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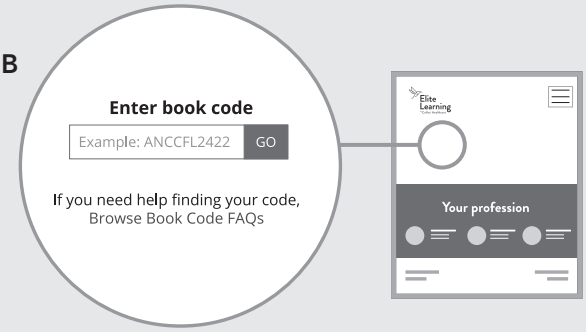

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Recognizing and Responding to Human Trafficking in Texas (Mandatory)

1 Contact Hour

Release Date: September 29, 2022

Expiration Date: September 29, 2024

Faculty

John Makopoulos, MD
Emergency Medicine
Mercy Fitzgerald

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Course overview

Human trafficking has been called a form of modern-day slavery.[1,2] It is a crime involving the exploitation of someone for the purpose of compelled labor or a commercial sex act through the use of force, fraud, or coercion.[1] Victims can be women or men, adults or children, citizens or noncitizens and occurs across the United States and throughout the world. Human trafficking does not require crossing of international or state borders.

For clinicians and health care workers, human trafficking can be viewed as a serious health risk associated with significant physical and psychological harms.[3] The abuses suffered by people who are trafficked include many forms of physical violence or abuse (e.g., beating, burning, rape, confinement) as well as many psychologically damaging tactics such as threats to themselves or their family members, blackmail, extortion, lies about the person's rights, and confiscation of vital identity documents.[3]

Learning objectives

After completing this course, the learner will be able to:

- Describe the types and venues of human trafficking in the United States.
- Discuss communication strategies to assist with identification of trafficked persons.
- Discuss the importance of safety planning and protocols.
- Identify resources for reporting suspected victims of human trafficking.

How to receive credit

- Read the entire course online or in print which requires a 1-hour commitment of time.
- Complete the self-assessment quiz questions which are at the end of the course or integrated throughout the course. These questions are NOT GRADED. The correct answer is shown after you answer the question. If the incorrect answer is selected, the rationale for the correct answer is provided. These questions help to affirm what you have learned from the course.
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  - An affirmation that you have completed the educational activity.
  - A mandatory test (a passing score of 70 percent is required). Test questions link content to learning objectives as a method to enhance individualized learning and material retention.
- If requested, provide required personal information and payment information.
- Complete the MANDATORY Course Evaluation.
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Activity director

June D. Thompson, DrPH, MSN, RN, FAEN, Lead Nurse Planner

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INTRODUCTION

What Is human trafficking?

Human trafficking is defined as:

> *"The recruitment, transportation, transfer, harboring or receipt of persons by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation."*[4]

The phrase "human smuggling" is often confused with "human trafficking" but they are two quite different crimes. Human smuggling involves the provision of a service—typically transportation or fraudulent documents—to an individual who voluntarily seeks illegal entry into a foreign country.[5] Also sometimes confused is the difference between sex trafficking and consensual commercial sex (sex work). Sex trafficking is when an adult takes part in the sale of sex through threat, abduction, or other means of coercion, whereas sex work involves the willing and consensual exchange of money for sex and does not infringe on the human rights of the participants.[6] (*Note*: Children cannot technically be prostitutes or sex workers because they cannot legally consent to commercial sex.)

Many victims of human trafficking are forced to engage in sexual practices through threats or other types of coercion, but trafficking also occurs as labor exploitation in urban, suburban, and rural areas. Many victims are lured with false promises of well-paying jobs or manipulated by people they trust.[1] They are forced or coerced into prostitution, domestic servitude, or other types of forced labor (e.g., agriculture, construction, fisheries, mining industries). Victims can be found in legitimate and illegitimate labor industries, including sweatshops, massage parlors, agriculture, restaurants, hotels, street peddling, door to door sales, begging, and domestic service.[1]

Although anyone can be at risk for being a victim of human trafficking, most are women and girls.[7] Risk factors for being vulnerable to human trafficking include:[8]

- Extreme poverty.
- Minimal education.
- A history of abuse or family instability.
- Being disabled.
- Belonging to a marginalized or stigmatized gender, ethnic, or cultural group.

Traffickers use various techniques to control their victims and keep them enslaved. Some traffickers hold their victims under lock and key. More frequently, however, more subtle techniques are used such as:[9]

- Isolation from:
  - The public by limiting contact with outsiders and making sure that any contact is monitored or superficial in nature.
  - Family members and friends.
- Control:
  - Confiscation or control of passports or other identification documents.
  - Debt bondage through enormous financial obligations or an undefined or increasing debt.
  - Control of the victims' money.
- Intimidation/threat:
  - Use or threat of violence toward victims or their family members.
  - Shaming victims by exposing humiliating circumstances to their families.
  - Telling victims they will be imprisoned or deported for immigration violations if they contact authorities.

"Victim" or "Survivor"?

The terms "victim" and "survivor" can both be used to refer to individuals who were trafficked. The term "victim" has legal implications within the criminal justice process and generally means an individual who suffered harm as a result of criminal conduct.[1]

"Survivor" is a term used by many in the health services field to recognize the strength it takes to continue on a journey toward healing in the aftermath of a traumatic experience.

The life situations of people who are trafficked are almost always complicated, whether they are under a trafficker's control, trying to leave, or are already out of a trafficking environment. In addition, trafficked people may not self-identify as trafficked. Rather they may feel that these are merely the restrictions of their circumstance. They are usually beset with physical, psychological, social, legal, and financial circumstances that can be overwhelming.[3]

Human trafficking became a federal crime with passage of the Trafficking Victims Protection Act of 2000 (TVPA) revised and updated in 2015.[10] The goals of the TVPA were to prevent severe forms of human trafficking, both in the United States and overseas; to protect victims and help them rebuild their lives in the United States; and to prosecute traffickers and impose federal penalties. Prior to enactment of the TVPA, no comprehensive federal law existed to protect victims of trafficking in the United States or to prosecute their traffickers. Congress has reauthorized and amended the TVPA several times, but its fundamental purpose and legal authorities remain the same.

Human trafficking in Texas

In 2009, the Texas legislature created the Texas Human Trafficking Prevention Task Force to respond to the growing human trafficking crisis and designated the attorney general as the presiding officer.[11] The Task Force develops legislative recommendations to attack the crime and policies to protect victims. A 2016 report by the University of Texas at Austin, School of Social Work estimated that there are approximately 79,000 minor and youth victims of sex trafficking and 234,000 workers who are victims of labor trafficking.[12] Minor and youth sex trafficking has an estimated economic impact to the state of nearly $6.6 billion while labor trafficking victims are exploited at an annual cost of almost $600 million.[12] In 2020, the latest year for which data are available, there were 987 human trafficking cases reported in Texas, 185 arrests for human trafficking, and 28 convictions.[11,13] There were also 97 arrests for compelled prostitution with 18 convictions.[11]

Of the 1,080 cases of human trafficking in 2019, most were for sex trafficking (739 cases), with labor trafficking being the next-most common (116 cases).[13] Most victims were female (824 cases vs. 131 for men), and adult (659 cases vs. 216 cases involving minors). [*Note*: statistics are non-cumulative because cases may involve multiple victims.]

An important caveat to all statistics about human trafficking is the difficulty of obtaining accurate data, which is a limitation of research into this issue that has been pointed out in the reports of the Texas Human Trafficking Prevention Task Force and other organizations working to reduce human trafficking.[11] Barriers to acquiring accurate data include the avoidance by victims of the criminal justice system due to fears of reprisal, deportation, or incarceration; failure of health care workers or emergency responders to ask about human trafficking or to probe causes of apparent violence; and a lack of coordination and data integration between the various levels of governmental agencies (local, state, federal) and other organizations (e.g., non-profits, hospitals) that may have data on human trafficking. These barriers and the limitations of existing data suggest that the true scope of human trafficking is larger than can be reliably estimated at the present time.[8]

AN ESSENTIAL ROLE FOR HEALTHCARE PROVIDERS

A number of organizations representing healthcare providers have issued statements recognizing human trafficking as a public health issue and acknowledging the importance of building awareness of human trafficking among health care providers.[14-17] The American Medical Association, for example, in its 2015 statement, says: "Physicians should be aware of the definition of human trafficking and of resources available to help them identify and address the needs of victims. The AMA will help encourage the education of physicians about human trafficking and how to report cases of suspected human trafficking to appropriate authorities to provide a conduit to resources to address the victim's medical, legal and social needs."[15]

Healthcare professionals are uniquely positioned to identify and intervene on behalf of trafficking victims. Outside of law enforcement, healthcare settings are among the few places where the lives of human trafficking victims may intersect with the rest of society, if only for brief periods.[18] In a study of 98 sex trafficking survivors, 88% had at least one encounter with a health care provider while they were being trafficked, with 63 percent of these encounters happening in an emergency department.[19]

One study noted that human trafficking victims in the U.S. may interact with a range of health care personnel, including primary care providers, sexual and reproductive health care workers, dentists, and providers of traditional or alternative remedies.[9] Trafficking victims may even be found working within health care facilities.

Unfortunately, studies have demonstrated that medical care providers are often unprepared to identify trafficking victims.[20,21]

Identifying potential victims of human trafficking

Certain patient behaviors and/or companion behaviors can alert health care professionals to a potential human trafficking case.[9,22] One common clue is the presence of a person who seems to control both the patient and the situation. Survivors report that their traffickers completed health-related paperwork for them and communicated with clinic staff and health care providers on their behalf.[9] The physical proximity of the traffickers perpetuated their coercion and control of the victims, preventing them from communicating with health care personnel directly.[9]

The presence of an overbearing or controlling companion should trigger concern, and most recommendations suggest that in order to allow patients the opportunity to speak for themselves, clinic or hospital staff should attempt to interview and assess all patients privately. This may require the use of an independent interpreter, since many survivors have limited English proficiency.[9]

Trained non-clinical workers could be instrumental in helping to maintain separation during potential victim identification interviews in a manner that does not alert potential traffickers to victim identification efforts. Non-clinical staff, such as receptionists, security guards, and accounting personnel, who are made sensitive to these matters through training, may observe patterns and know when and how to respond if a potential trafficker repeatedly presents for multiple patients as a companion, translator, or medical bill payer, regardless of whether these personnel interact with the patients themselves.

Multilingual non-clinical staff who may share a common language with trafficked persons of limited English proficiency may be able to develop a rapport with trafficked persons that facilitates trust and frank communication based on their language or cultural commonalities. It is recommended, therefore, that health care organizations think broadly about the types of employees who are appropriate to receive training about human trafficking in order to enhance opportunities for identification of and response to potential trafficking situations.[23]

A human trafficking victim may develop a mindset of fear, distrust, denial, and conflicting loyalties. Foreign victims of trafficking are often fearful of being deported or jailed and, therefore, they may distrust authority figures, particularly law enforcement and government officials. Many victims of both

sex and labor trafficking fear that if they escape their servitude and initiate investigations against their trafficker, the trafficker and his/her associates will harm the victims, the victims' family members, or others.

Additional patient situations, behaviors, or emotional states may suggest human trafficking:[2]

- Paying cash or having no health insurance.
- Lacking control of identification documents (ID or passport).
- Having few or no personal possessions.
- Being reticent for additional testing or services due to large debt.
- Inability to:
  - Leave home or place of work.
  - Speak for oneself or share one's own information.
- Feelings of helplessness, shame, guilt, self-blame, and humiliation.
- Loss of sense of time or space, not knowing where they are or what city or state they are in.
- Emotional numbness, detachment, or disassociation (i.e., "flat affect").

While not all victims of trafficking have physical indicators that aid identification, many victims suffer serious health issues, which may include:[2]

- Addiction to drugs and/or alcohol as a way to cope with or "escape" their situation, or as a method of control used by their traffickers.
- Symptoms of post-traumatic stress disorder, phobias, panic attacks, anxiety, and depression.
- Sleep or eating disorders.
- Untreated chronic illnesses, such as diabetes or cardiovascular disease.
- Signs of physical abuse, such as bruises, broken bones, burns, and scarring.
- Chronic back, visual, or hearing problems from work in agriculture, construction, or manufacturing.
- Skin or respiratory problems caused by exposure to agricultural or other chemicals.
- Infectious diseases, such as tuberculosis and hepatitis, which are spread in overcrowded, unsanitary environments with limited ventilation.
- Reproductive health problems, including sexually transmitted diseases, urinary tract infections, pelvic pain, and injuries from sexual assault or forced abortions.

Responding to victims of human trafficking

Victims of trafficking do not often disclose their trafficking situation in clinical settings.[8] Health care providers must, therefore, be thoughtful and careful about engaging patients if human trafficking is suspected. Before beginning any conversation with a patient, assess the potential safety risks that may result from asking sensitive questions of the patient. Recognize that the goal of your interaction is not disclosure or rescue, but rather to create a safe, non-judgmental place that will help you identify trafficking indicators and assist the patient.[2] This may be challenging in the context of busy, time-constrained schedules, but it is possible. Clinicians should:

- Allow the patient to decide if he or she would feel more comfortable speaking with a male or female practitioner.
- If the patient requires interpretation, always use professional interpreters who are unrelated to the patient or situation.
- If the patient is accompanied by others, try to find a time and place to speak with the patient privately.
- Take time to build rapport with potential victims, or if you do not have the time yourself, find someone else on staff who can develop rapport with the patient.
- Ensure that the patient understands confidentiality policies and practices, including mandatory reporting laws.
- Use multidisciplinary resources, such as social workers, where available.
- Refer to existing institutional protocols for victims of abuse/sexual abuse.
- Contact the National Human Trafficking Resource Center (NHTRC) hotline (1-888-373-7888) for assistance. Information available at: https://humantraffickinghotline.org/

If a patient has disclosed that he or she has been trafficked:[2]

- Ensure that safety planning is included in the discharge planning process.
- Provide the patient with options for services, reporting, and resources.
  - Provide the patient with the NHTRC hotline number. If the patient feels it is dangerous to have something with the number written on it, have them memorize the number or designate someone in your staff that they can call back to in order to provide that number.
- In situations of immediate, life-threatening danger, follow your institutional policies for reporting to law enforcement. Whenever possible, try to involve the patient in the decision to contact law enforcement.
- If the patient is a minor, follow mandatory state reporting laws and institutional policies for child abuse or serving unaccompanied youth. Most state laws require immediate intervention if the trafficked victim is a minor.
- Ensure that any information regarding the patient's injuries or treatment is accurately documented in the patient's records, recognizing that, similar to sexual assault examinations, the medical record serves both medical and legal purposes.

Legal requirements regarding mandatory reporting of human trafficking differ from state to state, and situations may require mandatory reporting under related statutes even if the situation is not human trafficking (e.g., child abuse or domestic violence). State-specific information is available at: https://polarisproject.org/resources/state-ratings-on-human-trafficking-laws/

Refer to your local or state requirements for additional information regarding mandatory reporting.

Four fundamental principles have been recommended for healthcare professionals who come into contact with people who have been, or are being, trafficked:[8]

1. Use a trauma-informed, resilience-oriented, human rights-focused, and culturally sensitive approach to the care of *all* patients.
2. Collaborate with and seek advice from colleagues who have been engaged in anti-trafficking or other violence prevention work.
3. Partner with advocates, social service providers, case managers, and others from outside the health sector to improve referral services and achieve a more effective overall response to human trafficking.
4. Play an active role in self-directed education and training about human trafficking.

USING A TRAUMA-INFORMED APPROACH

At a glance, it is easy to appreciate the trauma of a massive motor vehicle accident, but a patient who is trafficked is experiencing a similarly powerful, but far less visible, traumatic event. The task for clinicians is to recognize trafficking when they see it and respond appropriately. The patient's experiences can be dehumanizing, shocking or terrifying, can involve singular or multiple compounding events over time, and often include betrayal of a trusted person or institution and a loss of safety.[24] These experiences can mean that ordinary medical procedures, such as asking a patient to undress for an exam, performing a gynecological exam, or even simply checking blood pressure, can be threatening or anxiety-provoking.

Trauma-informed care (also known as trauma-sensitive or trauma-aware care) is one way to provide effective and compassionate care for patients who may be trafficked or are otherwise traumatized. The Substance Abuse and Mental Health Services Administration (SAMHSA) defines trauma-informed care as a program, organization, or system that:[24]

1. Realizes the widespread impact of trauma and understands potential paths for recovery.
2. Recognizes the signs and symptoms of trauma in clients, families, staff, and others involved with the system.
3. Responds by fully integrating knowledge about trauma into policies, procedures, and practices.
4. Seeks to actively resist re-traumatization.

Trauma-specific intervention programs generally:

- Acknowledge the survivor's need to be respected, informed, connected, and hopeful regarding their own recovery.
- Address the interrelation between trauma and symptoms of trauma such as substance abuse, eating disorders, depression, and anxiety.
- Collaboratively work with survivors, family and friends of the survivor, and other human services agencies in a manner that will empower survivors and consumers.

Other trauma-informed approaches support the need for fundamental safety throughout the healthcare system (e.g., the Sanctuary model. Information at http://sanctuaryweb.com/) Additional intervention information can be found in a manual about trauma-informed care published by SAMHSA and available at: https://store.samhsa.gov/product/TIP-57-Trauma-Informed-Care-in-Behavioral-Health-Services/SMA14-4816

Taking a history

No evidence-based recommendations guide assessment and evaluation processes in the context of known or suspected human trafficking. Practice-based evidence, however, has been used to generate recommendations for screening and inquiry in these situations.

Survivors of trauma report that disclosure may be more likely if health care providers are perceived to be knowledgeable about abuse and violence, nonjudgmental, respectful, supportive, and use a trauma-sensitive approach to evaluation and treatment.[8] Given the impact of adverse childhood experiences and other traumatic exposures on later physical and mental health and well-being, some experts recommend embedding specific questions about trafficking after a trusting relationship has been established. The length of time it takes to establish such a relationship with a victimized individual varies widely—it may take just a few minutes or require multiple separate visits.

Once rapport has been developed with the patient, and confidentiality (along with its limits) has been communicated clearly, questions about possible human trafficking and other forms of coercive control can be asked.

If you suspect human trafficking, try to start with indirect questions. Enlist the help of a staff member and/or interpreter who has knowledge of the patient's language and culture after confirming there is no conflict of interest. Attempt to interview the patient alone without raising suspicions. You may need to be creative in finding opportunities to interview the patient alone, as traffickers may accompany patients to their visits and insist on staying with the patient throughout the encounter. Requesting that the patient leave the room for specific tests, such as x-rays, or urine testing, even when not necessary, may provide time away from the escort to ask questions in a confidential environment.

Examples of probing questions:

1. Has your identification or documentation been taken from you?
2. What are your working or living conditions like?
3. Where do you sleep and eat?
4. Can you leave your job or situation if you want?
5. Do you sleep in a bed, on a cot or on the floor?
6. Do you have to ask permission to eat, sleep or go to the bathroom?
7. Can you come and go as you please?
8. Have you ever been deprived of food, water, sleep or medical care?
9. Are there locks on your doors and windows? Do you lock them or does someone else? (e.g., so you cannot get out)
10. Have you been threatened if you try to leave?
11. Have you been physically harmed in any way?
12. Is anyone forcing you to do anything that you do not want to do?
13. Has anyone threatened your family?

Physical examination

A physical examination should be performed carefully and sensitively, guided by the clinical presentation and by information gleaned from the history. In cases involving sexual violence and other forms of trauma, forensic evaluation and evidence collection should be offered when appropriate (e.g., if the most recent sexual assault has occurred within 120 hours of presentation, and with the patient's consent or in conjunction with mandated reporter responsibilities).8 Forensic evaluation and evidence collection should be performed using approved sexual assault evidence collection kits. If available in your area, sexual assault/forensic nurse examiners, who have specific training in forensic evaluation and evidence collection, should be used.

Abuse and violence, including that resulting from human trafficking, should be suspected when any of these physical findings are noted:

- Bilateral or multiple injuries.
- Evidence consistent with rape or sexual assault.
- Evidence of acute or chronic trauma, especially to the face, torso, breasts, or genitals.
- Pregnant woman with any injury, particularly to the abdomen or breasts; vaginal bleeding; or decreased fetal movement.
- Body tattoos that are the mark of a pimp or trafficker.
- Occupational injuries not linked clearly to legitimate employment.

Case study: Clinical consideration part 1

A young woman, Jessica, presents to the local clinic requesting evaluation for genital sores and vaginal discharge. You notice on her intake information that she is paying cash for this visit, and further review of her records reveals that she does not have a permanent address and has presented on multiple occasions to the clinic with similar symptoms. She is accompanied by her boyfriend, Mark, who largely speaks for Jessica, answering the questions, while she remains sitting quietly on the examination table. Jessica appears withdrawn and does not make eye contact with you. She appears to have superficial abrasions and bruises in various stages of healing on her upper extremities.

1. Take a moment to consider the many clues of this encounter that could indicate this young woman may be a victim of human trafficking.

Documentation

Clinicians should carefully and accurately document all findings in the medical record, not only because this is standard care for all patients, but because such data may be valuable if the patient seeks legal redress. The patient's medical history, physical findings, and oral disclosures, should be documented in writing, in an unbiased manner, using direct, unaltered quotes from the patient, to the extent possible. Photographic documentation of physical findings may be appropriate, with the patient's permission. Images should contain the patient's face and the injury or lesion measured with a ruler or other common object (such as a coin). Additional photographs can document close up views of each relevant injury or lesion. Patients should be informed that they have a right to refuse photographic documentation altogether or to restrict photographic documentation to certain specific areas if they so choose. The words "suspected human trafficking" as a finding, diagnosis, or problem should be included in the chart when appropriate.[8]

The Clinical Goal: The clinician's goal should not be to "get a disclosure" from a patient suspected of being trafficked or otherwise abused.[8] Instead, the health care provider should work to create a climate that allows every patient to feel safe, secure, cared for, validated, and empowered to disclose if he or she chooses. Disclosure might occur later if the patient does not feel ready to disclose in the immediate clinical setting. Therefore, each individual clinical encounter should be viewed as a step on a pathway to safety for at-risk patients.

