative side effects:
   - Improper fit could cause vision to be affected, especially the use of the progressive lenses.
   - Discomfort.
   - The glasses will probably have to be remade or the patient might demand a (justified) refund.
   - Overall patient dissatisfaction.
4. Steps to take to reduce or eliminate the reoccurrence of the error:
   - The licensed optician in charge or practice owner could train staff members that measurements are never to be "guessed."
   - A "check-off" box could be added to the Rx form, so there is more accountability in terms of checking specific areas such as neutralization, measurements, adjustments, etc.
   - Although generally not as effective as other measures, perhaps this willful act requires some punitive measure (e.g. official verbal warning/coaching, loss of incentive, if applicable, etc.).

Scenario # 7:

1. Yes. This seems like the use of a wrong plan to achieve an aim. This error in communication caused the patient to initially receive single-vision, Transitions lenses, when, in his mind, he clearly insisted on and was expecting progressive lenses.
2. Possible causes:
   - Failure to ask what he wore presently to read by the pool
   - Failure to ask "What do you mean by 'transitions' lenses." This 'error' of mistaking Transitions for progressives (and vice-versa) is more common than you would think.
   - Failure to ask "so you want bifocals, or the kind of lenses that get light and dark?"
   - No double-checks or verification methods in place
   - Lack of seriousness of purpose
   - Laziness

3. Possible negative side effects:
   - Loss of confidence in the optician.
   - Cost-of-goods increases as a remake or refund *is* on the horizon.
   - Frustration on the part of the patient and optician
   - Overall patient dissatisfaction.
4. Steps to take to reduce or eliminate the reoccurrence of the error:
   - Staff education of the prevalence of this communication error.
   - Institute specific "read-back" guidelines. (After the sale is made, the optician should summarize the charges. During this read-back process this error would likely be caught before the glasses were made.)

Scenario # 8:

1. Yes. This seems like the use of a wrong plan to achieve an aim. The use of "standard" progressive lenses for intense computer use will cause this "error" every time. Additionally, although conclusion reached about the cylinder sign was probably right, a call should have been made to the prescriber to verify the axis.
2. Possible causes:
   - Error in communication
   - Insufficient training
   - Improper supervision
   - Lack of seriousness of purpose
   - Laziness
   - No *real* lifestyle dispensing
3. Possible negative side effects:
   - Prolonged use of standard progressives by an intense computer user could lead to Computer Vision Syndrome.
   (For more information, refer to www.allaboutvision.com/cvs.)
   - Pain and discomfort
   - The patient will have to purchase a second pair of glasses. Had this been explained on the front-end, it would have caused less dissatisfaction.
   - Overall patient dissatisfaction.
4. Steps to take to reduce or eliminate the reoccurrence of the error:
   - The licensed optician in charge or practice owner could train staff members on the education of CVS for the patients.

Scenario # 9:

1. Yes. This seems like the use of a wrong plan to achieve an aim. The use of Transitions lenses apparently is insufficient for this patient while driving.
2. Possible causes:
   - Error in communication
   - Insufficient training
   - Failure to give samples and demonstrations to the patient
   - Lack of seriousness of purpose
   - Laziness
   - No lifestyle dispensing
3. Possible negative side effects:
   - Insufficient protection against brightness and glare
   - Pain and discomfort

- The patient will have to purchase a second pair of glasses.
- Overall patient dissatisfaction.
- Lack of patient retention.

4. Steps to take to reduce or eliminate the reoccurrence of the error:
   - The licensed optician in charge or practice owner could train staff members on the education of Transitions vs. sunglasses for the patients *on the front-end of the dispensing process*..
   - Mandatory outdoor demonstrations for all patients who are purchasing Transitions lenses for the first time.

Scenario # 10:

1. Yes. This seems like the use of a wrong plan to achieve an aim. The failure to specify the base curve, along with the possible "overwork" of the optician.
2. Possible causes:
   - Insufficient or ill-prepared Rx form
   - A tired optician; improper scheduling
   - Lack of seriousness of purpose
   - Laziness
3. Possible negative side effects:
   - Patient discomfort, frustration and confusion until the mistake is corrected.
   - Increased cost of goods – the glasses will have to be remade
   - Possible negative word-of-mouth advertising regarding the practice/optician.
   - Overall patient dissatisfaction.
4. Steps to take to reduce or eliminate the reoccurrence of the error:
   - Require base curves be specified on all jobs that are duplicated from other lenses.
   - Require a second ECP to double-check duplications.
   - Institute a policy with your lab that says no duplication job will be processed unless the base curve is specified.