RISK ASSESSMENT AND SAFETY PLANNING

If trafficking has been disclosed, clinicians can help the patient by:

- Having the patient assess his or her own personal risk.
- Making an independent judgment about that risk and communicating this opinion to the patient.
- Talking about safety planning.
- Making referrals to appropriate case management services for more detailed safety planning and case management.

Patients may minimize or deny the danger they face, hence clinicians should note the following "red flag" signs of heightened risk:

- More frequent or severe threats or assaults.
- New or increasingly violent behavior by the perpetrator.
- Increasing or new threats of homicide (or suicide by the trafficker) if the patient discloses.
- The presence or availability of lethal weapons in the residence.

Detailed safety planning and related case management are best undertaken by those with specific expertise in this area: advocates, social workers, and case managers.

These expert partners are generally equipped with the time and expertise needed to address each patient's immediate, short-term, and long-term needs, and to arrange for appropriate follow-up with known and trained community-based resources.

Safety and training of health care workers

Since traffickers may be involved in various criminal enterprises, protecting health care workers is essential. The following suggestions include general safety measures as well as those specifically applicable to health care workers who may help victims of human trafficking:[16]

- Build relationships with local police or security personnel.
- Review emergency plans periodically.
- Restrict after-hours access.
- Improve lighting at entrances and parking areas.
- Install security cameras, mirrors, and panic buzzers.
- Restrict access to all doors except the main entrance.
- Pre Program 911 into all phones.

Quality improvement programs of various kinds can create and support policy changes regarding safety and high quality health care systems. One training program specific to human trafficking is SOAR to Health And Wellness Training. (SOAR is an acronym for Stop, Observe, Ask and Respond to Human Trafficking.) The program is available at https://www.acf.hhs.gov/otip/training/soar-to-health-and-wellness-training

Legal considerations

> "Health care providers are not required to—and in fact may not—report suspected instances of human trafficking that involve a competent adult victim, without the patient's express consent."[8]

Clinicians should not involve law enforcement and/or social service providers (e.g., housing/shelter services, legal services, and case management) without first obtaining the explicit informed consent of the patient, or unless otherwise required under relevant law. These laws may include mandatory reporting laws for children, disabled adults, elders, and others. Privacy breaches can erode the provider-patient relationship and remove the autonomy patients deserve and need for making informed decisions for their own safety and future. As in cases of intimate partner violence, therefore, health care providers must follow the lead of the patient and respect the decisions of those who decide not to contact law enforcement or accept referrals to other services.

Domestic as well as international victims of human trafficking have specific legal rights under federal and state law, but may not know of these rights or be in a position to exercise them. If the patient is willing, a referral to law enforcement, attorneys, or legal service providers is appropriate.

Case study: Clinical consideration part 2

Continuing Jessica's visit, you are now beginning her physical examination. Mark indicates he would like to remain in the room during the examination, Jessica agrees and consents to his presence. He stands next to the head of the bed during the pelvic examination. Upon completion, you have identified an outbreak of Genital Herpes, and microscopic examination of the discharge reveals Trichomoniasis, two sexually transmitted diseases. Mark seems unusually undisturbed by the diagnoses.

You are concerned about Jessica's current living situation and would like to question her privately. In discussing the diagnoses with Jessica and Mark, you indicate that she must undergo urine pregnancy testing before beginning treatment and request that she accompany you to the restroom to provide a urine sample. Mark offers to go with her and wait outside of the restroom. You explain that it is not possible as the route to the restroom may pass other patients' rooms, that the restroom is in a location shared with other patients, and you must protect their privacy. Mark quickly replies that it is impossible for Jessica to be pregnant, as she is compliant with her oral contraceptives, her periods are normal and questions the necessity of the test. You indicate she will not be treated until the test is complete, and Mark reluctantly agrees.

You lead Jessica to a private conference room and emphasize that everything the two of you discuss will remain confidential.

You preface your questions by stating, "I am worried about you, and would like to ask some questions about your current living conditions and situation so that I might help you."

1. Take a moment to consider how you might respond if Jessica refuses to answer any further questions.
2. Take a moment to consider ways you could help Jessica if she did indeed admit to being a victim of human trafficking.

Conclusion

Clinicians, as "first contacts," have an imperative to make a difference for their patients. Human trafficking poses many health risks, including physical injury, death, and/or long-lasting psychological damage. In the absence of validated tools to screen for victims of human trafficking, health care providers may need to consider implementing universal methods and policies to create a safe environment for all patients. Clinicians who encounter a trafficked person or other exploited individual have a unique opportunity to provide essential medical care and supportive referral options that may be an individual's first step towards safety and recovery.

Resources

Texas resources

- Texas Office of the Attorney General
  humantrafficking@oag.texas.gov
  512-463-1646
- Texas Child Protective Services
  800-252-5400
- Texas Department of Public Safety, Victim Services
  512-424-2211
  dps.texas.gov/administration/staff_support/victimservices/pages/index.htm

National Resources

- Coalition Against Trafficking in Women
  www.catwinternational.org
- Human Rights Watch
  www.hrw.org
- SOAR to Health and Wellness
  acf.hhs.gov/endtrafficking/initiatives/soar
- HEAL Trafficking
  https://healtrafficking.org
- Caring for Trafficked Persons: A Guide for Health Providers
  http://publications.iom.int/books/caring-trafficked-persons-guidance-health-providers
- National Human Trafficking Resource Center (NHTRC)
  Hotline (24/7): 1-888-373-7888
  http://traffickingresourcecenter.org/
- Polaris Project
  www.polarisproject.org

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Final Examination Questions

Select the best answer for each question and mark your answers on the Final Examination Answer Sheet found on page 99, or complete your test online at **EliteLearning.com/Book**

1. Which of the following is not an industry in which people who are trafficked often work?
   a. Restaurants.
   b. Education.
   c. Agriculture.
   d. Fisheries.
2. Which is a common method used by human traffickers to control and manipulate their victims?
   a. Exposure to loud music.
   b. Isolation from family members.
   c. Lawsuits.
   d. Large payments for illicit or illegal behaviors.
3. Which statement best describes the use of the terms "victim" and "survivor" in relation to human trafficking?
   a. Both terms may be appropriate depending on the circumstances of the person being trafficked.
   b. The term "victim" is preferred because it emphasizes how much those being trafficked suffer.
   c. The term "survivor" is preferred because it recognizes that the individual is "surviving" despite their current situation.
   d. Neither term is preferred because both are emotionally loaded—the preferred term is "person being trafficked."
4. In a study of people involved in sex trafficking, what percentage had at least one encounter with a health care provider while they were being trafficked?
   a. 18%.
   b. 45%.
   c. 88%.
   d. 95%.
5. Which statement best summarizes the finding of several studies about the role or behaviors of health care providers relating to human trafficking?
   a. Most providers have been educated about the problem of human trafficking but do not have time to adequately address the needs of trafficked patients.
   b. Many providers are unprepared to identify trafficking victims when they are encountered in clinical settings.
   c. Many providers can identify trafficking victims, but they often do not follow up with appropriate referrals to external sources of support.
   d. Most providers are not exposed to the issue of human trafficking in medical school.
6. What is one possible way to increase the identification in health care settings of people who are being trafficked?
   a. Install security cameras in waiting rooms.
   b. Train non-clinical staff (e.g., receptionists, security guards) in ways to identify human trafficking and to communicate with medical personnel.
   c. Require all patients to fill out a questionnaire about human trafficking.
   d. Require that all patients are asked about human trafficking when signing in for their visit.
7. If a patient suspected of being trafficked does not speak English, or is not comfortable speaking English, the best approach is:
   a. Have the patient's friend or relative translate for them.
   b. Use printed materials that have been translated into other common languages.
   c. Use a professional interpreter or someone unrelated to the patient.
   d. Use the language translation phone application on your smartphone to communicate.
8. Before asking a patient questions about human trafficking, it's best if clinicians:
   a. Establish a rapport with the patient and separate the patient from any people who may have accompanied him or her on the visit.
   b. Use a written questionnaire to screen for potential signs of human trafficking.
   c. Perform a thorough physical examination.
   d. Check the patient's health insurance status using an online database.
9. If a patient discloses that they are a victim of human trafficking:
   a. Police must be notified.
   b. Any escort accompanying the patient should be detained by the office staff.
   c. Injuries must be carefully documented and detailed in their medical record.
   d. Insist that they take pamphlets and information regarding human trafficking with them at their time of discharge.
10. Why is it important, in the context of human trafficking, to train all clinical and non-clinical staff on safety and security procedures?
    a. Because victims of human trafficking are often violent.
    b. Because traffickers may be involved in various criminal enterprises and present a threat of violence.
    c. Because victims of human trafficking are more likely to be infected with contagious diseases.
    d. To conform with local or state laws related to the treatment of victims of human trafficking.

Course Code: ANCCTX01RR

Care of Older Adults for Texas Nurses, 2nd Edition

2 Contact Hours

Release Date: September 15, 2022

Expiration Date: September 15, 2025

Faculty

Adrianne E. Avillion, DEd, RN, is an accomplished nursing professional development specialist and health care author. She earned her doctoral degree in adult education and her MS in nursing from Penn State University, and a BSN from Bloomsburg University. Dr. Avillion has held a variety of nursing positions as a staff nurse in critical care and physical medicine and rehabilitation settings with an emphasis on neurological and mental health nursing as well as a number of leadership roles in nursing professional development. She has published extensively and is a frequent presenter at conferences and conventions devoted to the specialty of continuing education and nursing professional development. Dr. Avillion owns and is the CEO of Strategic Nursing Professional Development, a business that specializes in continuing education for healthcare professionals and consulting services in nursing professional development. Her publications include the following: *The Path to Stress-Free Nursing Professional Development: 50 No-Nonsense Solutions to Everyday Challenges and Nursing Professional Development: A Practical Guide for Evidence-Based Education*.

Adrianne E. Avillion has disclosed that she has no significant financial or other conflicts of interest pertaining to this course.

Reviewer:

Robin McCormick, DNP, MSN, RN, is a registered nurse with a research focus on vulnerable populations, maternal–child outcomes, and adult health. She has over 20 years of clinical nursing experience working in medical-surgical nursing and critical care. She received a BSN from Troy University, an MSN from the University of South Alabama, and a Doctorate of Nursing Practice from Troy University. She worked as an assistant professor of nursing at Troy University for over six years. She currently serves as a nurse planner for Colibri Healthcare.

Robin McCormick has disclosed that she has no significant financial or other conflicts of interest pertaining to this course.

Course overview

The purpose of this course is to assist nurses to be prepared to provide safe and appropriate nursing care for older adults. Components of the course include information on elder abuse; age-related memory changes; and health maintenance and disease processes, including chronic conditions and end-of-life issues. The course meets the continuing education requirements mandated by the Texas Board of Nursing as they pertain to the older adult.

Learning objectives

After completing this course, the learner will be able to:

- Differentiate among the different types of elder abuse.
- Identify risk factors for elder abuse.
- Describe the reporting process for elder abuse.
- Describe the assessment process for elder abuse.
- Explain interventions to deal with elder abuse.
- Describe age-related memory and cognitive changes in older adults.
- Identify strategies to enhance memory and cognition in older adults.
- Describe strategies for dealing with behaviors associated with dementia.
- Describe ways to reduce the impact of chronic conditions in the older adult population.
- Identify helpful end-of-life care strategies.
- Discuss intent to change practice and nursing interventions.

How to receive credit

- Read the entire course online or in print which requires a 2-hour commitment of time.
- Complete the self-assessment quiz questions which are at the end of the course or integrated throughout the course. These questions are NOT GRADED. The correct answer is shown after you answer the question. If the incorrect answer is selected, the rationale for the correct answer is provided. These questions help to affirm what you have learned from the course.
- Depending on your state requirements you will be asked to complete either:
  - An affirmation that you have completed the educational activity.
  - A mandatory test (a passing score of 70 percent is required). Test questions link content to learning objectives as a method to enhance individualized learning and material retention.
- If requested, provide required personal information and payment information.
- Complete the MANDATORY Course Evaluation.
- Print your Certificate of Completion.

CE Broker reporting

Colibri Healthcare, LLC, provider # 50-4007, reports course completion results within 1 business day to CE Broker. If you are licensed in Arkansas, District of Columbia, Florida, Georgia, Kentucky, Michigan, Mississippi, New Mexico, North Dakota, South Carolina, or West Virginia, your successful completion results will be automatically reported for you.

Accreditations and approvals

Colibri Healthcare, LLC is accredited as a provider of nursing continuing professional development by the American Nurses Credentialing Center's Commission on Accreditation.

Individual state nursing approvals

Colibri Healthcare, LLC is accredited as a provider of nursing continuing professional development by the American Nurses Credentialing Center's Commission on Accreditation. In addition to states that accept courses offered by ANCC accredited Providers, Colibri Healthcare, LLC is an approved Provider of continuing education in nursing by: Alabama Board of Nursing, Provider #ABNP1418 (valid through February 5, 2025); Arkansas State Board of Nursing, Provider #50-4007; California Board of Registered Nursing, Provider #CEP17480 (valid through January 31, 2024); California Board of Vocational Nursing and Psychiatric Technicians (LVN Provider #V15058, PT Provider #V15020; valid through December 31, 2023); District of Columbia Board of Nursing, Provider #50-4007; Florida Board of Nursing, Provider #50-4007; Georgia Board of Nursing, Provider #50-4007; Kentucky Board of Nursing, Provider #7-0076 (valid through December 31, 2023; CE Broker Provider #50-4007); Michigan Board of Nursing, Provider #50-4007; Mississippi Board of Nursing, Provider #50-4007; New Mexico Board of Nursing, Provider #50-4007; North Dakota Board of Nursing, Provider #50-4007; South Carolina Board of Nursing, Provider #50-4007; and West Virginia Board of Registered Nurses, Provider #50-4007. This CE program satisfies the Massachusetts States Board's regulatory requirements as defined in 244 CMR5.00: Continuing Education.

Activity director

June D. Thompson, DrPH, MSN, RN, FAEN, Lead Nurse Planner

Disclosures

Resolution of conflict of interest
In accordance with the ANCC Standards for Commercial Support for continuing education, Colibri Healthcare, LLC implemented mechanisms prior to the planning and implementation of the continuing education activity, to identify and resolve conflicts of interest for all individuals in a position to control content of the course activity.

Sponsorship/commercial support and non-endorsement
It is the policy of Colibri Healthcare, LLC not to accept commercial support. Furthermore, commercial interests are prohibited from distributing or providing access to this activity to learners.

Disclaimer

The information provided in this activity is for continuing education purposes only and is not meant to substitute for the independent medical judgment of a healthcare provider relative to diagnostic and treatment options of a specific patient's medical condition.

Course verification

All individuals involved have disclosed that they have no significant financial or other conflicts of interest pertaining to this course. Likewise, and in compliance with California Assembly Bill No. 241, every reasonable effort has been made to ensure that the content in this course is balanced and unbiased.

INTRODUCTION

The number of Americans 65 years of age and older is growing at a rapid pace. The population age 65 and over increased from 37.2 million in 2006 to 54.1 million in 2021, which is 16.8% of the U.S. population (U.S. Census Bureau, 2022). The population is projected to reach 80.8 million by 2040 and 94.7 million by 2060 (Administration for Community Living [ACL], 2022).

Increasing numbers of older adults in the U.S. mean that healthcare professionals (HCPs) must be prepared to provide safe and appropriate healthcare for a segment of the population that is rapidly growing. Part of this preparation includes providing care to people with chronic illnesses and memory changes. End-of-life care will become even more important as the population ages. Unfortunately, the recognition, intervention, and prevention of cases of elder abuse will also grow in importance because this problem is a growing concern.

In Texas, nearly 13% of the population, or 3.7 million people, are 65 and older, and the number is growing. It is estimated that by 2050, that number will increase to nearly 17% (Texas Health and Human Services, 2022). This means that there will be an increased demand for healthcare, home care, personal care, long-term care, and healthcare professionals with expertise in gerontology.

This education program, which meets the mandatory older adult continuing education requirements of the Texas Board of Nursing, focuses on the following:

- Elder abuse.
- Age-related memory changes and disease processes (including chronic conditions).
- End-of-life issues.
- Health maintenance.
- Health promotion.

ELDER ABUSE

Definitions of elder abuse vary somewhat from state to state. In Texas, according to the Texas Human Resources Code, Section 48.002(a)(2), elder abuse is defined as:

A. The negligent or willful infliction of injury, unreasonable confinement, intimidation, or cruel punishment with resulting physical or emotional harm or pain to an elderly person or person with a disability by the person's caretaker, family member, or other individual who has an ongoing relationship with the person; or

B. Sexual abuse of an elderly person or person with a disability, including any involuntary or nonconsensual sexual conduct that would constitute an offense under Section 21.08, Penal Code (indecent exposure) or Chapter 22, Penal Code (assaultive offenses), committed by the person's caretaker, family member, or other individual who has an ongoing relationship with the person. (Statutes.capitol.texas.gov, 2015).

The following are additional definitions related to abuse from the Texas Human Resources Code Section 48.002 (Statutes.capitol.texas.gov, 2015):

- **Exploitation**: "The illegal or improper act or process of a caretaker, family member, or other individual who has an ongoing relationship with the elderly or disabled person using the resources of an elderly or disabled person for monetary or personal benefit, profit, or gain without the informed consent of the elderly or disabled person."
- **Neglect**: "The failure to provide for one's self, the goods or services, including medical services, which are necessary to avoid physical or emotional harm or pain or the failure of a caretaker to provide such goods or services."

Legislatures in all 50 states have passed some form of elder abuse prevention laws (National Center on Elder Abuse, n.d.a). Elder abuse can have serious, even fatal, consequences. It is important that nurses understand, in detail, each type of elder abuse and the corresponding signs and symptoms.

Physical abuse

The National Center on Elder Abuse (NCEA) defines physical abuse as the "use of physical force that may result in bodily injury, physical pain, or functional impairment" (NCEA, n.d.a).

Examples of physical abuse include, but are not limited to, the following actions (NCEA, n.d.a; Nursing Home Abuse Center, 2020):

- Striking (with or without an object).
- Bruising.
- Hitting.
- Shaking.
- Slapping.
- Kicking.
- Pinching.
- Punching.
- Pushing/shoving.
- Burning.
- Inappropriate use of drugs.
- Restraining.
- Scratching.
- Forced feeding.

Nurses must be able to recognize signs and symptoms of physical abuse, which include the following (Flomenbaum, 2017; NCEA, n.d.a; Nursing Home Abuse Center, 2020):

- Bruises, black eyes, and welts (most commonly found on the head, neck, face, posterior torso, and upper arms).
- Bone fractures, including skull fractures.
- Open wounds, cuts, punctures, and lacerations.
- Sprains, dislocations, and internal injuries or bleeding.
- Signs of being restrained, such as rope marks, bruising around ankles or wrists.
- Broken eyeglasses.
- Laboratory evidence of overdose or underuse of prescribed drugs.
- An older adult's report of being abused.
- A sudden change in the older adult's behavior, such as becoming agitated, fearful, or depressed.
- A caregiver's refusal to allow visitors, family members, or healthcare workers to see the older adult alone.

Nurses must also pay attention to the pattern of injuries found on the older adult's body. The following patterns of injury indicate abuse rather than accidental injury (Flomenbaum, 2017; NCEA, n.d.a; Nursing Home Abuse Center, 2020):

- Bilateral bruising over the upper arms, lateral arms, or anterior arms.
- Face, skull, and neck injuries.
- Bruising, cuts, lacerations, scars, or other wounds around the breasts or genital areas.
- Bruises or injuries that have a particular pattern—a cigarette burn, the imprint of a hand or an object such as a cane.
- Bruises in different stages of healing.
- Unexplained injuries or injuries that do not fit with the elder's (or the elder's caregiver's) explanation of how the elder was injured.

Nursing consideration: Not all injuries are caused by physical abuse. Older adults do fall and bump into things. Nurses should perform a thorough physical and mental assessment as well as observe the older adults and their interactions with family, friends, and healthcare workers to help differentiate accidents from abuse.

Self-Assessment Question #1

Sandy is a registered nurse who works in a busy pediatric office. One day, a toddler's 68-year-old grandmother brings the child in for a wellness visit. It is a warm summer day, but the grandmother is wearing a long-sleeved sweater. Sandy asks if the woman would like to remove her sweater since it is quite warm in the office due to a malfunction of the air conditioning system. The woman shakes her head, rather sadly, and declines. As the child and his grandmother leave the office, Sandy, who is leaving the office for her lunch break, happens to walk by the grandmother's car. She notices that the grandmother has removed her sweater. The upper portions of both of the woman's arms are covered with purple bruises in various stages of healing. Sandy is alarmed and is concerned that the woman may have been abused.

Which of the following statements best describes Sandy's circumstances?

a. Sandy must realize that older adults fall and bruise themselves, and the bruises are most likely caused by an accident.
b. Sandy cannot report her suspicions unless the toddler's grandmother admits to abuse.
c. Sandy should get permission from her employer to report the abuse.
d. Sandy knows that a pattern of bilateral bruising on the upper arms is characteristic of physical abuse.