Scenario # 11:

1. Yes. This seems like the use of a wrong plan to achieve an aim. The patient obviously expected the new prescription/glasses would enable her to pass her driver license exam, which was not the case.
2. Possible causes:
   - Lack of communication between the doctor and patient
   - Failure of prescribing doctor to indicate resultant acuity on the Rx
   - Lack of seriousness of purpose on the part of the prescriber and/or optician
   - Laziness
   - The fragmented nature of the delivery process. Was the doctor on-site?
3. Possible negative side effects:
   - Possible endangerment of the patient. She may feel she should be able to drive with the new prescription.
   - Possible endangerment of other drivers/pedestrians.
   - Possible refund.
   - Overall patient dissatisfaction.
   - Breakdown of relationship between optician and other ECPs.
4. Steps to take to reduce or eliminate the reoccurrence of the error:
   - Require acuity indication on all Rxs filled in your practice.

- Require a trial frame session for any Rxs that are suspect.

Scenario # 12:

1. Yes. This seems like the use of a wrong plan to achieve an aim. Presumably, the "aim" was to provide maximum eye protection, not to have the patient sign a piece of paper.
2. Possible causes:
   - Error in communication. Perhaps if the real danger the patient was exposing himself to had been better communicated, he would not have rejected the safe lenses.
   - Insufficient training
   - Lack of seriousness of purpose
   - Laziness
3. Possible negative side effects:
   - Patient endangerment.
   - Potential loss of sight.
   - Potential lawsuit
4. Steps to take to reduce or eliminate the reoccurrence of the error:
   - Refuse to fill a prescription if the patient fails to accept your recommendation of impact-resistant lenses.
   - Consider providing impact-resistant lenses at no additional cost.
   - When impact resistant lenses are indicated, do not even present non-impact resistant lenses as an option.

Scenario # 13:

1. No. The patient required and would probably benefit from polarized lenses. That aim certainly was achieved, and the plan was achieved as well. So, technically, this probably would not meet the specific definition of a medical error. On the other hand, certainly an error of omission and/or communication occurred. The patient should have been informed that some instrumentation might not be easily viewed through polarized lenses. Additionally, the "rainbow effect" (it's called cross hatching) should have been explained. If all that had been properly and professionally communicated on the front end of the encounter, the patient probably still would have purchased polarized lenses, and therefore would not have been surprised or dissatisfied on the back end.
2. Possible causes: N/A
3. Possible negative side effects: N/A
4. Steps to take to reduce or eliminate the reoccurrence of the error: N/A

Scenario # 14:

1. Yes. This seems like the use of a wrong plan to achieve an aim. Presumably, the "aim" was to provide maximum eye protection. On the other hand, if the patient can't or won't wear them due to visual discomfort, what good are they? It seems the optician did the "next best thing" by providing an acceptable lens material with a "safety" center thickness. Hopefully this was all explained to the patient, her guardian, and a notice of what was done was signed and included in the patient record.
2. Possible causes:
   - Error in communication/transcription. Why wasn't the patient's hyper-sensitivity to polycarbonate lenses clearly and boldly indicated on her record (in the same way a patient's allergy to penicillin or sulfa drugs would be noted on a medical record)?
   - Lack of seriousness of purpose.

- Insufficient training
- Laziness

3. Possible negative side effects:
   - Patient dissatisfaction.
   - Unnecessary remake.
   - Reputation of practice/optician compromised.
4. Steps to take to reduce or eliminate the reoccurrence of the error:
   - Institute a policy that ensures *whenever* a patient-related redo (e.g. sensitivity to a lens material, preference of an unusually high or low segment, AR preference, etc.) occurs, it is clearly and boldly noted on the patient file.
   - Institute a policy so that whenever an Rx exceeds a certain power, it is "flagged," so that the optician is at least alerted and reminded to apply conscious attention to the lens selection.

Scenario # 15:

1. Yes. This seems like the use of a wrong plan to achieve an aim. Asking the patient if she understands the use and care of AR lenses was a "plan" to make sure they were cared for properly. The fact that she says "yes," does not (and apparently did not) achieve that aim.
2. Possible causes:
   - Error in communication. Instead of asking if she "understands," perhaps it would be wiser to say, "So, Ms. Jones…tell me how you're going to take care of these lenses." If she replies correctly, reinforce and supplement as needed. If she gets it wrong, reply with, "Oh, I'm glad I asked! If you did that you could really destroy these lenses…" And then inform her of the proper care.
   - Insufficient training
   - Lack of seriousness of purpose
   - Laziness
3. Possible negative side effects:
   - Patient dissatisfaction
   - Potential increase of cost-of-goods.
   - Potential bad will or negative word-of-mouth advertising.
4. Steps to take to reduce or eliminate the reoccurrence of the error:
   - Conduct training sessions so all staff members are on the same page with these types of instructions.
   - Supplement the verbal instructions with written cleaning instructions.
   - Consider having the patient "sign off" on said instructions to further reinforce the serious care that must be shown with AR lenses.