Sexual abuse

Texas defines sexual abuse as "Any involuntary or nonconsensual sexual conduct committed by the person's caretaker, family member, or other individual who has an ongoing relationship with the person" (Statutes.capitol.texas.gov, 2015). The Nursing Home Abuse Center (2022a) defines sexual abuse of the older adult as "an action against an elder that is unwanted and sexual in origin. It usually involves those older than 60 years of age." Such actions also include the taking of visual images (e.g., photographs of a sexual nature). Furthermore, "[A]dult sexual abuse includes any sexual contact with an elder who, because of mental illness or dementia, cannot communicate their disapproval of the behavior against them or cannot communicate consent for the activity" (Nursing Home Abuse Center, 2022a).

Signs of sexual abuse inflicted upon the older adult include (Nursing Home Abuse Center, 2022a):

- Pelvic injury.
- Difficulty walking or sitting.
- Torn, bloody, or stained underwear.
- Bruises of the genitals or inner thigh.
- Anal or genital bleeding.
- Irritation or pain of the anus or genitals.
- Panic attacks.
- Signs of posttraumatic stress disorder (PTSD).
- Agitation.
- Social or emotional withdrawal.
- Engaging in inappropriate, unusual, or aggressive sexual activities.

Emotional or psychological abuse

Monica is a nurse practitioner who specializes in geriatric care at a large medical center. She stops outside one of her patient's hospital room and overhears the patient's son speaking in an angry tone of voice. He tells his father, "You are really a stupid old man. You had better learn to behave yourself or I won't let you come back home to live with me and my family. And believe me, nobody else will put up with an old man like you." Monica is horrified and decides to monitor this patient for evidence of emotional or psychological abuse.

Emotional and psychological abuse involves intentional acts that cause mental pain, fear, or distress in an older adult (Nursing Home Abuse Center, 2022b). Examples of this type of abuse include (Nursing Home Abuse Center, 2022b):

- Barring access to resources.
- Humiliating.
- Insulting.
- Intimidating.
- Isolating.
- Name calling.
- Threatening.
- Terrorizing.

Signs of emotional and psychological abuse include (Nursing Home Abuse Center, 2022b):

- Appearing depressed.
- Appearing withdrawn.
- Attempting to hurt others.
- Avoiding eye contact.
- Demonstrating a change in eating or sleeping patterns.
- Being isolated from family and friends.
- Having low self-esteem.
- Having mood swings.

Neglect

Margaret lives in an upper-middle-class neighborhood. She is especially fond of her neighbors, Leslie and Paul Mason. She thinks they are wonderful people, so kind and thoughtful. And they have been so generous to take in Leslie's elderly mother. She thinks, "I wonder if the old lady is sick. I hardly ever see her anymore." That afternoon, Margaret receives some mail for the Masons by mistake. She knocks on their door to deliver it and Leslie's mother answers the door and says, "My daughter isn't home. She doesn't like it when I talk to anybody else." Even though it is a cold winter's day, Leslie's mother is wearing a thin dress with short sleeves and no shoes or stockings. Her hair is dirty and untidy. Margaret asks the woman if she is sick and says, "Aren't you cold in that little dress?" The woman replies, "This is the only dress I have." Could this woman be a victim of neglect?

Texas defines neglect as "The failure to provide for one's self the goods or services, including medical services, which are necessary to avoid physical or emotional harm or pain or the failure of a caretaker to provide such goods or services" (Statutes.capitol.texas.gov. 2015).

Evidence-Based Practice Alert! An estimated 1 in 10 Americans aged 60 and older have experienced some form of abuse. Only about 1 in 14 cases of abuse are reported to authorities (National Council on Aging [NCOA], n.d.a). The World Health Organization (WHO) reports that 4.2% of abuse reported by older adults who live in community settings is neglect. In institutionalized settings, 11.6% of the cases of older adult abuse reported by older adults were of neglect. For neglect reported by staff, 12% of reported cases were of neglect (WHO, 2022).

Examples of neglect of the older adult include failure to provide or adequately provide (Nursing Home Abuse Center, 2022b):

- Basic daily living activities.
- Clothing.
- Hygiene maintenance.
- Medical care.
- Nutrition and hydration.
- Shelter.

Abandonment

Traffic is heavy, and Liz is late arriving for her shift as a triage nurse in the emergency department (ED). As she hurries to the ED entrance, Liz notices an elderly man slumped on the sidewalk. He is wearing only a thin sweater even though the night is cold. He is crying. Liz hurries to him. She asks him his name and if he is hurt. He replies, "They told me they were tired of taking care of me. They said they were going to get rid of me. My own children!" The man has been abandoned.

Abandonment is the desertion of an older adult by a person who has the responsibility for providing care for the older adult, or by a person with physical custody of an elder. Signs of abandonment include, but are not limited to (NCEA, n.d.a):

- The desertion of an older adult at a hospital, nursing facility, or a similar institution.
- The desertion of an older adult at a public location such as a shopping center.
- An older adult's report of being abandoned.

Financial abuse

Ruth is helping her 10-year-old daughter deliver Girl Scout cookies ordered by friends and neighbors. They stop at Mrs. Wilson's house to deliver her cookies and to obtain payment. When Mrs. Wilson answers the door, she smiles and asks them to come in. "I'll just get some cash to pay you." She leaves the room and is gone for nearly 20 minutes. When Mrs. Wilson returns, she is tearful and trembling. "My money is gone. I keep about $300 in the house. My daughter and her husband were here, and every time they visit, I find money missing!" Could Mrs. Wilson be the victim of financial abuse?

Financial abuse is the unauthorized use of property, assets, funds, credit cards, or bank accounts by someone who is in a supposedly trusting relationship with the older adult. This includes stealing cash and checks, forging signatures, identity theft, charity scams, and making unauthorized or pressuring an elder to make financial investments (NCEA, n.d.c; Nursing Home Abuse Center, 2022b).

Signs and symptoms of financial abuse include (NCEA, n.d.c; Nursing Home Abuse Center, 2020):

- Sudden or unexplained changes in bank account balances or banking practices.
- Adding names to an older adult's bank accounts, credit cards, or bank signature cards.
- Unauthorized ATM withdrawals.
- Sudden or unexplained changes in a will or other financial documents.
- Unexplained disappearance of money or valuable possessions.
- Unpaid bills.
- Substandard care even though adequate financial funds were available.
- Discovery of forged signatures on the older adult's financial documents.
- Sudden appearance of relatives who were not previously involved with the older adult but who claim that they have rights to the older adult's financial assets.
- An older adult's report of financial abuse.

Self-neglect

Mr. Samson is a 75-year-old retired electrical engineer. He is a widower and has no children. Well-off financially, Mr. Samson lives in the home he and his wife shared. One of his few relatives is a niece. She arrives at the local Adult Protective Services (APS) office in considerable distress. She is concerned about her uncle. She tells the caseworker, "My uncle has plenty of money and a beautiful home, but he just won't take care of himself. He won't bathe or eat properly or take his blood pressure medicine. The house is getting dirty, too. I try to get him to see a doctor, but he won't! He tells me to mind my own business when I try to talk to him about taking care of himself, but something needs to be done!" Mr. Samson is a victim of self-neglect.

Nursing consideration: The definition of self-neglect *does not* include a situation where mentally competent elders who understand the consequences of their own actions make a deliberate and voluntary decision to behave in ways that threaten their health or safety (NCEA, n.d.c).

Self-neglect is defined as the behavior of older adults that threatens their own health or safety. Examples include an older adult who does not take prescribed medications, consume adequate food or water, or perform necessary personal hygiene (NCEA, n.d.c; Nursing Home Abuse Center, 2020).

Signs and symptoms of self-neglect include the following (NCEA, n.d.c; Nursing Home Abuse Center, 2020):

- Dehydration.
- Malnutrition.
- Untreated medical condition.
- Failure to seek medical help when needed.
- Living in an unsanitary environment.
- Living in an unsafe environment.
- Inadequate or inappropriate clothing.

Nursing interventions and intent to change practice

Nurses need to have knowledge of the types of older adult abuse, how to recognize them, and how to intervene. Changes in practice may include, in addition to recognition and intervention, the education of healthcare professionals as well as the general public regarding what constitutes older adult abuse, recognition, and what to do about it.

Self-Assessment Question #2

Alex is a community health nurse in east Texas. He is developing a class on older adult abuse for community leaders who have expressed concern about this issue in their community. Alex researches the various types of older adult abuse and how to recognize them.

Alex will provide examples of older adult abuse. Which of the following actions is NOT considered to be abuse?

a. Failure of an adult child to provide prescription refills for a parent.
b. Removal of the car keys from a parent with significant dementia.
c. Failure to routinely toilet a wheelchair confined older adult.
d. Cashing a parent's Social Security check and giving the parent only a small portion of the money.

Self-Assessment Question #3

One of the participants attending the education program tells Alex that there is no such thing as self-neglect. "A person can't abuse himself." Alex responds by explaining?

a. Self-neglect occurs when the behavior of an older adult threatens their own health and safety.
b. Self-neglect is a new category of abuse that will eventually be removed from the list of types of older adult abuse.
c. Self-neglect is not considered to be abuse unless it is accompanied by other, more obvious, types of abuse.
d. Self-neglect is not an "officially" recognized type of abuse but can be a problem.

RISK FACTORS FOR ELDER ABUSE

There are a number of risk factors that may increase the potential for abuse of an older adult. The following factors are some of the issues that increase the risk of abuse (Alegre Home Care, 2021; Centers for Disease Control and Prevention [CDC], 2020; WHO, 2022):

1. **Advanced age**
   The risk of abuse increases for persons over the age of 80. Advanced age is often associated with declines in health and physical and mental abilities. This can further increase the risk for abuse.
2. **Gender**
   Although both male and female older adults suffer abuse, women are more likely to be abused.
3. **Dementia**
   Older adults who have dementia are particularly vulnerable to abuse since the disease may prevent them from recognizing it or reporting it. Dementia is thought to increase risk because of increased caregiver burden when dealing with cognitively impaired older adults; the inability of the older adult to communicate effectively; and the possibility that the dementia/cognitive impairment may make the older adult aggressive (verbally or physically), thus increasing the risk that others may respond aggressively as well (Alzheimer's Association, 2022; CDC, 2020; WHO, 2022).
4. **Numerous serious illnesses**
   Older adults affected by many serious illnesses most likely need additional assistance with physical care, financial management, transportation to and from healthcare appointments, and the normal activities of daily life. Their ability to perform self-care activities and their cognitive abilities may deteriorate. These needs make an older adult vulnerable to physical and emotional regression and place additional burdens on caregivers. All of these factors increase the risk for abuse (Alegre Home Care, 2021; CDC, 2020; WHO, 2022).
5. **History of domestic violence**
   Spouses are often the perpetrators of elder abuse. Domestic violence that started when people were young may continue as both parties age (Alegre Home Care, 2021; CDC, 2020; WHO, 2022).
6. **Social isolation**
   Older adults who are unable to maintain contact with family or friends or participate in social activities are at greater risk for abuse. Abusers often deliberately isolate their victims from family, friends, and social outlets to hide their abuse. Or they may use isolation as a form of abuse (Alegre Home Care, 2021; CDC, 2020; WHO, 2022).

7. **Physical immobility**
   Research has shown that older adults whose physical mobility is compromised are at higher risk for abuse. Physical immobility may be accompanied by an increased need for physical assistance (Alegre Home Care, 2021; CDC, 2020; WHO, 2022).

8. **Low income**
   Although abuse can and does occur among persons at all socioeconomic levels, research has shown that it is more common among those who have a reduced or low income (Alegre Home Care, 2021; CDC, 2020; WHO, 2022).

Nursing interventions and intent to change practice

Knowing the risk factors for older adult abuse should trigger awareness on the part of the nurse. Incorporating risk factors into assessment may help to identify those people suffering from abuse and to get them help more quickly (Alegre Home Care, 2021; CDC, 2020; WHO, 2022).

Self-Assessment Question #4

Monica is a nurse practitioner who specializes in gerontology. She is part of a task force that is updating the screening methods for older adult abuse.

Monica will be sure to point out which of the following issues to her colleagues on the task force?

a. Persons between the ages of 65 and 75 years of age are at the highest risk for abuse.
b. Male and female adults are at equal risk for being abused.
c. Older adults who are unable to maintain contact with family or friends are at greater risk for abuse.
d. Domestic violence is a risk factor for abuse only if the abuse began at the age of 60 or older.

Risk factors for becoming an abuser

There are risk factors related to the abusers themselves. Some of these risk factors include (CDC, 2020; WHO, 2022):

- Current diagnosis of mental illness.
- Current abuse of alcohol or other substances.
- Exposure to or experience of abuse as a child.
- Currently lives with an older adult for whom the abuser is responsible.
- History of poor family interpersonal relationships.
- Poor or no preparation for taking care of older adults.
- Assumption of caregiving responsibilities at an early age.
- Inadequate coping skills.
- High financial and emotional dependence upon a vulnerable elder.
- Lack of social support.
- Lack of community support.
- Lack of access to community resources.
- Culture that has a high tolerance for and acceptance of aggressive behavior.
- Family members expected to care for older adults without help.

REPORTING OLDER ADULT ABUSE

The law

Texas law says that *anyone* who thinks a child or a person 65 years or older or an adult with disabilities is being abused, neglected, or exploited must report it to the Department of Family and Protective Services (DFPS). Texas law further states, "A person who reports abuse in good faith is immune from civil or criminal liability." The name of the person making the report is kept confidential. However, anyone who suspects abuse and does not report it can be held liable for criminal charges, which could be a misdemeanor or a felony (Texas Department of Family and Protective Services (DFPS), n.d.).

The following are some key points for Texas nurses when reporting older adult abuse (Paxton, n.d.; DFPS, n.d.; DFPS, 2021a):

- Nurses are mandated by law to report any case of suspected older adult abuse. Note that anyone in Texas who suspects older adult abuse is obligated to report it.
- Any person suspecting abuse and not reporting it can be held liable for a misdemeanor or state jail felony.
- Any Texas resident who knows about older adult abuse and decides not to report it will be charged and convicted of a Class B misdemeanor.
- Texas law forbids anyone from filing a false claim of older adult abuse.
- Adult Protective Services is responsible for investigating any claims of older adult abuse.
- A person who reports abuse in good faith is immune from civil or criminal liability.
- The DFPS keeps the name of the person making the report confidential.
- If the elder is in immediate danger, calling 911 for prompt intervention by emergency and law enforcement personnel is the protocol.
- The nurse is not responsible for determining why or how the abuse occurred.
- Suspected abuse of older adults living at home should be reported to APS at 1-800-252-5400.
- If abuse is suspected within the facility where the older adult is hospitalized, where they live as a resident of a long-term care facility, or within other healthcare institutions, the nurse should follow the policies and procedures of that facility for reporting the abuse. If attempts are made to cover up suspected abuse, the nurse is still obligated to report it to local APS.
- Even if a patient or other person that the nurse suspects is a victim of abuse asks them not to report it, the nurse is still legally mandated to report the suspected abuse.
- Anonymous reporting can be done by calling the local elder abuse hotline or APS.
- Nurses who report elder abuse are not responsible for proving that the abuse actually occurred. The agency that receives the report of suspected abuse is responsible for investigating and determining abuse.
- If the older adult suspected of being abused is living in a nursing home or assisted living facility, or is living at home and relies on a home health provider, the report must be made to the Texas Department of State Health Services at 1-800-458-9858.
- If the older adult is a resident of a long-term care facility that receives Medicaid funding, the suspected abuse should be reported to the Attorney General's Medicaid Fraud Control Unit at 1-800-252-8011.
- Abuse of a senior who is not in a healthcare facility can be reported to APS at 1-800-252-5400.

- If the situation is urgent or an emergency, and needs to be investigated within 24 hours, the Texas Abuse Hotline should be called at 1-800-252-5400. The hotline can be called 24 hours a day, seven days a week.
- Reports can also be made using a secure website at https://www.txabusehotline.org/Login/Default.aspx.
- Website reporting should not be used to report urgent or emergency situations. Instead, the hotline should be called.

Nursing interventions and intent to change practice

Nurses must know how to report older adult abuse. They should help colleagues and members of the community learn how to report such abuse.

Self-Assessment Question #5

Angela has recently retired from her position as a professor of history at an urban university in Texas. She comments to her friend, a registered nurse, "It's a joy to be able to do what I want and when I want. Another benefit is that I don't have to worry about reporting abuse since I'm no longer an active educator."

Which of the following statements concerning Angela's circumstances is accurate? What should her friend tell her?

a. The responsibility to report older adult abuse is limited to healthcare professionals, but Angela is still accountable for reporting child abuse.
b. Anyone in Texas who suspects older adult abuse should report such abuse to the Texas hotline, regardless of the severity of the abuse.
c. If Angela encounters an older adult that she suspects is being abused, she does not have to report it if the older adult asks her not to.
d. If Angela suspects abuse and does not report it, she can be held liable for a misdemeanor or state jail felony.

ASSESSMENT

The first step is to treat any injuries that require medical intervention. After assuring that the older adult is not in immediate danger, the nurse should conduct a thorough screening assessment. A history and head-to-toe physical exam should be obtained in a secure, private setting away from potential abusers and in an environment where the older adult feels safe (Earlam et al., 2018; Flomenbaum, 2017).

Screening tools

Older adult abuse screening tools may be quite helpful as the nurse conducts assessment and screening. Here are examples of such screening tools:

Elder Assessment Instrument (EAI)
The EAI is a 41-item assessment tool first published in 1984. It has seven sections that help to review signs and symptoms as well as other indicators of the various types of abuse (Fulmer, n.d.).

Elder-Abuse Suspicion Index (EASI)
The EASI was developed to help physicians identify patients who might be victims of abuse. It consists of six items, five of which are yes/no questions that the elder answers, and a sixth item that asks the physician if they have identified any behaviors that suggest abuse (FindLaw, 2021).

H-S/EAST
This is a six-item tool that can be self-reported by the older adult or via interview by a healthcare professional. It is suitable in an emergency or outpatient setting and has good cross-cultural adaptation (NCEA, 2016).

Vulnerability to Abuse Screening Scale (VASS)
This is a 12-item, self-reporting scale concerning dejection, coercion, and vulnerability (NCEA, 2016).

Nursing consideration: There are a significant number of older abuse screening tools. Healthcare organizations should choose (or develop) a tool that best meets their needs and ensure that it is consistently utilized.

Interventions for persons suffering from older adult abuse

All older adults should be screened for abuse. In a clinical setting, elders need a safe environment so their injuries (if present) can be treated and they can answer questions without fear of being overheard. Treatment is focused on dealing with the current consequences of the abuse and taking steps to prevent further abuse (NCEA, n.d.a; Tabloski, 2019).

If older adults are in immediate danger, it is important to separate them from the alleged abuser immediately. If the caregiver is no longer able to deal with the challenges of caring for the older adult, respite services and counseling are options that may help alleviate stress (NCOA, n.d.a; Paxton, n.d.).

All healthcare settings are required to have policies and procedures for dealing with suspected abuse, including circumstances that involve an employee as the possible abuser. Remember, the older adult must be separated from the caregiver so that the older adult can be questioned in private. Most victims of abuse do not readily report the abuse or identify their abuser (DFPS, 2021b; NCOA, n.d.a).

Documentation of findings is critical. It is especially important that documentation in the medical records be objective and factual. A body map is a helpful guide when documenting injuries (Stout, 2019; Tabloski, 2019).

Nursing consideration: Nurses must be careful not to draw conclusions, document personal opinions, or interpret the elder's comments (Stout, 2019).

Documentation should include the following (DFPS, 2021b; Stout, 2019; Tabloski, 2019):

- The time and place of injury, if known or reported by the older adult.
- The date and time of documentation.
- The exact location, size, color, and shape of the injury. The size should be measured with a ruler or tape measure. The size should never be estimated.
- The older adult's comments exactly as stated, in quotation marks. The nurse should not try to interpret the remarks or document personal opinions about the remarks.
- When documenting, the nurse should keep in mind the acronym OLD: observe, listen, document.

Here are some suggestions for helping older adults to stay safe in their homes (DFPS, 2021b; Olson & Hoglund, 2014):

- Assist older adults to develop a safety plan that includes a list of actions to take in the event of an abusive situation.
- Compile a list of telephone numbers for use in an emergency, including 911 or the number of a trusted friend or family member who could help in an emergency.

- Facilitate, if needed, a move to an alternative living situation (senior living community, assisted living community, long-term care facility).
- Register the older adult's telephone numbers with the National Do Not Call Registry to reduce telemarketing calls and the possibility of financial exploitation.
- Caution the older adult to shred financial documents before throwing them away.
- Warn the older adult not to give out personal or financial information to anyone except a trusted family member or friend.
- Help the older adult to develop a strategy to avoid social isolation. Referrals can be made to a visitor or to a well-being check program. Arrange a contact system for trusted neighbors, friends, or family members to check in on the older adult, or for the establishment of a buddy system for one elder to check in with another.
- Help the older adult identify transportation services for older adults.

Education can help HCPs, those who work in healthcare settings, older adults, family members, neighbors, and friends recognize and intervene in circumstances involving elder abuse. Community education programs can increase awareness of the problem and teach people what to do if they suspect elder abuse (DFPS, 2021b; Tabloski, 2019).

The primary goals relating to elder abuse are to prevent elder abuse and to remove older adults from dangerous situations when abuse is discovered. Nurses and other healthcare professionals are critical to achieving these goals. By taking a proactive stand, they can identify those at risk for or those who are currently being abused, act to stop the abuse and protect the elders, and work to ensure a safe environment for vulnerable older adults.

Self-Assessment Question #6

Lacey is an RN who is in the process of documenting suspected older adult abuse. Which of the following examples is the best way to document suspected abuse?

a. March 10, 2023. Mrs. Franklin, an 80-year old female, is crying and reports that "My daughter keeps screaming at me. I'm so afraid of her. She tells me that one day she will just throw me out of the car and leave me on the street. She tells me this every day."
b. March 10, 2023. Mrs. Franklin says that she is afraid of her daughter. She is worried about being abandoned.
c. March 10, 2023. Mrs. Franklin, an 80-year-old female, reports that her daughter screams at her and threatens to abandon her. Mrs. Franklin is afraid of her daughter. It seems that she is being abused.
d. March 10, 2023. Mrs. Franklin is complaining about her daughter. She says that "my daughter keeps screaming at me." It is necessary to talk to the daughter to hear her side of the story before proceeding with any type of older adult abuse screening. Mrs. Franklin may be confused.

AGE-RELATED MEMORY CHANGES

Amanda is a 75-year-old retired pharmacist. She enjoys good health and has an energetic lifestyle. She enjoys traveling throughout the country, is active in her church, and volunteers at the local hospital. Amanda has two children who live close by and many friends. She laughingly complains, "My memory sure isn't what it used to be. Yesterday I couldn't remember where I put my glasses, and today I had to search for my car keys for 15 minutes!"

David is 72 years old. He and his wife live in a condo in a large urban area. David is a retired business owner and has an excellent retirement income. He and his wife enjoy socializing and patronizing affluent community events. Lately David has become forgetful to the point that his wife is insisting he see a doctor. While driving home from a golf game one afternoon, David got lost and could not find his way home despite having driven the same route numerous times. Today his wife found David staring in a puzzled fashion at his car keys. He tells his wife, "I found these in my pocket but don't really know what to do with them."

Older adults who are healthy and have small memory lapses, such as forgetting where they put their glasses, are generally not experiencing clinically significant memory problems. However, elders who get lost in familiar circumstances or forget what familiar objects are used for are in need of further evaluation and treatment (National Institute on Aging, 2018; Tabloski, 2019).

Normal memory and cognitive changes in aging

Subtle changes in memory occur with age. These changes may not be evident, or they may cause concern. The majority of changes in memory and cognition are not of major consequence and do not interfere with activities of daily living or quality of life (Cleveland Clinic, 2022; National Institute on Aging, 2018).

Normal memory and cognitive changes associated with aging include the following (Cleveland Clinic, 2022; National Institute on Aging, 2018; Tabloski, 2019):

- Learning new information occurs at a slower rate, and there is greater need for repetition.
- The ability to divide attention between two tasks slows.
- The ability to maintain sustained attention seems to decline with age.
- The ability to filter out or discard irrelevant information seems to decrease with age.
- Mental flexibility declines somewhat with age.
- The speed of information processing is slowed.
- Simple lapses in memory occur, such as forgetting where car keys are.
- The speed with which problem-solving skills are used decreases.
- Reaction time decreases with age.

Research has shown that certain factors are associated with preserving cognitive function and delaying the onset of dementia, as well as helping compensate for normal memory lapses. Here are some of these factors (Cleveland Clinic, 2022; National Institute on Aging, 2018; Tabloski, 2019):

- Higher education helps preserve cognition and delays the onset of dementia.
- Making lists and posting notes regarding appointments on calendars helps with memory lapses.
- A diet high in antioxidants and olive oil lowers the risk of dementia.
- Memory training and memory enhancement techniques are helpful tactics, such as trying to link the name of a person the older adult just met with a common object or something else that is easily remembered.
- Staying mentally active by engaging in such activities as board games, cards, or crossword puzzles helps enhance cognition.
- Positive feelings about life have been linked to enhanced cognition.
- Engaging in social activities helps slow cognitive decline.

Nurses are in a good position to assess memory loss and to offer suggestions to older adults and their families as to how to slow age-related cognitive deficits. There are memory changes associated with disease and pathological cognitive deficits that result in behaviors that are disturbing to the older adult experiencing them and to family, friends, and caregivers.

Nursing interventions and intent to change practice

When evaluating cognition, it is imperative that nurses be able to differentiate between normal and abnormal memory and cognitive changes in aging. Practice can be changed to incorporate such knowledge into assessments and interventions.

Self-Assessment Question #7

Normal memory and cognitive changes associated with aging include all of the following EXCEPT:

a. The ability to divide attention between two tasks slows.
b. The ability to filter out or discard irrelevant information decreases with age.
c. Mental flexibility tends to increase with age.
d. Reaction time decreases with age.

Abnormal memory and cognitive changes in aging

Mild cognitive impairment

Mild cognitive impairment (MCI) is characterized by significant memory problems without loss of independent functioning. Older adults with MCI are quite forgetful and struggle to remember to perform tasks, such as taking medications and paying bills, but are still able to do so without the help of another person (Cleveland Clinic, 2022; National Institute on Aging, 2018; Tabloski, 2019).

In addition to implementing strategies previously identified as helping delay onset of serious cognitive impairment, HCPs can suggest the following interventions (Cleveland Clinic, 2022; Tabloski, 2019):

- Arrange for home health services—a visiting aid to monitor medication administration or house cleaning help.
- Facilitate the identification of a trusted family member or friend to help monitor financial issues, including paying bills.
- Use a large calendar to write down reminders for appointments, paying bills, and other tasks.
- Use a dated pill box to facilitate safe medication administration.
- Help arrange for a trusted family member or friend to check on the older adult at least daily.
- Review a list of trusted community services that provide assistance with housework, meal preparation, and other activities of daily living; many churches have a number of service-related programs to help older adults.

Dementia

Dementia is actually a syndrome with signs and symptoms caused by several acquired disorders that are progressive and life limiting. Initially, those affected lose the ability to perform activities of daily living independently. Eventually, they become dependent in all aspects of self-care and independent functioning (Tabloski, 2019).

Nursing consideration: Dementia can and does affect various areas of the brain, including different levels of the cortex. This means that there is no consistent course of illness and no ability to predict its progression (Tabloski, 2019).

The following are some of the forms of dementia:

- **Alzheimer's disease (AD)**: AD is the most common cause of dementia. It is responsible for nearly 80% of all cases of dementia (Tabloski, 2019). It causes memory loss, confusion, impaired judgment, disorientation, loss of language skills, and changes in personality (Rebar et al., 2019).
- **Vascular dementia**: This is the second most common form of dementia. It is thought to be caused by cardiovascular issues and usually has an acute onset (Rebar et al., 2019; Tabloski, 2019).
- **Lewy body dementia**: Lewy body dementia includes Parkinson's disease with dementia and dementia with Lewy bodies. This particular form of dementia is characterized by the presence of round structures called *Lewy bodies* and neuritis found in the brain (Rebar et al., 2019; Tabloski, 2019).
- **Frontotemporal lobe dementia**: This form of dementia is characterized by personality changes and atrophy of the frontotemporal lobe of the brain and includes Pick's disease (Rebar et al., 2019; Tabloski, 2019).

A number of behaviors are associated with dementia. These behaviors can cause significant distress for the older adult's family, friends, and caregivers. Even HCPs can become stressed when dealing with such behaviors. The most common causes of negative behavior are physical discomfort, overstimulation, unfamiliar surroundings, complicated tasks, and frustration. The Alzheimer's Association (2017) has developed a brochure that describes various behaviors and how to deal with them.

Nursing consideration: The Alzheimer's Association (2017) recommends a three-step approach to help respond to dementia-related behaviors and their etiology:

1. Identify the behavior.
2. Consider possible solutions.
3. Try different responses.

- **Physical or verbal aggression**: Aggression can occur abruptly without specific cause or in response to a situation in which the elder feels fear or frustration. The first appropriate response is to rule out pain or other discomfort as the cause. If discomfort is not the trigger of the behavior, try to identify the cause. Focus on feelings, not facts. Facts may not necessarily be part of the problem. Limit distractions and speak calmly. Try to initiate another activity, especially one that is relaxing, such as listening to soft music. Make sure that both the older adult and the caregiver are safe. If the older adult is not able to calm down, call for assistance (Alzheimer's Association, 2017; Rebar et al., 2019; Tabloski, 2019).
- **Anxiety and agitation**: Check for pain or other forms of discomfort, such as a full bladder (Rebar et al., 2019; Tabloski, 2019). Listen to the older adult's concerns, provide reassurance, decrease noise and distractions, and move the older adult to a calm environment. Involve the person in activities, especially ones that promote relaxation. A walk may be a useful outlet for pent up energy (Alzheimer's Association, 2017).
- **Confusion**: Dementia may cause the affected person to not recognize once-familiar people, places, or objects. Suggested responses include staying calm and providing a brief explanation of who someone is or where he is. Show objects, such as photographs, that help remind the older adult of persons and places. Do not take confusion or inability to recognize relatives and friends personally (Alzheimer's Association, 2017).
- **Repetition**: Repetition can involve repeating the same sentences, constantly asking the same questions, or repeating behaviors such as walking or folding clothes. This helps the older adult feel comfortable and secure. But such behaviors can be stressful for caregivers. Strategies to cope with repetition include looking for a specific reason for the repetition, such as fear or pain; staying calm and patient; providing answers for the older adult even if this requires repeating information several times; and redirecting the behavior into an activity (Alzheimer's Association, 2017.).

- **Suspicion**: Older adults affected by dementia may become suspicious of those around them—even close family members or trusted caregivers, such as nurses. Remember not to take such behavior personally. Offer simple explanations; redirect the focus to another activity; determine, if possible, if there is a reason for the suspicion (for example, abuse); and help the older adult look for items that are misplaced (Alzheimer's Association, 2017).
- **Wandering and getting lost**: Wandering and getting lost are common behaviors. Research has shown that 6 in 10 persons with AD wander at some time. They may be looking to establish a routine or attempting to go home. Make sure their environments are safe. Encourage activity and redirect focus. In healthcare settings, alarm systems that sound when an older adult reaches a door or window are helpful (Alzheimer's Association, 2017).
- **Sleep disturbances**: Sleep disturbances are common problems. Strategies to help older adults with dementia get adequate sleep and rest include the following (Alzheimer's Association, 2017):
  - Keeping the environment at a comfortable temperature.
  - Encouraging a regular routine of going to bed at the same time each night and waking up at the same time in the morning.
  - Establishing routine mealtimes.
  - Limiting naps during the day as much as possible.
  - Avoiding stimulants such as food and beverages that contain caffeine and loud music before bedtime.
  - Incorporating some type of appropriate exercise during the day.

The Alzheimer's Association is a good resource for information about dealing with the disease and ways to provide help for caregivers. There is information about local chapters on the national association's website. Contact information is available at http://www.alz.org and at 1-800-272-3900.

Nursing interventions and intent to change practice

Nurses should be aware of the best ways to intervene with a patient who has dementia. They should, as needed, teach colleagues and loved ones how to effectively intervene as well.

Self-Assessment Question #8

All of the following are appropriate strategies for dealing with behaviors associated with dementia EXCEPT:

a. Encouraging a regular routine of going to bed and waking up at the same times.
b. Not taking behaviors personally.
c. Encouraging walking as a useful outlet for energy.
d. Providing detailed explanations as to who someone is.

REDUCING THE IMPACT OF CHRONIC ILLNESS

The rapidly growing number of elders in the U.S. is causing a higher demand for healthcare and social services. It is estimated that 80% of elders have at least one chronic health condition—arthritis, hypertension, diabetes, heart disease, or respiratory disease—that can lead to disability (NCOA, n.d.b).

The most common causes of disability in the U.S. are (NCOA, n.d.b; Tabloski, 2019):

- Atherosclerosis.
- Chronic back pain.
- Degenerative joint disease.
- Diabetes mellitus.
- Hearing problems.
- Mental health problems.
- Respiratory disorders.
- Stroke.
- Vision problems, including blindness.

Fortunately, the rate of disability and functional limitation among elders has decreased significantly since the 1980s, with about one in five older American adults reporting a chronic disability (NCOA, n.d.b; Tabloski, 2019). Nurses have an obligation to promote health among older adults. The focus is not only on dealing with chronic conditions but also on preventing and delaying the onset of chronic conditions and reducing their progression.

The following are examples of important nursing wellness interventions (Alzheimer's Association, 2017; NCOA, n.d.b; Tabloski, 2019):

- **Cancer screenings**: Screenings for breast, cervical, vaginal, colorectal, and prostate cancers according to the most recent guidelines.
- **Lab work**: Cholesterol screening, fasting blood glucose, and other lab work as indicated.
- **Bone mass screening**: Every two years for those at risk.
- **Eye examination and glaucoma screening**: Annually as indicated.
- **Immunizations**: Flu vaccines annually as medically appropriate; pneumonia and hepatitis B vaccinations according to medical advice.
- **Mental health screening**: Make up an important part of a complete history and physical.

The following are some other initiatives to promote a healthy lifestyle among older adults (Alzheimer's Association, n.d.; Tabloski, 2019):

- **Proper diet**: Adequate hydration and a nutritious diet are important. For older adults living on a fixed income, money may be an issue when it comes to purchasing healthy foods. Financial resources should be assessed and referrals made to financial assistance resources as needed. Dental health may also be an issue. Dental health is important to overall health. It is also important for proper nutritional intake. If teeth or dentures are in poor condition, the older adult may not be able to eat adequately.
- **Exercise**: Exercise is important at all stages of life. After medical clearance, older adults should be encouraged to participate in exercise appropriate for their state of physical health.
- **Socialization**: As noted throughout this education program, it is essential for older adults to maintain contact with others and avoid isolation.
- **Self-management programs**: Nonprofit associations, such as the Arthritis Foundation, offer courses on managing the effects of aging. Older adults should be given information about local programs that help them to age in a healthy fashion. Community education provided by hospitals, churches, health-related associations, and senior citizens centers are all sources that help manage the aging process.

Injury prevention is essential to the health and well-being of older adults. More than a third of people over the age of 65 experience a serious fall every year. Falls are the leading cause of accidental death in people over 65 years of age in the U.S. The rate of mortality from falls rises with increasing age (NCOA, n.d.b; Tabloski, 2019).

To help decrease the likelihood of falls, tripping hazards—such as throw rugs and clutter—should be removed. Grab bars should be installed throughout the house. Older adults' vision should be monitored and appropriate interventions (cataract surgery, glasses) performed. Decreased vision increases the probability of falling (Alzheimer's Association, 2017; NCOA, n.d.b; Tabloski, 2019).

Self-Assessment Question #9

All of the following are among the most common causes of disability EXCEPT:
a. Atherosclerosis.
b. Chronic back pain.
c. Mental health problems.
d. Substance abuse.

END-OF-LIFE CARE

According to experts in end-of-life care, viewing death as a natural part of life is critical. To give compassionate end-of-life care, nurses must confront their own feelings about death and seek guidance and mentorship when dealing with the loss of patients (National Institute on Aging, 2021; Tabloski, 2019).

Each life, and each death, are different. The following are suggestions for nurses and other HCPs to help patients die with comfort and dignity (National Institute on Aging, 2021; Tabloski, 2019).

- Provide relief of psychosocial distress.
- Adhere to treatment regimens to control pain and other symptoms.
- Coordinate care across the healthcare continuum to provide optimal services.
- Prepare patients and families for death.
- Communicate clearly and clarify goals of treatment interventions.
- Respect patient and family values.
- Support the patient's and family's decision-making processes.
- Explain the benefits and burdens of treatment.

What is a "good death"? A good death means something different to different people. Some may want to know their diagnosis and prognosis. Others prefer not to know the specifics of their prognosis. Some patients want to be surrounded by family and friends as death approaches. Still others may prefer to be alone or only with those closest to them. Nurses should do their best to see that their patients' end-of-life wishes are fulfilled as much as possible (National Institute on Aging, 2021; Tabloski, 2019).

According to the National Institute on Aging (2021), there are four areas of need for patients who are dying:

- Physical comfort.
- Mental and emotional needs.
- Spiritual issues.
- Practical tasks.

Physical comfort

Every effort should be made to keep the patient as comfortable as possible. Patients in pain should receive as much pain medication as prescribed without worrying about possible long-term problems of dependence or abuse. Suffering from pain that could be relieved is unnecessary. It can drain the patient of energy and the ability to enjoy being with family and friends and participating in social activities to the best of their abilities (National Institute on Aging, 2021; Tabloski, 2019).

Dyspnea at the end of life is common
Oxygen should be used as prescribed, the head of the bed elevated, a vaporizer used, the window opened, or a fan used to facilitate breathing (National Institute on Aging, 2021).

Meticulous skin care should be provided
Alcohol-free lotion can help relieve dry skin. Patients should be repositioned frequently, and the skin examined for redness and breaks in skin integrity every day. A lip balm may relieve dry lip (National Institute on Aging, 2021).

Nausea, vomiting, and loss of appetite are common at the end of life
Medications to control nausea, vomiting, and diarrhea may be prescribed. Small, frequent feedings are often better tolerated than three large meals (National Institute on Aging, 2021; Tabloski, 2019).

Temperature intolerance may develop at the end of life
Patients may not be able to inform caregivers that they are too hot or too cold. Nurses and caregivers should be alert to clues, such as the patient repeatedly trying to remove a blanket or sweater, which could indicate they are uncomfortably warm, even though they cannot say so (National Institute on Aging, 2021).

Fatigue is very common for people nearing the end of life
Activities should be kept simple. Energy-saving devices, such as shower stools, can help conserve energy (National Institute on Aging, 2021).

Mental and emotional needs

Persons at the end of life may feel anxious or depressed. Listening to them talk about their concerns is often helpful. A counselor familiar with end-of-life issues may be a good resource for the dying person (National Institute on Aging, 2021).

Some patients are afraid of dying alone. This fear may be increased if family and friends, who are unsure of what to say or do, or who have their own concerns about dying, stop visiting. If this happens, nurses can try to discuss these concerns and facilitate comfort when visiting the dying person (National Institute on Aging, 2021; Tabloski, 2019).

Simple physical contact, such as holding a dying person's hands, can be very comforting to them. Before doing so, the caregiver's hands should be warmed by rubbing them together or running them under warm water (National Institute on Aging, 2021).

Spiritual issues

Spiritual needs should be addressed. Many people find comfort in their religious faith. Praying, talking with clergy and others of their faith, reading religious materials, or listening to religious music may be comforting (National Institute on Aging, 2021).

Visitors should be encouraged to talk to the dying person, even if they seem to be unresponsive. The dying person should always be talked to, not about. All caregivers and visitors should tell the dying person who they are when they enter the dying person's room. For example, a nurse could say, "Good morning Eleanor. It's Tracey, your nurse. I've come to wash your face and make you more comfortable" (National Institute on Aging, 2021).

Practical tasks

A dying person may be concerned about many practical matters—who will take care of beloved pets when the person is gone; who will take care of the surviving spouse, especially if this person is elderly; or whether the dying person has made a will. These issues may cause a dying person considerable distress and should be addressed. Perhaps a friend can reassure the

dying person that they will take care of the patient's beloved dog. Or a neighbor may be able to tell the dying person that they will make sure their wife has a ride to the grocery store or the doctor's office. Reassuring the dying person that practical concerns are being dealt with can be a great comfort (National Institute on Aging, 2021).

Nursing interventions and intent to change practice

Nurses' behaviors should be soothing and consist of what is most comforting for the patient. Some people who are outgoing and love a crowd may find it most comforting to be surrounded by family members and friends. Others may prefer quiet and solitude and find it most comforting to be with just one or two people. Some experts believe that when death is near, music at low volumes and soft lighting are soothing. Nurses and other caregivers should get to know what is most comforting for their patients before death is imminent so that when the time comes they can provide the most comforting environment (National Institute on Aging, 2017).

For those people looking for more information about helping the person facing end-of-life issues, Caring Info (National Hospice and Palliative Care Organization) can be a good resource. This organization can be contacted via http://www.caringinfo.org or at 1-800-658-8898.

Self-Assessment Question #10

When providing end-of-life care, it is important for the nurse to remember that:

a. Nurses' personal feelings about death do not usually affect their ability to provide end-of-life care.
b. "Good death" usually means the same thing to people who are dying.
c. Most older adults prefer to be alone when dying so that they can prepare themselves for death.
d. According to the National Institute on Aging, there are four areas of need for patients who are dying: emotional needs, spiritual issues, practical tasks, and physical comfort.

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CARE OF OLDER ADULTS FOR TEXAS NURSES, 2ND EDITION

Self-Assessment Answers and Rationales

1. The correct answer is D.
Rationale: There are certain patterns of injury that are indicative of abuse. One such pattern is bilateral bruising on an older adult's upper arms.

2. The correct answer is B.
Rationale: Removal of the car keys from a parent with significant dementia is an appropriate safety measure. It is not abuse.

3. The correct answer is A.
Rationale: Self-neglect is considered to be a type of abuse and is defined as occurring when the behavior of an older adult threatens their own health and safety.

4. The correct answer is C.
Rationale: Older adults who are unable to maintain contact with family or friends are at great risk for abuse. This lack of contact, or isolation, makes it more difficult for the older adult to get help.

5. The correct answer is D.
Rationale: Failure to report suspected older adult abuse can result in a misdemeanor or state jail felony. Anyone in Texas who suspects older adult abuse is obligated to report it. The hotline should be used in urgent and emergency situations. Even if the older adult asks that the abuse not be reported, it is still necessary to report the suspected abuse.

6. The correct answer is A.
Rationale: Documentation must be objective without adding personal opinions or assumptions. The patient's exact words should be documented in quotes. All older adults should be screened for abuse.

7. The correct answer is C.
Rationale: Mental flexibility tends to decrease with age.

8. The correct answer is d.
Rationale: Simple explanations are best when intervening for persons with dementia.

9. The correct answer is D.
Rationale: Atherosclerosis, chronic back pain, and mental health problems are among the most common causes of disability.

10. The correct answer is D.
Rationale: According to the National Institute on Aging, there are four areas of need for those who are dying: emotional needs, spiritual issues, practical tasks, and physical comfort.