Scenario # 16:

1. No. You did not really provide any service or healthcare to this person at all. On the other hand, in this optician's opinion, you did inadvertently "lie" to the patient. Technically speaking, the lenses could easily be stripped of the AR coating in as little as five minutes. The fact that the patient has resolved to wait until his insurance is valid to replace the lenses means that in the interim (six months!) he will be walking and driving with lenses that are most certainly obstructing his vision. This would potentially endanger him and others.
2. Possible causes: N/A
3. Possible negative side effects: N/A
4. Steps to take to reduce or eliminate the reoccurrence of the error: N/A

Scenario # 17:

1. Yes. This seems like the use of a wrong plan to achieve an aim. (You planned to give her proper-fitting, comfortable lenses; and, you should not have relied on the memory and verbal instructions of the doctor.) Additionally, the doctor helped contribute to an error that was caused by the use of a wrong plan to achieve an aim (first, omitting the base curve; second, relying on memory to provide the information).
2. Possible causes:
   - Error in communication.
   - Error of omission on the part of the doctor.
   - Lack of seriousness of purpose.
   - Laziness
3. Possible negative side effects:
   - Patient endangerment.
   - Patient discomfort.
   - Patient dissatisfaction.
   - Potential further breakdown in the relationship between the optician and the doctor.
4. Steps to take to reduce or eliminate the reoccurrence of the error:
   - Never rely on verbal instructions/memory.
   - Insist on a written prescription
   - Refer to the doctor's manifest and again, ask for a written Rx.
   - Always compare dispensed contacts/glasses to the doctor's original information when possible.

Scenario # 18:

1. Yes. This seems like the failure of a plan to be implemented as intended. The doctor *intended* for that person to have AR. In this author's opinion, if the doctor specifically wrote "AR lenses" above his signature, that is part of the prescription, not a mere "suggestion."
2. Possible causes:
   - Error in communication. Perhaps no discussion about AR was appropriate. It was simply the lens that was prescribed. Would you discuss the doctor's "suggestion" as to sphere, cylinder, or axis? Of course not.
   - Lack of seriousness of purpose.
   - Lack of confidence.
3. Possible negative side effects:
   - Patient endangerment.
   - Patient discomfort.
   - Patient dissatisfaction.
   - Law suit/financial restitution.
   - Physical harm to the patient and others.
   - Property damage.
   - Potential further breakdown in the relationship between the optician and the doctor.
4. Steps to take to reduce or eliminate the reoccurrence of the error:
   - Institute a policy of no deviation from the doctor's written Rx/instructions.
   -In the case of any confusion or refusal on the part of the patient to pay/accept a prescribed item, decline the sale or call the doctor and insist on a new prescription.

Scenario # 19:

1. No. Everything seems fine, and the scenario further illustrates the danger of pre-judging (the optician tried to talk the patient out of progressives based solely on age).
2. Possible causes: N/A
3. Possible negative side effects: N/A
4. Steps to take to reduce or eliminate the reoccurrence of the error: N/A

Scenario # 20:

3. Yes. This seems like the use of a wrong plan to achieve an aim. (Whatever "plan" was used to verify the glasses obviously doesn't "work.") Additionally, there was the use of a wrong plan to achieve an aim (the lab didn't *intend* to de-center the lenses backwards).
4. Possible causes:
   - Glasses only checked in as to power
   - Improper supervision
   - Lack of seriousness of purpose – should have also checked base curves, PDs, etc.
   - Laziness
3. Possible negative side effects:
   - Patient endangerment.
   - Patient discomfort/dissatisfaction.
   - Loss of patient retention. Despite the fact he never returns to complain about anything, the discomfort experienced by that much induced prism almost certainly assures that he, his friends, and his family will never patronize your practice again.
4. Steps to take to reduce or eliminate the reoccurrence of the error:
   - Always check *everything* – not just lenses as to power.
   - Create a "checklist" for verification of glasses/contacts prior to dispensing.