Course Code: ANCCTX02CA

Texas Ethics and Jurisprudence for Nurses, 2nd Edition

2 Contact Hours

Release Date: September 15, 2022

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Faculty

Adrianne E. Avillion, DEd, RN, is an accomplished nursing professional development specialist and health care author. She earned her doctoral degree in adult education and her MS in nursing from Penn State University, and a BSN from Bloomsburg University. Dr. Avillion has held a variety of nursing positions as a staff nurse in critical care and physical medicine and rehabilitation settings with an emphasis on neurological and mental health nursing as well as a number of leadership roles in nursing professional development. She has published extensively and is a frequent presenter at conferences and conventions devoted to the specialty of continuing education and nursing professional development. Dr. Avillion owns and is the CEO of Strategic Nursing Professional Development, a business that specializes in continuing education for healthcare professionals and consulting services in nursing professional development. Her publications include the following: *The Path to Stress-Free Nursing Professional Development: 50 No-Nonsense Solutions to Everyday Challenges and Nursing Professional Development: A Practical Guide for Evidence-Based Education*.

Adrianne E. Avillion has disclosed that she has no significant financial or other conflicts of interest pertaining to this course.

Reviewer:

Shelly McDonald, DNP, MSN, RN, PHNC, is an experienced nurse educator and leader with 7 years of specific work in academia. Her prior clinical experience, focused in the South Texas region, includes women's health and dialysis, and she remains passionate about healthcare access in rural areas and bridging the gap related to healthcare disparities. In administrative and managerial roles, Dr. McDonald aims to provide a supportive and inclusive environment with a heavy emphasis on collaboration to enhance organizations. As a Nurse Planner for Colibri Healthcare, she focuses on engaging subject matter experts to produce high-quality, evidence-based continuing education courses.

Shelly McDonald has disclosed that she has no significant financial or other conflicts of interest pertaining to this course.

Course overview

This continuing education program is intended to guide nurses in Texas on the Texas Board of Nursing's role, as well as on standards of practice and laws and rules that pertain to ethical and legal issues for nursing practice. Lastly, professional nursing boundaries and practice will be discussed.

Learning objectives

After completing this course, the learner will be able to:

- Explain how nursing practice is regulated in Texas.
- Describe the role of the Texas Board of Nursing, including its authority and responsibilities.
- Explain how Texas rule 217.11/standards of nursing practice regulate nursing practice.
- Describe recent amendments to Texas State Laws and Rules that affect ethical and legal nursing practice standards.
- Discuss the relevance of Texas Board of Nursing Position Statements as they pertain to nursing practice.
- Discuss legal and ethical principles of nursing practice.
- Discuss the relationship between nursing professional boundaries and appropriate nursing practice.

How to receive credit

- Read the entire course online or in print which requires a 2-hour commitment of time.
- Complete the self-assessment quiz questions which are at the end of the course or integrated throughout the course. These questions are NOT GRADED. The correct answer is shown after you answer the question. If the incorrect answer is selected, the rationale for the correct answer is provided. These questions help to affirm what you have learned from the course.
- Depending on your state requirements you will be asked to complete either:
  - An affirmation that you have completed the educational activity.
  - A mandatory test (a passing score of 70 percent is required). Test questions link content to learning objectives as a method to enhance individualized learning and material retention.
- If requested, provide required personal information and payment information.
- Complete the MANDATORY Course Evaluation.
- Print your Certificate of Completion.

CE Broker reporting

Colibri Healthcare, LLC, provider # 50-4007, reports course completion results within 1 business day to CE Broker. If you are licensed in Arkansas, District of Columbia, Florida, Georgia, Kentucky, Michigan, Mississippi, New Mexico, North Dakota, South Carolina, or West Virginia, your successful completion results will be automatically reported for you.

Accreditations and approvals

Colibri Healthcare, LLC is accredited as a provider of nursing continuing professional development by the American Nurses Credentialing Center's Commission on Accreditation.

Individual state nursing approvals

Colibri Healthcare, LLC is accredited as a provider of nursing continuing professional development by the American Nurses Credentialing Center's Commission on Accreditation. In addition to states that accept courses offered by ANCC accredited Providers, Colibri Healthcare, LLC is an approved Provider of continuing education in nursing by: Alabama Board of Nursing,

Provider #ABNP1418 (valid through February 5, 2025); Arkansas State Board of Nursing, Provider #50-4007; California Board of Registered Nursing, Provider #CEP17480 (valid through January 31, 2024); California Board of Vocational Nursing and Psychiatric Technicians (LVN Provider #V15058, PT Provider #V15020; valid through December 31, 2023); District of Columbia Board of Nursing, Provider #50-4007; Florida Board of Nursing, Provider #50-4007; Georgia Board of Nursing, Provider #50-4007; Kentucky Board of Nursing, Provider #7-0076 (valid through December 31, 2023; CE Broker Provider #50-4007); Michigan Board of Nursing, Provider #50-4007; Mississippi Board of Nursing, Provider #50-4007; New Mexico Board of Nursing, Provider #50-4007; North Dakota Board of Nursing, Provider #50-4007; South Carolina Board of Nursing, Provider #50-4007; and West Virginia Board of Registered Nurses, Provider #50-4007. This CE program satisfies the Massachusetts States Board's regulatory requirements as defined in 244 CMR5.00: Continuing Education.

Activity director

June D. Thompson, DrPH, MSN, RN, FAEN, Lead Nurse Planner

Disclosures

Resolution of conflict of interest
In accordance with the ANCC Standards for Commercial Support for continuing education, Colibri Healthcare, LLC implemented mechanisms prior to the planning and implementation of the continuing education activity, to identify and resolve conflicts of interest for all individuals in a position to control content of the course activity.

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The information provided in this activity is for continuing education purposes only and is not meant to substitute for the independent medical judgment of a healthcare provider relative to diagnostic and treatment options of a specific patient's medical condition.

Course verification

All individuals involved have disclosed that they have no significant financial or other conflicts of interest pertaining to this course. Likewise, and in compliance with California Assembly Bill No. 241, every reasonable effort has been made to ensure that the content in this course is balanced and unbiased.

INTRODUCTION

Legal and ethical components of nursing practice are complex and can generate vigorous debate and moral quandaries. In 2014, the Texas Board of Nursing (TBON) established a requirement for 2 continuing education contact hours related to nursing jurisprudence and ethics prior to the end of every third licensure renewal cycle to assist nurses, including APRNs, in interpreting legal and ethical guidelines, rules, regulations, and position statements (TBON, 2019a).

This course provides principles and best practices for delivering nursing care that meets or exceeds legal and ethical standards. As required by the Texas BON, it covers:

- Information related to the Texas Nursing Practice Act.
- BON rules including Board Rule 217.11.
- Standards of Nursing Practice.
- Texas BON Position Statements.
- Professional boundaries.
- Principles of nursing ethics.

NURSING JURISPRUDENCE AND NURSING ETHICS

Each nurse, including an APRN, is required to complete at least two hours of CNE, as defined in this chapter, relating to nursing jurisprudence and nursing ethics before the end of every third, two-year licensing period. The Board requires that nurses update their address within 10 days of a move or change of address. The hours of continuing education required under this subsection shall count towards completion of the 20 contact hours of CNE required in subsection (a) of this section. Certification may not be used to fulfill the CNE requirements of this subsection (TBON, 2019a).

Nursing practice regulation

Numerous laws and guidelines govern nursing practice. Professional organizations may establish codes of behavior for their membership, and each state has its own nursing practice act that sets nursing standards, defines scope of practice, and otherwise regulates professional nursing in that state. Most nursing practice acts begin by defining critical terms, such as the *practice of registered nursing* and the *practice of licensed practical nursing*, which differentiate between RN and LPN/LVN practice, according to the scope of practice and education requirements (Russell, 2017). In Texas, there are three distinct areas of nursing practice: Licensed Vocational Nurse (LVN), Registered Nurse (RN), and Advanced Practice Nurse (APRN) (TBON, 2019b).

Many state standards and guidelines are patterned after those established by national nursing organizations. A revised version of the American Nurses Association (ANA) Code of Ethics for professional nursing behavior, published in 2015, will likely influence the content of state nursing codes because it emphasizes nurse obligations to protect patients from harm and professional responsibilities in promoting a culture of safety (ANA, 2015).

Each state's nursing practice act establishes a board of nursing. Individual state boards of nursing have the authority to (National Council of State Boards of Nursing [NCSBN], n.d.):

- Evaluate licensure application.
- Issue nursing licenses.
- Renew licenses.
- Take disciplinary action against licenses of persons who violate laws or rules.
- Authorize the use of licensing examinations.
- Advise on the determination of the legal scope of nursing practice in a state.
- Approve nursing education programs.
- Regulate advanced nursing practice.
- Regulate nurse aides/nursing assistants, medication aides/assistants working in nursing home and home healthcare settings.

State nursing boards, such as the Texas BON, and national nursing organizations, such as the American Nurses Association, play separate but complementary roles in nursing regulation. Nursing associations represent their members, while the Board serves the people of Texas via ensuring licensed nurses meet minimum standards of safe practice (TBON, 2013a).

Codes of ethics published by professional nursing associations and organizations are not enforceable as law. However, nurses who violate these codes of conduct may be subject to disciplinary action for unprofessional conduct by their state boards of nursing. Disciplinary actions could include reprimand, license suspension, litigation, and/or revocation of the nurse's license (RegisteredNursing.org., 2019). Therefore, it behooves nurses to practice within not only legal parameters but ethical codes as well.

The Texas BON has a Nursing Disciplinary Matrix to help determine appropriate disciplinary action (TBON, n.d.). The Matrix helps to determine the appropriate disciplinary action, including the amount of any administrative penalty to assess. The BON will consider (TBON, n.d.):

- The threat to public safety.
- The seriousness of the violation.
- Any aggravating or mitigating factors.
- Whether the person is being disciplined for multiple violations of either Chapter 301 or a rule or order adopted under Chapter 301 or has previously been the subject of disciplinary action by the BON and has previously complied with BON rules and Chapter 301.

If a person has previously been the subject of disciplinary action by the Board, the Board will consider taking a more severe disciplinary action, including revocation of the person's license (TBON, n.d.).

TEXAS NURSING PRACTICE ACT

The Texas Nursing Practice Act (NPA) (including the associated Rules of the Texas Administrative Code [TAC]) is the primary source of nursing law in Texas. All nurses should be familiar with, and know how to access, copies of the current Texas Nursing Practice Act, which can be found on the Texas BON website: https://www.bon.texas.gov/laws_and_rules_nursing_practice_act.asp.

What is considered legal and within scope of practice in one state may be prohibited in another state, and recent amendments to Texas Laws and Rules affect provisions of the Texas NPA.

Nursing consideration: The primary goal of the Nursing Practice Act is to protect the public from harm (TBON, 2017).

The Texas NPA defines *professional nursing* as "the performance of an act that requires substantial specialized judgment and skill, the proper performance of which is based on knowledge and application of the principles of biological, physical, and social science as acquired by a completed course in an approved school of professional nursing." The term does not include acts of medical diagnosis or the prescription of therapeutic or corrective measures" (TBON, 2017).

The scope of practice for professional nursing involves (TBON, 2017):

- The observation, assessment, intervention, evaluation, rehabilitation, care and counsel, or health teachings of a person who is ill, injured, infirm, or experiencing a change in normal health processes.
- The maintenance of health or prevention of illness.
- The administration of a medication or treatment as ordered by a physician, podiatrist, or dentist.
- The supervision or teaching of nursing.
- The administration, supervision, and evaluation of nursing practices, policies, and procedures.
- The requesting, receiving, signing for, and distribution of prescription drug samples to clients at practices where an advanced practice registered nurse is authorized to sign prescription drug orders as provided by Subchapter B, Chapter 157.
- The performance of an act delegated by a physician under Section 157.0512, 157.054, 157.058, or 157.059.
- The development of the nursing care plan.

Evidence-Based Practice Alert! Nurses must rely on evidence that the scope of practice adheres to all provisions of the NPA.

A professor of nursing is teaching a class on the Texas Nursing Practice Act and the Texas BON. The following questions pertain to information that the professor will share with the class.

Self-Assessment Question #1

The primary goal of the Texas Nursing Practice Act is to:

a. Establish ethical parameters of practice.
b. Provide health care employers with rules for nursing conduct.
c. Protect the public from harm.
d. Differentiate RN from LVN education and training.

ROLE OF THE TEXAS BON

The Texas BON establishes and enforces state standards via rules that implement Texas statutes as well as explanatory documents such as position statements, interpretive guidelines, and frequently asked questions (FAQ) available on the TBON website at http://www.bon.texas.gov. These resources can inform decision making, assisting nurses in navigating ethical and/or legal dilemmas. Here are some examples of frequently asked questions and answers from the Texas BON:

- ***Is current cardiopulmonary resuscitation (CPR) certification a licensure requirement for nurses in Texas?***
  The Texas BON does not require CPR for licensure renewal. But employers may have specific requirements for achieving/maintaining current CPR certification as a condition of employment (TBON, 2018a).
- ***Do all nurses have an obligation to initiate CPR for a client?***
  The BON notes that all nurses have an obligation or duty to initiate CPR for clients who require resuscitative measures. Furthermore, "in all healthcare settings, nurses must initiate CPR immediately in the absence of a client's do-not-resuscitate/out of hospital do-not-resuscitate order… A do-not-resuscitate/out of hospital do-not-resuscitate order is a medical order that must be given by a physician and in the absence thereof, it is generally outside the standard of nursing practice to determine that CPR will not be initiated" (TBON, 2018a).

- ***What authority or statement does the BON have regarding staffing and work hour issues?***
  - The Texas BON does not have authority over facility operations or most facility policies or procedures.
  - The Texas BON has no jurisdiction over employment-related matters, including work hours, scheduling, staffing, or extended work hours.
  - The Texas BON does have applicable laws and rules that pertain to this topic as it relates to a nurse's duty to patients (TBON, 2018a). (See the section on Board Rule 217.11 for more information).
- ***What is a Safe Harbor Peer Review?***
  Safe harbor is a nursing peer review process that a nurse may initiate when asked to engage in an assignment or conduct that the nurse believes, in good faith, would potentially result in a violation of the Nursing Practice Act (NPA) or Board rules. When invoked in good faith, safe harbor protects a nurse from employer retaliation, suspension, termination, discipline, discrimination, and from licensure sanction by the Board of Nursing ("BON" or "Board"). Safe harbor must be invoked prior to engaging in the conduct or assignment for which nursing peer review is requested, and may be invoked at any time during the work period when the initial assignment changes. Examples of safe harbor situations include clinical assignments related to staffing and/or acuity of patients when the nurse believes patient harm may result (TBON, 2018b).

Self-Assessment Question #2

Sharon believes that her hospital does not provide an adequate RN to patient ratio. She contacts the Texas BON and asks them to intervene. The BON responds by explaining that:

a. They need more information about staffing patterns before they can intervene.
b. The Texas BON has no jurisdiction over employment-related matters.
c. Sharon should consult an attorney before pursuing this concern.
d. The Texas BON is responsible for work hours but not staffing.

TEXAS BON RULES

All aspects of Texas BON roles and responsibilities focus on facilitating the delivery of safe and effective nursing care. The BON rules and regulations relate to nurse education, licensure, and practice. As part of its mission statement, the Texas BON states that it is "to protect and promote the welfare of the people of Texas by ensuring that each person holding a license as a nurse in the State of Texas is competent to practice safely. The BON fulfills its mission through the regulation of the practice of nursing and the approval of nursing education programs. This mission, derived from the Nursing Practice Act, supersedes the interest of any individual, the nursing profession, or any special interest group" (TBON, 2017).

The Texas NPA and BON emphasize that it is the nurse's responsibility and duty to the patient to provide safe and effective nursing care. The Texas BON mandates that nurses must "know and conform" with the NPA and Board rules as well as the laws, rules, and regulations for their particular practice setting (TBON, 2017). Complying with this mandate requires a thorough understanding of Board of Nursing rules that affect practice.

Rule 217.11/Standards of Nursing Practice

Rule 217.11: Standards of Nursing Practice is among the most critical standards for nursing professionals. It applies to all vocational nurses, registered nurses, and registered nurses with advanced practice authorization, and states that failure to meet minimum standards established by the BON may result in action against the nurse's license, even if no actual client injury results. Rule 217.11 requires that nurses (TBON, 2013b):

- Know and conform to the Texas NPA.
- Know and conform to the BON rules and regulations as well as to federal, state, or local laws, rules, or regulations that affect nurses' current area of nursing practice.
- Implement measures to promote a safe environment for clients and others.
- Know the rationale for and effects of medications and treatments and correctly administer them.
- Accurately and completely report and document a client's status; nursing care; physician, dentist, or podiatrist orders; administration of medications and treatments; responses; and contact with other health care team members concerning significant events regarding client status.
- Respect the client's right to privacy by protecting confidential information, unless required or allowed by law to disclose the information.
- Promote and participate in education and counseling to client(s), and, where applicable, the family/significant other(s) based on needs.
- Obtain instruction and supervision as necessary.
- Make a reasonable effort to obtain orientation/training for competency when encountering new equipment and technology or unfamiliar care situations.
- Notify the appropriate supervisor when leaving a nursing assignment.
- Know, recognize, and maintain professional boundaries of the nurse–client relationship.
- Comply with mandatory reporting requirements of Texas Occupations Code Chapter 301 that include reporting a nurse who violates the NPA or a Board rule and contributes to the death or serious injury of a client; whose conduct causes a person to suspect that the nurse's practice is impaired by chemical dependency or drug or alcohol abuse; whose actions constitute abuse, exploitation, fraud, or a violation of professional boundaries; or whose actions indicate that the nurse lacks knowledge, skill, judgment, or conscientiousness to such an extent that the nurse's continued practice of nursing could reasonably be expected to pose a risk of harm to a client or another person, regardless of whether the conduct consists of a single incident or a pattern of behavior.
- Provide, without discrimination, nursing services regardless of the age, disability, economic status, gender, national origin, race, religion, health problems, or sexual orientation of the client served.
- Institute appropriate nursing interventions that might be required to stabilize a client's condition and/or prevent complications.
- Clarify any order or treatment regimen that the nurse has reason to believe is inaccurate, non-efficacious, or contraindicated by consulting with the appropriate licensed practitioner and notify the ordering practitioner when the nurse makes the decision to not administer the medication or treatment.
- Implement measures to prevent exposure to infectious pathogens and communicable conditions.
- Collaborate with the client; members of the health care team; and, when appropriate, the client's significant others in the interest of the client's healthcare.
- Consult with, utilize, and make referrals to appropriate community agencies and healthcare resources to provide continuity of care.
- Be responsible for one's own continuing competence in nursing practice and individual professional growth.

- Make assignments to others that take into consideration client safety and that are commensurate with the educational preparation, experience, knowledge, and physical and emotional ability of the person to whom the assignments are made.
- Accept only those nursing assignments that take into consideration client safety and that are commensurate with the nurse's educational preparation, experience, knowledge, and physical and emotional ability.
- Supervise nursing care provided by others for whom the nurse is professionally responsible.
- Ensure the verification of current Texas licensure or other Compact State licensure privilege and credentials of personnel for whom the nurse is administratively responsible, when acting in the role of nurse administrator.

Case study: Jennifer

Karen has always admired her nurse manager, Jennifer. Jennifer has many years of experience as a critical care nurse and has earned the respect of her staff. Lately, however, Jennifer has been distracted and has difficulty making decisions. One morning, Jennifer arrives late to work, wearing the same clothes she had on the day before, and smelling faintly of alcohol. She is also unsteady on her feet.

Question:
According to standards of nursing practice, what should Karen do?

Discussion:
Because Jennifer's nursing practice is impaired, Karen should report Jennifer to their employer and to the Texas Board of Nursing, as it is a potential patient safety concern.

NURSING PRACTICE ACT, NURSING PEER REVIEW, AND NURSE LICENSURE COMPACT, AS AMENDED SEPTEMBER 2019

The mission of the Texas Board of Nursing (BON or Board) is to protect and promote the welfare of the people of Texas by ensuring that each person holding a license as a nurse in this state is competent to practice safely. The Board fulfills its mission through the regulation of the practice of nursing and the approval of nursing educational programs. This mission, derived from the Nursing Practice Act, supersedes the interest of any individual, the nursing profession, or any special interest group (TBON, 2019b, 2019c).

The 86th Regular Session of the Texas Legislature passed two bills that amended the Nursing Practice Act (NPA).

House Bill (HB) 2059, which relates to human trafficking prevention training, requires as part of a continuing competency program under Section 301.303 of the Nursing Practice Act (Continuing Competency) that a nurse who provides direct patient care must complete a human trafficking prevention course approved by the executive commissioner of the Health and Human Services Commission (HHSC) under Section 116.002 of the Occupations Code (TBON, 2019b).

HB 2410, which amends Sections 303.005(b) and (d) of the Occupations Code, allows a nurse who wishes to have a peer review committee determine if a requested act would violate the nurse's duty to a patient to request the review orally if the nurse cannot complete a written form at the time of the request. If requested orally, the nurse's supervisor must record the request in writing, sign it, and have the requesting nurse sign it as well. The statute specifies the details that must be included in the written documentation (TBON, 2019b).

For further information on HB 2059 and HB 2410, visit Texas Legislature Online at www.capitol.texas.

Nursing consideration: It is the nurse's responsibility, not the employer's responsibility, to obtain the necessary continuing education for licensure.

Case study: April

April has been diagnosed with ovarian cancer. She does not want to disclose her diagnosis to anyone, including her husband and daughters. Her family members are extremely concerned and frightened, and they beg the nurse to tell them what is wrong with their loved one. The nurse believes that the client needs the support of her family, and that her family has the right to know about the diagnosis.

Question:
May the nurse disclose the diagnostic information to the family?

Discussion:
No. Doing so would violate the Nursing Practice Act and HIPAA privacy laws. This is clearly an ethical dilemma for the nurse. She should seek guidance from a supervisor if she continues to struggle with being unable to share this patient information, and she should refer the patient to appropriate resources.

The preceding example should trigger an examination of not only the standards of nursing practice but also the nurse's role in compliance with such standards. Compliance may also pose emotional dilemmas for nurses. The NPA and standards of nursing practice are intertwined with each other and with position statements issued by the Texas BON.

TEXAS BON POSITION STATEMENTS

Although BON position statements do not have the force of law, they are a means of providing direction for nurses on Board issues of concern relevant to the public and nursing practice. Board position statements are reviewed annually for relevance and accuracy related to current practice, the NPA, and the BON rules (TBON, 2021). In Texas, the BON views position statements as clarifications of the NPA and the Board rules and regulations. A violation of a position statement can lead to disciplinary action. For example, an LVN may be course-trained to remove a PICC line; however, the Board has determined that removal of a PICC line is beyond the scope of an LVN and requires training through a degree of higher learning (TBON Position Statement 15.3).

Position statements address a wide variety of nursing actions. The following queries are based on information taken from Texas BON position statements (TBON, 2021):

- **15.1. May nurses carry out orders from physician's assistants (PA)**?
  Nurses may carry out physician orders relayed by a physician assistant (PA) when the PA is compliant with laws regulating the practice of the PA. The nurse is expected to clarify any order the nurse questions by communicating with the PA or the physician.
- **15.2. May an LVN pronounce death?**
  LVNs must initiate CPR in the absence of a clear do-not-resuscitate (DNR) order. Laws regarding the pronouncement of death are not in the NPA or Board rules. LVNs cannot pronounce death.
- **15.3. Can licensed vocational nurses (LVNs) engage in IV therapy, venipuncture, or PICC line care?**
  LVNs must complete post-licensure training to engage in IV therapy/venipuncture (not typically included in LVN curriculum). Insertion or removal of PICC lines is beyond the scope of practice for an LVN.

- **15.9. Can RNs or LVNs perform laser therapy?**
  A nurse must have the appropriate education, knowledge, and experience to perform laser therapy. There are criteria to be followed by the nurse who accepts physician delegation in the use of nonablative laser therapy. There are specific regulations related to laser hair removal from the Texas Department of Licensing and Regulation and the Texas Department of Health and Human Services.
- **15.12. What is the BON's position on the use of American Psychiatric Association diagnoses by LVNs, RNs, or APNs?**
  LVNs and RNs cannot determine medical diagnoses. Use of multidisciplinary psychiatric diagnoses is "permitted by advanced practice nurses designated as Clinical Nurse Specialists (CNS) or Nurse practitioners (NPs) whose population focus area is psych/mental health. Client problems beyond the scope of training and education of the CNS/NP are to be referred to an appropriate medical provider" (TBON, 2021).
- **15.15. What is the BON's jurisdiction over a nurse's practice in any role and use of the nursing title?**
  If an RN or LVN functions in a role lower than that for which they are licensed, or in another area with an overlapping scope of practice, the nurse is still held to the level of education and competency of their highest licensure. The BON also restricts the use of the titles LVN or RN or any designation implying nursing licensure by non-nurses.
- **15.18. What is the BON's position regarding nurses carrying out orders from advanced practice registered nurses (APRNs)?**
  Nurses may carry out orders issued by APRNs, as long as such orders are within the APRN's scope of practice in their role and population focus.
- **15.19. May nurses carry out orders from pharmacists for drug therapy management?**
  The BON notes that there are current rules that permit pharmacists to write orders for drug therapy management (DTM) while working under physician delegation. Nurses may carry out these orders, as long as the orders originate from a written protocol authorized by a physician.
- **15.29 May a nurse establish an interpersonal relationship with a client or a client's family member?**
  May a nurse use social media? Nurses have an obligation to maintain professional boundaries. Professional boundaries are defined as the spaces between the nurses' power and the client's vulnerability. "Common to the definition of professional boundaries from the Texas Board of Nursing and from the National Council of State Boards of Nursing is that a nurse abstains from personal gain at the client's expense and the nurse refrains from inappropriate involvement with the client or the client's family. Nurses have an ethical and legal obligation to maintain client privacy and confidentiality at all times, and when using social media do not identify clients by name or post or publish information that may lead to the identification of a client. Limiting access to postings through privacy settings is not sufficient to ensure privacy. Nurses must promptly report any identified breach of confidentiality or privacy." The issue of professional boundaries and social media use is a complex one. For further information, consult https://www.bon.texas.gov/practice_bon_position_statements_content.asp#15.29. (TBON, 2021).
- **15.30 How can nurses deal with workplace violence and facilitate a safe working environment?**
  As violence in the workplace has the potential to compromise collaboration and communication, which may lead to patient care errors, this position statement uses evidence-based practice research and the standards of nursing practice found in Board Rule 217.11(1) to guide nurses in promoting a safe patient care environment. For further information, consult https://www.bon.texas.gov/practice_bon_position_statements_content.asp#15.30.

Evidence-Based Practice Alert! Based on the Texas BON position statements and evidence-based practice information, nurses should take a collaborative approach to reducing workplace violence, including implementing policies, recognizing professional boundaries, instituting appropriate nursing interventions, and obtaining supervision when needed (TBON, 2021).

Position statements demonstrate how the Texas Board of Nursing interprets appropriate behavior regarding various aspects of practice. The NPA, rules/standards of nursing practice, guidelines and interpretive guidelines, and position statements—among other Board of Nursing publications—are important resources for clarifying ethical principles and delineating professional boundaries in nursing practice.

Self-Assessment Question #3

All of the following statements about nursing practice in the state of Texas are correct EXCEPT:

a. LVNs may insert PICC lines after receiving appropriate education and training.
b. Nurses may carry out pharmacists' orders for DTM management, as long as the orders originate from a written protocol authorized by a physician.
c. All nurses have an obligation to protect their clients' privacy and confidentiality.
d. Nurses may carry out physician orders relayed by a PA and/or those that originate from a protocol between the PA and the physician.

ETHICS AND THE LAW

Ethics can be defined as systematic rules or principles that govern right conduct. Every nurse, upon entering the profession, has the responsibility to adhere to the standards of ethical practice and conduct set by the profession (Medical Dictionary, 2020). Most healthcare professions have developed ethical codes of conduct that delineate the professions' goals, values, and ideals, which provide guidance as to what the public should expect from professionals in any setting.

Ethics and law overlap to a certain extent. Codes of ethics generally describe a vision that exceeds what is expected under prevailing laws. The law is what must be done; ethical codes provide a picture of what ought to be done. Therefore, ethical conduct means that at the very least, a nurse or other health care professional is performing duties legally and acting with integrity and fidelity according to the profession's principles of ethical behavior (Haddad & Geiger, 2022).

It is essential that nurses understand both legal and ethical concepts and fulfill their professional roles accordingly.

Basic legal concepts: Negligence and malpractice

Nurses should be able to define the terms negligence and malpractice and identify the elements of malpractice. Negligence is defined as doing something or failing to act as a careful, reasonable, prudent person would or would not in the same situation. As it relates to nursing, negligence is the failure to meet accepted standards for nursing competence and scope of practice (Jacoby & Scruth, 2017).

The definition of negligence is not based on what a nurse or nurses "think" is appropriate in a given situation. It is based on whether a nurse acted with the education, knowledge, and skill that is reasonably expected of a nurse with similar education, knowledge, and skill (Arganata & Astutik, 2021).

Professional malpractice, a type of negligence, is defined as negligence committed in carrying out professional duties. The primary question to be addressed is, "What is the nursing care that reasonably should have been delivered under the circumstances?" If a nurse is sued for malpractice, the judge or jury will consider whether the nurse's actions demonstrated knowledge and skill reasonably expected of a nurse with that level of education and training. Determination is based on nursing standards of care, nursing practice acts, professional boundaries, ethical principles, and appropriate care standards as established by professional associations, such as the American Nurses Association (Haddad & Geiger, 2022).

Some of the major categories of negligence that result in nursing malpractice lawsuits are (Oshman Firm, 2017):

- Failure to properly monitor.
- Medication errors.
- Routine procedure errors.
- Documentation errors.

There are several generally recognized elements of malpractice: Legal duty, breach of duty, causation, and damages/harm.

Legal duty

What is a legal duty? Legal duty is defined as "the responsibility to others to act according to the law" (Hill & Hill, n.d.). A nurse's legal duty begins as soon as the nurse–client relationship is established. In nurse–client relationship, the client relies upon the ability of the nurse to deliver professionally safe and competent care (TBON, 2021).

Breach of duty

Breach of duty is defined as a violation of nursing standards of care. The client/plaintiff's attorney will provide evidence to support the claim that a breach of duty occurred. A nurse's failure to adhere to standards constitutes a breach of duty (Brous, 2019).

Harm

In order for the plaintiff to win a malpractice lawsuit, it must be shown that the breach of duty caused harm to the client/plaintiff. In other words, actual harm must have occurred because of the nurse's actions or failure to act. Another way of putting this is the concept of causation. Causation means that there must be a direct cause-and-effect link between the breach of duty and the injury (Brous, 2020a).

Damages

The term *damages* refers to the monetary value of the alleged harm. After malpractice has been proven, damages are intended to compensate the client/plaintiff for the harm suffered as a result of the breach of duty (Brous, 2020b).

Damages usually include out-of-pocket medical and related expenses resulting from the occurrence of malpractice. Examples of expenses include lost wages, costs of medical treatment, and pain and suffering experienced by the client as the result of the harm caused by malpractice (Briley, 2019).

For the client/plaintiff to win a malpractice lawsuit, all elements of malpractice must be proven. The burden or responsibility for proving malpractice remains with the client/plaintiff. The nurse (defendant) does not have to prove that their actions were not negligent. The client/plaintiff's attorney must prove that malpractice occurred. The defendant's attorney will attempt to convince the judge or jury that each element of malpractice has not been proven (Banja, 2019).

Case study: Theresa

Theresa is an RN who works on a surgical unit in a large urban medical center. One of her clients, Mr. Manning, is recovering from hip replacement surgery performed several days ago. He has made excellent progress and is scheduled for discharge tomorrow. This client has a reputation as a "complainer." On the morning of discharge, a nursing assistant approaches Theresa and tells her that Mr. Manning is complaining of feeling dizzy and "not right." Theresa is very busy and tells the nursing assistant to take Mr. Manning's vital signs. Theresa forgets about Mr. Manning. Several hours later, she enters Mr. Manning's room to find him confused and unable to move his right side. He is rushed to the intensive care unit, where he is diagnosed with a massive stroke and suffers permanent disability. His family files a lawsuit and names Theresa as one of the defendants.

Question:

What might best describe Theresa's role in the malpractice suit?

Discussion:

Based on the information provided, it does seem as though Theresa has breached her duty to Mr. Manning, and she failed to provide competent and safe nursing care by not following up on a potentially unstable patient.

Malpractice insurance

Although the healthcare organization for which the nurse works may cover them under the organization's malpractice insurance policy for medical negligence in a civil suit, it is important that all nurses understand the kinds of events and financial limitations covered by that policy. Nurses should regularly check their employer's coverage of its nurses to ensure that coverage has not changed or even been discontinued.

Some attorneys recommend that nurses carry their own malpractice (professional liability) insurance. There are three major reasons to have one's own professional liability policy (CPH & Associates, 2020):

- An employer's policy will act in the interest of the employer. There may be times that the employer's interest is the same as the nurse's interest. However, there may be times when these interests do not coincide. By having their own policy, nurses will have someone representing their interests.
- Complaints to boards of nursing are typically *not* covered by an employer's plan. If a complaint is filed at the board of nursing, the nurse runs the risk of losing licensure or being disciplined. A personal professional licensure defense policy may provide representation in cases of complaints to the board.
- Nurses may be considered independent contractors, which may exclude them from coverage purchased by an employer. Nurses should read their employers' policies to identify the extent of coverage provided to them. If the policy is not clear, the insurer should be contacted for clarification. Or the nurse may contact an attorney to determine coverage.

Nursing consideration: When a hospital or person files a complaint with the Board, the Board investigates and seeks to determine if discipline is warranted. If an agreement cannot be reached, then the Board files a formal complaint.

Ethical principles

The ANA's Code of Ethics (2015) notes that ethics are an integral part of nursing's foundation. Nurses are expected to adhere to the ideals and moral norms of the profession. The Code of Ethics explicitly delineates the primary goals, values, and obligations of the profession.

Confidentiality
One of the most prominent legal and ethical issues that nurses must deal with is the issue of confidentiality. Nurses have an ethical obligation not to disclose information about clients. They must maintain the client's confidentiality, which refers to the duty of nurses not to disclose or share information without the express consent of the client. They must also respect the client's right to privacy, which means that clients have the right to keep information about their lives from being made public, even to one other person, if they so choose. Confidentiality is an ethical and professional obligation, but privacy may be protected by law.

Example
While the dangers of cigarette smoking were apparent as early as 1953, it was not until the mid- to late 1960s that the U.S. federal government mandated warnings in an attempt to inform the public of health dangers associated with smoking. What ethical obligations did health care professionals have to act on research findings regardless of legislative mandates? What options do health care professionals have now when they are made aware of a practice that may compromise wellness but would require disclosure of confidential client information?

Consider this ethical dilemma

- *Mrs. Davidson is a 60-year-old investment banker who has recently been diagnosed with Stage II breast cancer. Her mother and grandmother were breast cancer survivors. Mrs. Davison has a 35-year-old daughter, from whom she is estranged. After undergoing genetic testing, it is determined that Mrs. Davidson has a genetic mutation that significantly increases the risk of breast cancer.*

  Mrs. Davison has made it clear to her physician and the nursing staff that she will not be sharing the results of the genetic testing with her daughter, Victoria. One of Mrs. Davidson's nurses knows Victoria, since they both attend the same church. The nurse believes that Victoria has a right to know about the results of the genetic testing. Can the nurse legally disclose information about Mrs. Davidson?

  - No. The nurse cannot legally disclose information about Mrs. Davidson. Health care professionals who see an ethical obligation to disclose client information for a "greater good" should be aware they have neither the legal obligation nor the legal right to do so. Divulging confidential information without Mrs. Davidson's permission is prohibited, even though the nurse's concerns about Victoria are reasonable.

In this case, disclosure is not necessary to provide appropriate care. The nurse can educate Mrs. Davidson about the implications of the test results for both Mrs. Davidson and her family members. Providing this information in an objective, supportive manner may yield opportunities for further discussion and encourage Mrs. Davidson to relay important health-related information to her daughter.

Texas BON Scope of Practice Decision Making Model (DMM)
The Texas BON has developed the Scope of Practice Decision Making Model (DMM) to begin, identify, or clarify the activity, task, procedure, role, or intervention under consideration (2019c).

For further information on the model, consult http://txccc.net/texas-board-of-nursing-releases-new-scope-of-practice-decision-making-model-dmm/. The DDM has replaced the former Sis-Step Decision-Making Model (TBON, 2019c).

HIPAA
HIPAA is the acronym for the Health Insurance Portability and Accountability Act that was passed by Congress in 1996. Among other mandates, HIPAA privacy regulations require that health care providers and organizations, as well as their business associates, develop and follow procedures that ensure the confidentiality and security of protected health information (California Department of Health Care Services, 2020; U.S. Department of Health and Human Services Office for Civil Rights, n.d.).

Here are some examples of the application of HIPAA confidentiality mandates.

- *Mr. Stetson is a 32-year-old male who is admitted to an outpatient surgical center for a vasectomy. It is a simple outpatient procedure, and Mr. Stetson is preparing to leave for home after the procedure. He confides in the nurse that he made the decision to have the procedure without telling his wife, who wants more children. "We already have two kids and that's as many as I can handle," he says. The nurse believes that the client's wife has a right to know about her husband's actions. The nurse is a casual acquaintance of Mrs. Stetson and wonders if it would be "OK" to tell her in a private, non-work-related setting.*
  - No. The nurse may not disclose privacy-protected information to the client's wife. Disclosure of client information is not required by law, nor is it necessary for specified health purposes.
- *Stephanie works in a large office practice setting. One of her favorite clients is an 82-year-old woman who, until recently, had lived independently in her home for the past 40 years. Recently, her 50-year-old divorced daughter moved in with the client. "It is such a relief for me. I have someone in the house to help with the housework, to drive me places, and to just keep me company," she said. However, the nurse notices that there are several bruises on the client's upper arms and discoloration over her left eye. The nurse questions the client about the bruises, including asking her if she feels safe in her home and if anyone is hurting her. The client responds by saying she does not want to cause any trouble and that her daughter is a big help "even if she loses her temper sometimes." The nurse suspects abuse. Does the nurse have the right to disclose this information to the appropriate authorities?*
  - Yes. HIPAA allows for disclosure of suspected abuse or neglect to the extent that disclosure is required by law if the client agrees to the disclosure or if the disclosure is authorized by law. In most U.S. states and territories, nurses are mandated reporters of suspected abuse. In this case, the nurse is legally and ethically obligated to disclose the suspected abuse. This is known as being a *mandated reporter* (Carlson, 2022). In Texas, nurses are mandated to report suspected elder or child abuse within 48 hours, and they can report anonymously. Confirmation of abuse is not the standard—the standard is suspicion of abuse. Failure to report is a violation of the law and subjects the nurse to disciplinary action.

These two examples are only a tiny fraction of the many ethical/legal issues that nurses must deal with. Further examples may help to clarify such issues as they pertain to professional boundaries.

Professional boundaries
Nurses must always act in the best interests of clients and follow legal mandates and ethical principles. They must understand and apply the concepts of professional boundaries. The National Council of State Boards of Nursing (NCSBN) defines professional boundaries as "the space between the nurse's power and the client's vulnerability" (NCSBN, 2018a). In essence, this means that nurses must refrain from obtaining personal gain at the expense of the client and they must abstain from inappropriate involvement in the client's personal relationships (NCSBN, 2018a).

Some examples of inappropriately crossing professional boundaries include (NCSBN, 2018a):

- Confusion between the needs of the nurse and the needs of the client, such as when a nurse excessively discloses personal information about themselves or becomes involved in role reversal (e.g., expecting the client to help the nurse).

- Sexual misconduct (i.e., when the nurse behaves in ways that are seductive, sexually demeaning, harassing, or that can be interpreted by the client as sexual).
- Accessing, or attempting to access, private knowledge about the client that is not necessary for the provision of nursing care.

Nursing consideration: Professional sexual misconduct is considered to be one of the most serious violations of the nurse's professional responsibility (NCSBN, 2018a).

Some common questions related to professional boundaries and sexual misconduct include the following items (NCSBN, 2018a):

- **If a nurse wants to date or marry a former client, is this considered sexual misconduct?**
  According to the NCSBN, the critical issue here is the word *former*. How long has it been between the end of the professional nurse–client relationship and the initiation of the personal relationship? Was the client being treated for an acute short-term problem, or is the nurse still involved in a long-term professional relationship because of a chronic or long-term condition? How will the nurse's access to and knowledge of client information impact the future relationship? Is there any risk to the client?
- **What if the nurse and the client live in the same community?**
  Does this mean that the nurse cannot interact with the client in social settings? This is a complex, narrow issue. Setting appropriate boundaries can be difficult in these kinds of situations. Ultimately, the nurse must ask themselves what actions must and must not be taken so that professional boundaries are maintained and so that they behave in the best interests of the client.
- **If the client consents, does this make a sexual relationship between nurse and client acceptable?**
  According to the NCSBN, "if the client consents, and even if the client initiates the sexual conduct, a sexual relationship is still considered sexual misconduct for a health care professional. It is an abuse of the nurse-client relationship that puts the nurse's needs first." The Texas BON considers this unprofessional conduct that causes a serious breach of the minimum standards of nursing practice and that will likely result in revocation of a license or emergency suspension of a license (22 Tex. Admin. Code §213.33(b)) (TBON, 2019a).

Additional examples of crossing professional boundaries include these inappropriate behaviors (NCSBN, 2018a):

- The nurse excessively discloses personal problems, feelings of sexual attraction, or other facets of their intimate life with the client.
- The nurse keeps secrets with the clients.
- The nurse believes that only they can meet the client's needs.
- The nurse spends inappropriate amounts of time with certain clients, including visiting the client when off duty.
- The nurse behaves in a flirtatious manner with the client.
- The nurse fails to recognize their inappropriate feelings or behaviors and fails to transfer care or consult with supervisors in order to protect the best interests of the client.

In summary, the nurse must be aware of their feelings and behaviors, be aware of the behavior of other professionals, and *always* act in the best interest of the client (NCSBN, 2018a).

Social media

The use of social media and other forms of electronic communication is a critical component of professional nursing practice. Occurrences of inappropriate use of electronic media have been reported to state BON; have been reported in the nursing and general public media; and, in some cases, have resulted in severe disciplinary action.

The NCSBN has published a brochure entitled *A Nurse's Guide to the Use of Social Media* (NCSBN, 2018b). Although many, if not most, healthcare organizations have policies that address employee use of social media during work hours, many do not address the use of such media outside the workplace. When using social media outside the workplace, the nurse is still vulnerable to accusations of professional misconduct such as violations of client's rights and confidentiality. This brochure attempts to address some of these occurrences.

A nurse's use of social media is still guided by professional, legal, and ethical standards. Client information must be protected regardless of whether the nurse is on or off duty. *Privacy* refers to the client's expectation and right to be treated with dignity and respect. Federal law reinforces such privacy through HIPAA. Breaches of client confidentiality and privacy can be intentional or accidental and can occur in a multitude of ways. However, even nonintentional breaches leave the nurse vulnerable to legal and other forms of disciplinary action. This includes posting information via social media (NCSBN, 2018b).