* * * * * * * *

Implementation

List five *specific* steps, policies, or procedures that you will integrate into your practice of opticianry in order to reduce the occurrence of errors. (Be specific. For example: Do not say that you will improve communication. Instead say: We will insist on all notations of sphere power, cylinder power, axes, and add powers will be written with three digits. We will also instruct the lab not to process any jobs that do not follow this format.)

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5._____
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Further Resources

- www.ahrq.gov/consumer/20tips.htm
- http://www.ahrq.gov/QUAL/30safe.htm.
- www.wikipedia.org/wiki/Medical_error
- www.familydoctor.org/736.xml
- www.cdc.gov

- *Internal Bleeding: The Truth Behind America's Terrifying Epidemic of Medical Mistakes* by Robert Wachter and Kaveh Shojania (Published by Rugged Land Publishers; May 2005)
- *Medical Error and Patient Safety: Human Factors in Medicine* by George A. Peters and Barbara J. Peters (Published by CRC1; November 2007)
- *After Harm: Medical Error and the Ethics of Forgiveness* by Nancy Berlinger (Published by The Johns Hopkins University Press; September 2007)

Test Questions for Reduction of Medical Errors for ECPs

1. The bombshell report entitled *To Err is Human*, which finally started to draw much-needed attention to the problem of Medical Errors, was first issued in November of what year?

    a. 1959
    b. 1969
    c. 1979
    d. 1999

2. A licensed optician provides standard progressive lenses to a patient who spends 8-10 hours a day working on the computer. If the patient is unable to comfortably function at work with the lenses provided, the optician's advice may have contributed to a medical error best described as:

    a. An error of omission
    b. A diagnostic error
    c. An error due to equipment failure
    d. A medicine error
    e. No error

3. While taking a patient's PD, an apprentice optician is unable to clearly see the apex of corneal reflection due to low batteries in the unit. Despite that, the apprentice takes an fairly accurate, though not perfect accurate PD measurement. This apprentice may have contributed to a medical error best described as:

    a. An error of omission
    b. A diagnostic error
    c. An error due to equipment failure
    d. A medicine error
    e. No error

4. A medical error is defined as:

    a. An adverse effect that results in patient injury or death
    b. Failure of a planned action to be completed as intended
    c. The use of a wrong plan to achieve an aim
    d. All of the above must apply to the question
    e. Either B and C must apply to the event in question
    f. Both B or C must apply to the event in question

5. Shortly after the IOM created its original definition of a medical error it was supplemented to include, "errors can include problems in…"

    a. Practice

b. Products
c. Procedures
d. Systems
e. All of the above

6. Even if the *lowest* estimate regarding the number of annual deaths in the United States due to medical errors is the accurate number, about how many people fall victim to medical errors?

    a. 44,000
    b. 64,000
    c. 84,000
    d. 104,000

7. Which of the following ailments claims more victims annually in the United States?

    a. Breast cancer
    b. Preventable medical errors
    c. AIDS
    d. Heart disease
    e. Traffic accidents

8. While all of the following are contributing factors in medical errors, which is probably the most significant?

    a. Improper hand washing on the part of healthcare workers
    b. The fragmented, decentralized nature of healthcare in the United States
    c. Lack of education on medical errors by professionals boards
    d. HIPAA

9. Which of the following are suggestions put together by the National Quality Forum in order for healthcare workers to contribute to the reduction of medical errors?

    a. Take error reduction more seriously by creating a *culture* of safety
    b. Ask patients to repeat verbal orders when instructions are given
    c. Wash hands in between each and every patient encounter
    d. Use standardized abbreviations and protocols
    e. All of the above

10. According to research conducted by physicians at justaskdoctors.com, how often do patients receive "proper healthcare?"
    a. 50% of the time
    b. 60% of the time
    c. 70% of the time
    d. 80% of the time

e. 90% of the time

11. According to research conducted by physicians at the Food and Drug Administration, one of the most significant contributing factors to medical errors is the "reckless individual behavior" of healthcare workers in the medical field.
    a. True
    b. False
    c. Only in hospitals

12. After dispensing AR-treated spectacle lenses and explaining the maintenance that is required, what is the best way to make sure the patient understands your instructions?
    a. Ask her if she has any questions, and answer them fully.
    b. Ask her if she understands, and have her sign a form attesting that she does.
    c. Ask her to repeat/paraphrase your instructions.
    d. Give the patient a written summary of your instructions so she can reference them at a later date.
    e. All of the above.
    f. A and B
    g. C and D

13. An optician accidentally takes a PD using a pupilometer set for near, when he thinks it is set for distance. The glasses are made and dispensed to the patient. Does this event meet the definition of a medical error?
    a. Yes
    b. No
    c. It depends if harm comes to the patient while wearing the glasses.
    d. Only if the event occurred in the United States after 1999.