A BON may investigate reports of inappropriate disclosures on social media on the grounds of (NCSBN, 2018b):

- Unprofessional or unethical conduct.
- Moral turpitude.
- Mismanagement of client records.
- Revealing privileged communication.
- Breaching confidentiality.

Nursing consideration: Improper use of social media by nurses may violate state and/or federal laws, thus making the nurse vulnerable to personal liability claims (NCSBN, 2018b).

Here are a few well-publicized examples of misuse of social media as described in the NCSBN white paper on the use of social media (NCSBN, 2018b).

- A junior nursing student provided nursing care to a 3-year-old leukemia client as part of her pediatric clinical rotation. When the child's mother was out of the room, the nursing student took his picture with her cell phone, posted the photo on her Facebook page, and commented about the bravery of the child and how proud she was to be a nurse. A nurse from the hospital was browsing Facebook and found the photo. The nurse reported it to hospital authorities. Although the student did not mean to do so, she had violated the client's confidentiality. She was expelled from the nursing program, the nursing program was barred from using the pediatric site for future student clinical rotations, and the hospital faced a HIPAA violation.
- A nurse blogged on a local newspaper's online chat room about taking care of a client. The description made the client identifiable in the small town where the nurse worked. The BON issued a warning to the nurse, advising her that further evidence of the release of personal information about clients would result in disciplinary action. Note that in Texas, a warning is a disciplinary action.
- A nurse working at a long-term care facility arrived at work and found an email on her work laptop. The email, sent during the previous night shift, contained a photo of an elderly female wearing a gown with her backside exposed. The email and photo were forwarded throughout the facility. Some employees were outraged, while others found the photo funny. No staff members brought the photo to the attention of a supervisor. By mid-day, the director of nursing and management had become aware of the incident and began an investigation into the matter. The local media also became aware of the incident, as did local law enforcement personnel, who began an investigation as to whether any crime involving sexual exploitation had been committed. The incident was also reported to the state's BON, which opened an investigation of its own. Although the original

source of the photo distribution was never discovered, nursing staff faced potential liability for their willingness to share the photo within and outside the facility and for their failure to bring it to the attention of management according to facility policies and procedures. The client was eventually identified, and the family threatened to sue the facility and all staff members involved. Several staff members were placed on administrative leave while the incident was under investigation. The BON complaint, as of this writing, is still pending. The incident was also referred to the agency that oversees long-term care facilities in that geographic region. Additionally, there could be a federal HIPAA complaint to the Office of Civil Rights (OCR).

The NCSBN advises nurses to avoid posting information about clients electronically and on any type of social media and to refrain from discussing patients with family or in public settings. They should be aware of and adhere to all employer policies regarding social media and promptly report any breach of client confidentiality or privacy.

Conclusion

Nursing has consistently been rated among the most trusted professions in the U.S. and other countries. To maintain this trust, nurses must, at all times, function in a manner that adheres to legal and professional standards.

Nurses have legal and ethical obligations to always act in the best interests of their clients. They must make themselves aware of their NPAs, BON position statements and rules, professional boundaries, and standards of practice published by professional and specialty nursing associations and practice according to these mandates. They must be aware that ignorance of laws and standards is no excuse for their violation.

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TEXAS ETHICS AND JURISPRUDENCE FOR NURSES, 2ND EDITION

Self-Assessment Answers and Rationales

1. The correct answer is C.
Rationale: The Texas Nursing Practice Act serves as a way to protect the public from harm through regulations and rules nurses must follow.

2. The correct answer is B.
Rationale: The Texas BON does not become involved with employment concerns, including work hours, scheduling, staffing, or extended work hours.

3. The correct answer is A.
Rationale: According to the Texas Nursing Practice Act, inserting a PICC line would be a violation of the scope of practice for LVNs.

Course Code: ANCCTX02TE

Basic Psychiatric Concepts

6 Contact Hours

Release Date: June 1, 2022 **Expiration Date:** June 1, 2025

Faculty

Robyn B. Caldwell, DNP, FNP-BC, earned a Doctor of Nursing Practice (DNP) from Samford University in nursing administration with an emphasis in nursing education in 2013; a post-master's certificate as a family nurse practitioner from Delta State University in 2003; a master's degree in Nursing Administration (MSN) in 1996; and Bachelor of Science in nursing (BSN) degree in 1990 from the University of Tennessee. Dr. Caldwell has worked in a variety of healthcare settings throughout her 32-year career including adult and pediatric emergency nursing, nursing administration, and nursing education (LPN to DNP) in both the community college and university settings. She has published and presented on topics relevant to nursing education and patient outcomes in local, state, and national venues. Currently, Dr. Caldwell is employed in an urgent care setting and is working on a post masters as a psychiatric mental health nurse practitioner (PMHNP).

Robyn B. Caldwell has disclosed that she has no significant financial or other conflicts of interest pertaining to this course.

Reviewer: Kimberleigh Cox, DNP, PMHNP-BC, ANP-BC, PHNc., is an Associate Professor at the University of San Francisco's School of Nursing and Health Professions and is nationally board certified as both an adult nurse practitioner (ANP) and psychiatric mental health nurse practitioner (PMHNP). She is also a certified Public Health Nurse (PHNc). Dr. Cox received her bachelor's degree in Psychology from Brown University. She then worked for Harvard, Brown and Stanford Universities' Departments of Psychiatry and Mood Disorders Clinics from 1990-1995 doing clinical research, primarily in depressive and anxiety disorders. Dr. Cox received her master's degree in Nursing (MSN) from University of California San Francisco in 1998, completing a dual adult and psychiatric nurse practitioner program. She has practiced clinically as a Nurse Practitioner since 1998 working with diverse populations of individuals with psychiatric, behavioral health, and addictive problems in a variety of specialty mood disorders, psychiatric and residential care settings in California. She completed her Doctor of Nursing Practice (DNP) from USF in 2010 and was the Dean's Medal recipient for professionalism. Her doctoral work focused on chronic depression and the application of an evidence-based psychotherapeutic treatment. Dr. Cox has been teaching undergraduate and graduate nursing students in community/public health and psychiatric/mental health since 2003. She has presented nationally on managing patients with difficult behaviors, has authored publications, including "Bipolar and Related Disorders: Signs, Symptoms and Treatment Strategies" (2018), and has peer reviewed "Depression: A Major Public Health Concern" (2nd & 3rd editions - 2019, 2022).

Kimberleigh Cox has disclosed that she has no significant financial or other conflicts of interest pertaining to this course.

Course overview

The goal of this course is to provide an introductory overview of mental health concepts. This course examines the history, epidemiology, legal/ethical aspects, mental health assessment, and other basic therapeutic skills used in mental health nursing. In-text links, case studies, and self-assessment questions and NCLEX-style testing are utilized.

This course is designed for registered nurses, licensed practical/vocational nurses, and newly licensed registered nurses who desire a greater understanding of basic mental health concepts. A fundamental understanding of medical terminology, abbreviations, and nursing care is assumed.

Learning objectives

Upon completion of the course, the learner will be able to:

- Explore historical aspects associated with mental healthcare.
- Identify legal and ethical principles of mental health nursing.
- Explore cultural aspects of mental health.
- Describe components of the psychiatric assessment, including the mental status exam.
- Describe neurobiological components essential to mental health.
- Identify therapeutic modalities used in mental healthcare.

How to receive credit

- Read the entire course online or in print which requires a 6-hour commitment of time.
- Complete the self-assessment quiz questions which are at the end of the course or integrated throughout the course. These questions are NOT GRADED. The correct answer is shown after you answer the question. If the incorrect answer is selected, the rationale for the correct answer is provided. These questions help to affirm what you have learned from the course.
- Depending on your state requirements you will be asked to complete either:
  - An affirmation that you have completed the educational activity.
  - A mandatory test (a passing score of 70 percent is required). Test questions link content to learning objectives as a method to enhance individualized learning and material retention.
- If requested, provide required personal information and payment information.
- Complete the MANDATORY Course Evaluation.
- Print your Certificate of Completion.

CE Broker reporting

Colibri Healthcare, LLC, provider # 50-4007, reports course completion results within 1 business day to CE Broker. If you are licensed in Arkansas, District of Columbia, Florida, Georgia, Kentucky, Michigan, Mississippi, New Mexico, North Dakota, South Carolina, or West Virginia, your successful completion results will be automatically reported for you.

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Activity director

Deborah Martin, DNP, MBA, RN, NE-BC, FACHE, Director of Learning Innovation Colibri Healthcare, LLC

Disclosures

Resolution of conflict of interest
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Course verification

All individuals involved have disclosed that they have no significant financial or other conflicts of interest pertaining to this course. Likewise, and in compliance with California Assembly Bill No. 241, every reasonable effort has been made to ensure that the content in this course is balanced and unbiased.

INTRODUCTION

AIn 1973, the American Nurses Association (ANA) developed standards as a framework for psychiatric-mental health nursing practice, which evolved into the "Psychiatric-Mental Health Nursing: Scope and Standards of Practice" (2nd edition, 2014). These practice guidelines provide a foundation for standardization of the professional role, scope, and standards of practice for psychiatric-mental health nurses. During the 1980s and 1990s, respectively, the American Nurses Credentialing Center (ANCC) and American Association of Nurse Practitioners (AANP) implemented specialty certifications relevant to the level of education and experience of the applicants. Increasing numbers of psychiatric mental health nurse practitioners (PMHNPs) have obtained certification to provide advanced care to individuals in both acute and community health settings.

HISTORY OF MENTAL HEALTHCARE

Before the late 1800s, unusual behaviors were commonly thought to be caused by demonic forces. Those who displayed strange behaviors were often banished or confined. People with these odd behaviors were treated poorly and the treatments were aggressive and torturous. In the late 1700s, Philippe Pinel became the superintendent of a mental institution in France (Keltner, 2015). He noted the substandard conditions of the institution and the brutal treatment of the patients. He was the first to begin what became known as *moral therapy*, which consisted of better treatment, including unchaining patients and allowing them time outside. Soon after, William Tuke founded a similar facility in England (Boyd, 2018; Kibria & Metcalfe, 2016). This facility was based on the religious teachings of the Quakers and ensured moral treatment. Tuke saw this institution as a refuge for those with mental illness.

In the United States, Dorothea Dix, a Boston school teacher, was instrumental in opening a state hospital that endorsed a warm and caring environment, providing food and protection for Massachusetts residents (Boyd, 2018; Forrester, 2016). This facilitated a movement toward a more humanistic view of those with mental illness.

In the late 1800s and early 1900s, Sigmund Freud developed his landmark work regarding how childhood experiences and faulty parenting shape the mind (Boyd, 2018; Fromm, 2013). This began the movement toward scientific reasoning and understanding behaviors. Freud influenced researchers such as Carl Jung and Alfred Adler as well as other researchers who contributed to the fields of behaviorism, somatic treatments, and biology (Wedding & Corsini, 2020). With these new developments, patients with psychiatric disorders began to receive needed psychiatric treatment and rehabilitation.

In 1946, the United States passed the National Mental Health Act, which resulted in the establishment of the National Institute of Mental Health or NIMH. In the second half of the 20th century, equality became a central tenet in mental health treatment. Many mental healthcare consumers became advocates and began to promote the rights of those with mental illness, working to demolish stigma, discrimination, and forced treatments.

In 1979, the National Alliance on Mental Illness, an advocacy group, was formed. Through the work of the alliance and other advocacy efforts, mental health patients were granted autonomy and began participating in their own care.

The 1990s were known as the *decade of the brain*, with focus placed on neuroscience and brain research.

It stimulated a worldwide growth of scientific research and advances, including the following:

- Research on genetic basis for mental illnesses.
- Mapping of the genes involved in Parkinson, Alzheimer's, and epilepsy.
- Discovery of the actions and effects of neurotransmitters and cytokines.
- Advancements in neuroimaging techniques that have increased our understanding of normal brain function and pathologic states (Halter, 2018).

In 1990, the Human Genome Project began to map the human genome. This 13-year project strengthened the theory that there are biological and genetic explanations for psychiatric conditions (https://www.genome.gov/human-genome-project). Although researchers have begun to identify genetic links to mental illness, research has yet to reveal the exact nature and mechanisms of the genes involved. It has been established, however, that psychiatric disorders can result from multiple mutated or defective genes.

EPIDEMIOLOGY

Epidemiology is the scientific study of the distribution (frequency, pattern) and determinants (causes, risk factors) of health-related states and events (not just diseases) in specified populations including neighborhoods, schools, cities, states, countries, and globally (https://www.cdc.gov/). Concepts related to epidemiology include *incidence* and *prevalence*. Applied to mental health, incidence is the number of new cases of a mental disorder in each period. Prevalence is the total number of cases in each population for a specific period. According to 2019 data from the National Institutes of Mental Health (NIMH), an estimated 51.5 million adults aged 18 or older (20.6%) in the United States have been diagnosed with mental illness. Lifetime prevalence estimates 49.5% of adolescents have been diagnosed with a mental disorder and 22.2% have had severe impairment (NIMH).

POLICY AND PARITY

The first Surgeon General's report on mental health was published in 1999. This landmark report, which was based on scientific literature and included a focus on mental health providers and consumers, concluded that mental health is fundamental to holistic health and that effective treatments for mental disorders are available.

In 2003, the President's New Freedom Commission on Mental Health recommended that the healthcare system needed to streamline care for those suffering from mental illness. This commission advocated for early diagnosis, prevention, and treatment and set forth new expectations for recovery and assistance for those experiencing mental illness to find housing and work.

In 2006, the Institute of Medicine (now the Health and Medicine Division of the National Academies) Committee on Crossing the Quality Chasm published Improving the Quality of Health Care for Mental and Substance Use Conditions. The *Quality Chasm* series highlights effective treatments and addresses large gaps in care, focusing on voluntary treatment. Additionally, this promotes a system that treats mental health issues separately from physical problems. A strong recommendation was made for equality in financial reimbursement and quality treatment. *The Mental Health Parity and Addiction Equity Act of 2008* (Office of the Federal Register, 2013) sought to improve the quality of treatments for those with mental illness by advocating mental health coverage at the same annual and lifetime benefit as any medical-surgical coverage (Centers for Medicare & Medicaid Services, n.d.). This Act required any business with more than 50 employees to have mental health coverage at the same level as medical-surgical coverage (Centers for Medicare & Medicaid Services, n.d.). This includes deductibles, copayments, coinsurance, out-of-pocket expenses, and treatment limitations. The requirements under the Act are applied indirectly to small group health plans in tandem with the Affordable Care Act's essential health benefit requirements (Centers for Medicare & Medicaid Services, n.d.).

PSYCHIATRIC AND MENTAL HEALTH NURSING

The psychiatric nurse *promotes mental health through the assessment, diagnosis, and treatment of human responses to mental health problems and psychiatric disorders* (American Nurses Association, 2014, p. 129). Psychiatric nursing integrates the use of self, neurobiological theories, and evidence-based practice in planning treatments. Nurses work in a variety of inpatient and outpatient settings with individuals and families across the lifespan who exhibit mental health needs. Specific activities of the psychiatric nurse are defined by the Psychiatric-Mental Health Nursing: Scope and Standards of Practice, published jointly by the American Nurses Association, the American Psychiatric Nurses Association, and the International Society of Psychiatric Mental Health Nurses (American Nurses Association, 2014).

Nurses encounter patients in crisis in many clinical settings. The crisis may be physical, emotional, mental, or spiritual. Regardless of the origin, these patients express a variety of feelings including hopelessness, helplessness, anxiety or anger, low self-esteem, and confusion. Many individuals act withdrawn, suspicious, depressed, hostile, or suicidal. Additionally, the individual may be intoxicated or withdrawing from alcohol or other substances. Knowledge of basic psychiatric concepts increases nursing competency in any clinical setting.

DSM-5 NOMENCLATURE FOR DIAGNOSES AND CLASSIFICATIONS

Blood tests, though useful for diagnosing many physical disorders, cannot diagnose all psychiatric disorders. Instead, healthcare practitioners base their diagnoses primarily on symptoms. Emil Kraepelin was the first healthcare provider to recognize and categorize patients' symptoms into mental disorders around the turn of the 20th century (Boyd, 2018). Today, healthcare providers often use other forms of tests, such as genetic testing, computerized tomography, magnetic resonance imaging, and positron emission tomography, to detect changes in the brain and brain activity.

By 1880, researchers had developed seven classifications of mental illness: mania, melancholia, monomania, paresis, dementia, dipsomania, and epilepsy (APA, n.d.). By 1918, the need for uniformity in diagnoses drove the Committee on Statistics of the American Medico-Psychological Association, which later became the American Psychiatric Association (APA, 2013), to develop the first *Statistical Manual for the Use of Institutions for the Insane*. The purpose of this document was to gather statistical information from institutions regarding 22 known disorders. Following World War II, US Army psychiatrists expanded the diagnostic categories to better incorporate the types of problems veterans experienced as a result of combat (APA, n.d.).

In 1952, the APA published the first edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM)*. Since then, the APA has published new editions of the DSM every 5 to 10 years. In 2013, the APA released the fifth edition of the DSM, the most recent version (APA, 2013). The DSM-5 is the result of a 12-year revision process involving hundreds of professionals, field trials to demonstrate the reliability of the data, and public and professional review and comment (APA, 2013).

The purpose of the DSM-5 is to facilitate healthcare providers' diagnosis of mental disorders and development of individualized treatment plans (APA, 2013). The DSM-5 bases disorders on a continuum from mental health to mental illness. A mental disorder is defined in the DSM-5 as *a syndrome characterized by clinically significant disturbance in the individual's cognition, emotion regulation, or behavior that reflects a dysfunction in the psychological, biological, or developmental processes underlying mental functioning* (APA, 2013, p. 20). The definition also reflects the high level of disability or distress in occupational or other life activities that results from the mental disorder.

Some healthcare providers feel that the DSM-5's categorical classifications limit its use because individuals may not fit neatly into one specific category. Regardless, the DSM-5 serves as a guideline to assist practitioners in making sound clinical decisions. Diagnosis does not always imply etiology; therefore, using the DSM-5 to predict behavior or response to treatment is inappropriate (APA, 2013).

THEORIES RELATED TO PSYCHIATRIC AND MENTAL HEALTH NURSING

Mental health professionals base their work on assessments, behaviors, and theories. These are often described as explanations or hypotheses and tested for relevance and soundness. In mental health, theories are often borrowed from other disciplines and inspire treatments for the practice of psychiatric nursing.

Freud's psychoanalytic theory

Sigmund Freud, referred to as *the father of psychoanalysis*, revolutionized thinking about mental disorders (Townsend, 2019). His theories of personality structure, level of awareness, anxiety, the role of defense mechanisms, and stages of psychosexual development revolutionized the psychiatric world (Townsend, 2019). Although Freud started as a biological scientist, he changed his approach to conversational therapy. He concluded that talking about difficult issues involving intense emotions had the potential to heal problems that could cause mental illnesses. This led Freud to develop his psychoanalytic theory (https://pmhealthnp.com/pmhnp-topics/sigmund-freud-psychoanalytic-theory/).

Erikson's theory on the stages of human development

Erik Erikson, a developmental psychologist, emphasized the role of the psychosocial environment and expanded on Freud's psychoanalytic theory. The Eight Stages of Man, is organized by age and developmental conflicts:

1. Basic trust versus mistrust.
2. Autonomy versus shame and doubt.
3. Initiative versus guilt.
4. Industry versus inferiority.
5. Identity versus role confusion.
6. Intimacy versus isolation.
7. Generativity versus stagnation.
8. Ego integrity versus despair.

Analysis of behavior using Erikson's framework helps nurses to identify long term successful resolution of psychosocial development across the lifespan.

Harry Stack Sullivan's interpersonal theory

Interpersonal theories are the cornerstone of mental health nursing. Harry Stack Sullivan, an American-born psychiatrist, identified personality as an observable behavior within interpersonal relationships, which led to the development of his interpersonal theory. Sullivan believed that anxiety or painful feelings arise from insecurities or the inability to meet biological needs. All behaviors are designed to help individuals through interpersonal interactions by decreasing anxiety. Individuals are unaware that they act out behaviors to decrease anxiety and therapy can help the patient gain personal insight into these insecurities. He was the first to use the term *participant observer*, which refers to the idea that therapists must be part of the therapeutic session. Sullivan insisted that healthcare professionals should interact with patients as authentic human

beings through mutual respect, unconditional acceptance, and empathy. Sullivan developed the concept of psychotherapeutic environments characterized by accepting the patient and the situation, which has become an invaluable treatment tool. Even today, many group psychotherapies, family therapies, and training programs use Sullivan's design of an accepting atmosphere (Halter, 2018).

Hildegard Peplau's theory of interpersonal relations

Hildegard Peplau, sometimes referred to as the *mother of psychiatric nursing*, published the theory of interpersonal relations in 1952, which became a foundation for modern psychiatric and mental health nursing (Townsend, 2019). The goal of interpersonal therapy is to reduce or eliminate psychiatric symptoms by improving interpersonal functioning (Sadock, & Ruiz, 2015). Sullivan's work greatly influenced Peplau. She developed the first systematic framework for psychiatric nursing, focusing on the nurse-patient relationship. Peplau established the foundation of professional practice for psychiatric nurses and continued working on psychiatric nursing theory and advancement of nursing practice throughout her career. She was the first nurse to identify mental health nursing as a specialty area with specific ideologies and principles, and the first to describe the nurse-patient relationship as the foundation for nursing practice (Boyd, 2018).