14. Which of the following claims the fewest lives annually in the United States?
    a. Preventable medical errors
    b. Heart disease
    c. Breast cancer
    d. AIDS
    e. Influenza

15. Which of the following is NOT a suggestion given to consumers of healthcare by the Agency for Healthcare Research and Quality, in order for them to be more active players in the prevention of medical errors?
    a. Always wash your hands before and after a doctor appointment
    b. Inform doctors of all medications you are taking
    c. Make sure you can read your doctor's prescription
    d. Ask for written information regarding possible side effects of treatment prescribed

16. Which of the following rules have been mandated by the Florida Department of Health and/or the Florida Board of Opticianry?
    a. Mandatory read-back of prescriptions given over the phone
    b. A maximum of 50 hours per week may be worked by a licensed optician
    c. No one other than an NCLE-licensed optician may conduct an I&R training
    d. Frame selection may not take place unless a licensed optician is on the premises
    e. All of the above
    f. None of the above

17. In order to meet the definition of a medical error, a serious adverse effect must be suffered by a patient?
    a. True
    b. False

18. Each year, about how many deaths can be attributed to illegible handwriting?
    a. 500
    b. 700
    c. 5,000
    d. 7,000

19. Accidentally measuring for near PD instead of distance would be considered a medical error because:
    a. An adverse effect could occur.
    b. Patient dissatisfaction would be compromised.
    c. It is the failure of a plan to be completed as intended.
    d. It is the use of a wrong plan to achieve an aim.
    e. None of the above

20. According to one of the researchers quoted in this module, the idea of punishing practitioners who make preventable medical errors:
    a. Is an idea that is usually distasteful to ECPs
    b. Is an idea that has proven effective in decreasing the occurrence of medical errors
    c. Is an idea that has outlived its usefulness
    d. Is the best way to reduce medical errors

21. The National Quality Forum(NQF) has developed a list of how many Safe Practices for Better Health Care?
    a. 10
    b. 20
    c. 30
    d. 40

22. About what percent of lawsuits brought against physicians by patients are actually won?
    a. 28%
    b. 38%
    c. 48%
    d. 58%

23. How many people die each year in the United States due to breast cancer?
    a. 10,000
    b. 20,000
    c. 40,000
    d. 75,000

24. According to a 2004 report issued by Health Grades, in addition to all of the deaths that occur due to preventable medical errors, about how many additional people are injured by such errors? Just over:
    a. 1,000,000
    b. 2,000,000
    c. 100,000
    d. 50,000

25. According to the the CDC (Centers for Disease Control), published in 2015, what caused the most deaths?
    a. Diabetes
    b. Alzheimer's Disease
    c. Cancer
    d. Heart Disease

26. In the same report, about how many US citizens died of influenza or pneumonia?
    a. 50,000
    b. 100,000
    c. 200,000
    d. 250,000

27. Research shows that when healthcare workers work more than __ hours per day, errors increase
    a. 6
    b. 8
    c. 10
    d. 12

28. This same research also shows that when adults who sleep fewer than ___out of 24 hours show reduced mental acuity.
    a. 5
    b. 6
    c. 7
    d. 8

29. According to *To Err is Human*, perhaps the single, most significant factor contributing to all of the medical errors is probably:
    a. Reckless, human behavior
    b. The high cost of medical care
    c. The fact that most doctors settle malpractice suits out of court
    d. The fragmented, decentralized nature of our healthcare delivery system

30. Also according to *To Err is Human*, beyond the death toll itself, and including the injured, the cost of these errors is:
    a. 17 Billion
    b. 25 Billion
    c. 29 Billion
    d. All of the above
    e. None of the above

Answer sheet for Reduction of Medical Errors for ECPs-2hr

Send this answer sheet only, do not enclose the entire printed material!

Also, do not take a picture of this page with your smart phone!

Please scan to email or just mail it. Email it: cedoinc@yahoo.com

Or: Postal Mail it: CEDO INC PO BOX 46486 TAMPA, FL 33646

Name_____ Opticians License # _____

Address_____City_____State_____

Zip_____Cell Phone_____Work Phone_____

Email:_____

Homestudy will be graded within 3-5 days of receipt and entered into cebroker immediately!

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