Peplau created a major shift from a care model focused on medical treatment to one based on the interpersonal relationship between nurses and patients. She further proposed that nurses are both participants and observers in the therapeutic treatment of patients. Her theory recognizes the *ability to feel in oneself the feelings experienced by another*; she identified this as *empathetic linkage* (Boyd, 2018). Another key concept, according to Peplau, is anxiety, which is an energy that arises when present expectations are not met (Boyd, 2018). Throughout her career, Peplau's goal was for nurses to care for the person and the illness.

B.F. Skinner's behavioral theory

Behavioral theories supply techniques that patients can use to modify or replace behaviors. This is an important concept in psychiatric nursing management and is the basis of several approaches that research has shown to be successful in altering specific behaviors. B. F. Skinner, a prominent behaviorist, researched *operant conditioning*, the process through which consequences and reinforcements shape behaviors. Behavioral therapy is grounded in the assumption that maladaptive behaviors can be changed, and positive and negative reinforcements can be used to help modify behavior. Behavioral therapy is often used in treating people with phobias, alcoholism, and anxiety. Another type of behavioral therapy is modeling, in which the therapist or nurse role-plays specific behaviors so that the patient can learn through imitation. Role-playing allows the patient to practice modeled behaviors in a safe environment. Another form of behavioral therapy is systematic desensitization, which targets a patient's specific fears and proceeds in a step-by-step manner to alleviate those fears with the help of relaxation techniques (Keltner, 2018).

Aaron Beck's cognitive behavioral therapy

Whereas behaviorists focus on the belief that behaviors can be changed, other researchers focus on cognition or thoughts involved in behaviors. Aaron Beck developed cognitive behavioral therapy after working with depressed patients. Cognitive behavioral therapy is based on cognitive psychology and behavioral therapy. Beck believed that depression was the result of distorted thinking processes and negative self-concept (https://www.ncbi.nlm.nih.gov/books/NBK470241/). Using this approach, the nurse can help the patient identify negative thought patterns and then help the patient recondition these cognitive distortions into more appropriate beliefs that are based on facts (https://www.ncbi.nlm.nih.gov/books/NBK470241/).

Humanistic Theories

Humanistic theories focus on the potential and the free will of patients. These theories emphasize self-actualization, the highest potential and productivity that an individual can achieve in life. For example, Abraham Maslow believed that motivation is driven by a hierarchy of needs that leads to becoming the best person possible. This model allows the nurse to work with the patient to create an individualized care plan based on the current hierarchical needs of the patient https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4130906/.

THE STRESS-DIATHESIS MODEL

The Stress-Diathesis Model was originally developed to explain schizophrenia during the 1960s, but later adapted to study depression during the 1980s (Colodro-Conde, et.al, 2018). According to this model, stress activates certain vulnerabilities (diathesis), which predisposes the individual to psychopathology. This model has been criticized for its vagueness, yet these principles are used to understand other psychiatric disorders.

BIOLOGICAL MODEL

Mental health nurses also attend to the physical needs of psychiatric patients. The nurse may administer prescribed medication, nutrition, and hydration to ensure optimal physiological functioning of the patient. The biological model of mental illness focuses on the chemical, biological, and genetic makeup of mental illness. This model seeks to understand how the body and brain interact to create experiences and emotions, and how social, environmental, cultural, spiritual, and educational factors influence individuals (Halter, 2018). All the theories discussed in this section play a vital role in how the nurse cares for the patient with a mental health disorder.

Self-Assessment Quiz Question #1

Which best describes Aaron Beck's Contribution to the mental health profession?

a. Hierarchy of needs.
b. Cognitive behavioral therapy.
c. Empathetic linkages.
d. Operant conditioning.

ETHICAL, LEGAL, AND CULTURAL CONSIDERATIONS

The term *ethics* refers to an individual's beliefs about right and wrong and societal standards regarding right and wrong. Bioethics refers to ethical questions related specifically to healthcare (Halter, 2018).

Ethics are linked to cultural values. Societal standards and values can be determined only within a specific group. However, fundamental principles of ethics exist in all cultures and are inherent in all human beings. Understanding how cultures view mental illness and the accompanying patient symptoms can influence how decisions, particularly ethical decisions, are made. Nurses can be an instrumental part of effective decision making when cultural values and societal standards differ.

A thorough understanding of general ethical principles is necessary to make reasonable, fair, and sound judgments in providing care. Nurses who choose to work in the specialty of mental healthcare will encounter ethical questions on almost a daily basis. Issues such as autonomy, confidentiality, patient protection, therapeutic relationships, mental health competency, and mental health admissions are particularly complicated. To better guide the nurse in making ethical choices, an understanding of the American Nurses Association Code of Ethics and the five basic principles of bioethics is useful.

American Nurses Association Code of Ethics

The American Nurses Association (ANA) established an ethical standard for the nursing profession that guides ethical analysis and decision making (ANA, 2015). Ethics is a branch of philosophy where one reflects on morality, which is the person's character, values, and conduct in a particular situation (ANA, 2015).

The Code of Ethics is the foundation for nursing theory and practice where values and obligations shape the nursing profession (ANA, 2015). This living document changes based on nursing's social context, with a revision occurring at minimum every 10 years (ANA, 2015). The ANA Code divides ethical issues into nine provisions, based on general ethical principles:

- Provision 1
  - The nurse practices with compassion and respect for the inherent dignity, worth, and unique attributes of every person, including self-determination (ANA, 2015).
- Provision 2
  - The nurse's primary commitment is to the patient, whether an individual, family, group, community or population (ANA, 2015).
- Provision 3
  - The nurse promotes, advocates for, and protects the rights, health, and safety of the patient (ANA, 2015).
- Provision 4
  - The nurse has authority, accountability, and responsibility for nursing practice, makes decisions, and takes action consistent with the obligation to promote health and to provide optimal care (ANA, 2015).
- Provision 5
  - The nurse owes the same duties to self as to others, including the responsibility to promote health and safety, persevere wholeness of character and integrity, maintain competence and continue personal and professional growth (ANA, 2015).
- Provision 6
  - The nurse, through individual and collective effort, establishes, maintains, and improves the ethical environment of the work setting and conditions and employment are conducive to safe, quality care (ANA, 2015).
- Provision 7
  - The nurse, in all roles and settings, advances the profession through research and scholarly inquiry, professional standards development, and the generation of both nursing and health policy (ANA, 2015).
- Provision 8
  - The nurse collaborates with other health professionals and the public to protect human rights, promote health diplomacy, and reduce health disparities (ANA, 2015).
- Provision 9
  - The profession of nursing, collectively through its professional organizations, must articulate nursing values, maintain the integrity of the profession and integrate principles of social justice into nursing and health policy (ANA, 2015).

The ANA Code may be viewed at no charge on the ANA website (https://www.nursingworld.org/coe-view-only).

Bioethical principles

Bioethics is a branch of ethics that studies the implications of biological and biomedical advances and can be considered a set of guiding principles for the nursing profession that go beyond right and wrong. Bioethical principles fall into five categories (Boyd, 2018; Halter, 2018). These principles are meant to be guidelines to help all clinicians in decision making.

- *Beneficence*: Clinicians have a duty to assist the patient to achieve a higher level of well-being. This concept encompasses kindness and generosity toward the patient in providing care. An example of this is changing healthcare policy or making sure a patient brought to the emergency department in severe pain gets medication as soon as possible.
- *Fidelity*: Healthcare providers have a duty to be honest and trustworthy. This concept includes loyalty, advocacy, and a commitment to the patient. An example of this is staying abreast of best practices in nursing or advocating for the patient to receive high-quality services. Another example is being faithful in your promises to check on a patient within a specific timeframe.
- *Autonomy*: The healthcare provider acknowledges the patient's right to make their own decision, even if the nurse disagrees with the decision. An example of this is a patient with cancer who refuses treatments that may prolong their life.
- *Justice*: Healthcare providers must recognize that all persons are entitled to equal treatment and quality of care. For example, it can be particularly difficult to provide emotional support and counseling equally to both the family harmed by an intoxicated driver and to the driver. Healthcare providers should strive to be nonjudgmental and fair to all patients, regardless of age, gender, race, sexual orientation, diagnosis, or any other differentiating characteristic.
- *Veracity*: The healthcare provider should always be truthful with the patient. This allows the patient to make informed decisions about their treatment. For example, talking to the patient about the side effects of medications is showing respect to the patient by being truthful.

Self-Assessment Quiz Question #2

Patients admitted to inpatient psychiatric units are scheduled for group therapy two times daily. Attendance is strongly encouraged, but not mandatory. Which ethical principle is demonstrated by this unit policy?

a. Autonomy.
b. Justice.
c. Beneficence.
d. Veracity.

IMPORTANT LEGISLATION IN MENTAL HEALTH

Section 1 of the 14th Amendment to the US Constitution adopted on July 9, 1868, states:

> *All persons born or naturalized in the United States, and subject to the jurisdiction thereof, are citizens of the United States and of the state wherein they reside. No state shall … deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws* (U.S. Constitution). The issue of liberty has been tested repeatedly in the courts in cases in settings where U.S. citizens have been held against their will, including in psychiatric institutions.

Keltner and Steele (2018) provide an overview of landmark legal decisions related to patients with psychiatric disorders. Historically, these nine rulings have had a major impact on the legal rights of patients with psychiatric disorders. A summary of each of these legal decisions is as follows:

1843 – The *M'Naghten rule* first identified a legal defense of not guilty by reason of insanity by stating that persons who do not understand the nature of their actions cannot be held legally responsible for those actions (https://www.law.cornell.edu/wex/m%27naughten_rule).

1965 – In *Griswold v. Connecticut*, The Supreme Court first recognized that a person has the right of marital privacy under the Constitution of the United States (https://www.law.cornell.edu/wex/griswold_v_connecticut_(1965)).

1966 – In *Rouse v. Cameron*, the courts found that a patient committed to an institution must be actively receiving treatment and not merely warehoused (https://casetext.com/case/rouse-v-cameron)

1968 – In *Meier v. Ross General Hospital*, a physician was found liable for the death of a hospitalized patient who committed suicide while under his care. The patient had a previous suicide attempt before the hospital stay. The physician was liable for failing in his *duty to warn* of the threat of suicide in this patient (https://caselaw.findlaw.com/ca-supreme-court/1822578.html)

1972 – In *Wyatt v. Stickney*, the entire mental healthcare system of Alabama was sued for an inadequate treatment program. The court ruled that each institution within the mental healthcare system must (1) stop using patients for hospital labor needs, (2) ensure a humane environment, (3) maintain minimum staffing levels, (4) establish human rights committees, and (5) provide the least restrictive environment possible for the patients (https://mentalillnesspolicy.org/legal/wyatt-stickney-right-treatment.html).

1976 – In the well-known case of *Tarasoff v. The Regents Of the University of California*, the parents of Tatiana Tarasoff sued the university following the 1969 death of their daughter at the hands of Prosenjit Poddar. Poddar had told his therapist that he planned to kill Tarasoff when she returned from summer break. Although the therapist had contacted the police, law enforcement released Poddar because he appeared rational. The court found that the therapist had a *duty to warn of threats of harm to others* and was negligent in not notifying Tarasoff of the threats that had been made against her (https://law.justia.com/cases/california/supreme-court/3d/17/425.html).

1979 – Patients at Boston State Hospital sought the right to refuse treatment in *Rogers v. Okin*. Based on the 1965 decision regarding the right of personal privacy, the court found that the hospital could not force nonviolent patients to take medication against their will. This ruling also included the directive that patients or their guardians must give informed consent before medications could be given (https://pubmed.ncbi.nlm.nih.gov/6134270/ and https://muse.jhu.edu/article/404046).

1983 – In *Rennie v. Klein*, a patient claimed a hospital violated his rights when he was forced to take psychotropic medications. The ruling again addressed the right to refuse treatment and the right to privacy, and it furthered the necessity of obtaining informed consent (https://pubmed.ncbi.nlm.nih.gov/11648483/).

1992 – *Foucha v. Louisiana* demonstrated that the nature of an ongoing psychiatric commitment must *bear some reasonable relation to the purpose for which the patient is committed* (Foucha v. Louisiana, 1992). When Foucha was first hospitalized, the indication was a patient who was considered mentally ill and dangerous. The ruling recognized that patients who are no longer mentally ill do not require hospitalization and that patients are not required to prove themselves to be no longer dangerous (https://www.law.cornell.edu/supct/html/90-5844.ZO.html).

Mental health laws have been created to protect patients with psychiatric disorders and regulate their care. These laws often vary by state. Check the Nurse Practice Act within the respective state of practice to determine state-level regulation.

MENTAL HEALTH AND DEINSTITUTIONALIZATION

The changes in mental healthcare over the years show a shift in care from institutionalization to community settings, also known as deinstitutionalization (Boyd, 2018). Deinstitutionalization was also significant because this shaped our current community and mental health treatment for many vulnerable individuals including the homeless and those with substance use disorders. During the era of state hospitals, mentally ill individuals were less likely to be chronically homeless. While deinstitutionalization was a noble concept, it was not well implemented. The lack of existing public health infrastructure left communities unprepared to manage those with chronic mental illness. Additionally, the arrival of inexpensive and accessible illicit drugs like crack cocaine, changed the face of communities and left those with mental illness even more vulnerable. The lack of affordable treatment for mental health disorders contributes to both individual and public health risk.

Two of the most important concepts in civil rights law are the writ of habeas corpus and the least restrictive alternative doctrine (Halter, 2018). The writ of habeas corpus pertains to holding people against their will. Psychiatric patients are included in this protection and they have the right not to be detained unless individual welfare is involved. Additionally, the least restrictive alternative doctrine states that a patient's autonomy must be upheld whenever possible (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2733575/pdf/behavan00025-0105.pdf). In practice it means that nurses need to try to manage patients' symptoms and behaviors with psychotherapeutic interventions (milieu management, communication, and behavioral approaches) first. If symptoms are not fully or adequately managed, nurses should document what was attempted and ineffective in order to move to more restrictive measures or levels of care (i.e. move up the treatment hierarchy to more restrictive approaches such as medications/chemical restraints, seclusion, and/or physical restraints). Each time a more restrictive measure is applied, documentation needs to support which lesser restrictive strategies were attempted and describe their lack of efficacy.

An understanding of civil rights and state regulations is important to patient care procedures. Admission of psychiatric patients can be voluntary or involuntary, but neither voluntary nor involuntary admission indicates the ability of the patient to make decisions (Halter, 2018). Admission procedures are in place to protect the patient and the public. Involuntary admission is used when patients are a danger to self or others or cannot take care of themselves. However, all patients are to be treated

with respect and have the right to informed consent, the right to refuse medications, and the right to the least restrictive treatments (Boyd, 2018). Furthermore, the patient must be seen by a specified number of providers who confirm that the patient meets the criteria for involuntary admission.

THE CONSUMER BILL OF RIGHTS AND CONFIDENTIALITY

In 1997, President Clinton appointed the Advisory Commission on Consumer Protection and Quality in the HealthCare Industry. The Commission, co-chaired by Donna Shalala, secretary of the Department of Health and Human Services at the time, issued its final report, which included a Consumer Bill of Rights & Responsibilities. Of interest to psychiatric nurses is the section on confidentiality of health information. Patients with psychiatric disorders are expressly protected in the confidentiality of their records; practitioners may not share information with any third party without the express written consent of the patient or their legal guardian. The patient can withdraw consent to release information at any time.

CONSUMER BILL OF RIGHTS AND RESPONSIBILITIES

The Commission's consumer bill of rights consists of the following rights and responsibilities:

1. Access to Accurate, Easily Understood Information about health plans, facilities, and professionals to assist consumers in making informed health care decisions;
2. Choice of Health Care Providers that is sufficient to ensure access to appropriate high quality care. This right includes providing consumers with complex or serious medical conditions access to specialists, giving women access to qualified providers to cover routine women's health services, and ensuring continuity of care for consumers who are undergoing a course of treatment for a chronic or disabling condition;
3. Access to Emergency Services when and where the need arises. This provision requires health plans to cover these services in situations where a prudent layperson could reasonably expect that the absence of care could place their health in serious jeopardy;
4. Participation in Treatment Decisions including requiring providers to disclose any incentives -- financial or otherwise -- that might influence their decisions, and prohibiting gag clauses that restrict health care providers' ability to communicate with and advise patients about medically necessary options;
5. Assurance that Patients are Respected and Not Discriminated Against, including prohibiting discrimination in the delivery of health care services based on race, gender, ethnicity, mental or physical disability, and sexual orientation;
6. Confidentiality provisions that ensure that individually identifiable medical information is not disseminated and that provide consumers the right to review, copy, and request amendments to their medical records;
7. Grievance and Appeals Processes for consumers to resolve their differences with their health plans and health care providers -- including an internal and external appeals process; and
8. Consumer Responsibilities provisions that ask consumers to take responsibility by maximizing healthy habits, becoming involved in health care decisions, carrying out agreed-upon treatment plans, and reporting fraud.

Note. Adapted from the President's Advisory Commission. (1997). Consumer bill of rights and responsibilities. Retrieved from https://govinfo.library.unt.edu/hcquality/press/cborimp.html

In addition to the Consumer Bill of Rights, the Health Insurance Portability and Accountability Act (HIPAA) was enacted in 1996 and went into effect in 2003 (U.S. Department of Health and Human Services, 1996). This act was designed to protect patient health information more securely and has been a major force behind the use of electronic health records.

There are a few circumstances where confidentiality may be waived in mental health (U.S. Department of Health and Human Services, 2000). If the patient has made a direct threat against another person, the healthcare provider has a clear duty to warn the endangered individual (U.S. Department of Health and Human Services, 2000). If the patient has reported actual or suspected abuse (including molestation) or neglect of a minor child, the healthcare provider has an obligation to report this to the appropriate Child Protective Services division of the state's Office of Family and Children. A judge may also order documents (clinical records) to be turned over to the court for examination. A subpoena to appear in court does not constitute a judge's order to release information; it merely mandates the appearance of the subpoenaed individual. Violation of the confidentiality of a patient with a psychiatric illness in situations other than those outlined by law may subject the nurse to legal action and revocation of licensure. Most agencies have an acceptable form that identifies to whom information can be released, the date that the release is valid, and types of information that can be shared.

NURSING LIABILITY IN MENTAL HEALTH

The state nurse practice act (NPA) is the single most important piece of legislation for the nurse because it affects ALL facets of nursing practice. Each state has its own NPA for which the courts have jurisdiction. NPA's generally grant specific provisions on how nurses practice in a state and define 3 levels of nurses: LPNs, RNs, and APRNs with defined scopes of practice. The nurse practice act also established a state board of nursing. Its main purpose is to ensure enforcement of the act and protect the public.

Individuals who present themselves as nurses must be licensed. The National Council of State Boards of Nursing serves as a clearinghouse, further ensuring that nursing licenses are recorded and enforced in all states. Individual state boards of nursing develop and implement rules and regulations regarding the discipline of nursing. Most changes deal with modifications with rules and regulations rather than the act itself. Nurses must be advised of the provisions of the state's nurse practice act. Thus, what is acceptable in one state is not necessarily acceptable in another state.

The nurse has legal liability in the psychiatric setting when caring for patients (Boyd, 2018). *Torts* are wrongful acts that result in injury, loss, or damage and can be intentional or unintentional (Boyd, 2018). *Intentional torts* are voluntary acts that result in harm to the patient and include the following:

- *Assault* involves any action that causes an individual to fear being touched in any way without consent. Examples of this include making threats to restrain a patient or making threats to administer an injection for failure to cooperate.
- *Battery* involves harmful or unwarranted contact with a patient; actual injury may or may not occur. Examples of this

include touching a patient without consent or unnecessarily restraining a patient.
- *False imprisonment* involves the unjustifiable detention of a patient. Examples of this include inappropriate use of a restraint or inappropriate use of seclusion

Unintentional torts are involuntary acts that result in harm to the patient and include the following:
- *Negligence* involves causing harm by failing to do what a reasonable and prudent person would do in a similar circumstance (anyone can be negligent). Examples of this include failing to erect a fence around a pool and a small child drowns or leaving a shovel on the icy ground and someone falls down on it and cuts their head.
- *Malpractice* is a type of negligence that refers specifically to healthcare professionals. An example of this includes a nurse who does not check the treatment orders and subsequently gives a medication that kills the patient.

CULTURAL CONSIDERATIONS IN MENTAL HEALTHCARE

Culture influences various aspects of mental health, including the recognition and expression of psychiatric symptoms, coping styles, community support, and the willingness to seek treatment. Cultural concepts of distress are recurrent, locality-specific patterns of aberrant behavior that are not linked to a specific diagnostic category in the *Diagnostic and Statistical Manual of Mental Disorders*, fifth edition (American Psychiatric Association, 2013). More impoverished communities have environmental risks such as a lack of access to healthy nutritious foods, clean soil, and clean air in urban areas. This may impact mental health via physiological/neurological impact and deficits, especially in vulnerable populations.

As of 2021, the percentage of the US population that self-identified as African American had grown to 13.4% (U.S. Census Bureau QuickFacts: United States). Although anyone can develop a mental health problem, African Americans may experience barriers to appropriate mental healthcare(National Alliance on Mental Illness, n.d.a). For example, the poverty rate among African Americans in 2020 was 19.4%, with 11.4 million people of all races living in poverty (Income and Poverty in the United States: 2020 [census.gov]). Poverty directly relates to mental healthcare access. The poverty rates in the African American community combined with provider bias and patient distrust of the health system can result in subpar mental health care for African Americans (NAMI: National Alliance on Mental Illness. In addition, the African American community has experienced increasing diversity because of immigration from Africa, the Caribbean, and Latin America. Mental healthcare providers need to understand this diversity and develop cultural competence (Boyd, 2018). Contributing to this cultural consideration is the estimation that over half of the prison population has a mental illness and that African Americans are five times more likely to be incarcerated than Whites (Mental Health America, n.d.; Sakala, 2014).

The Latin/Hispanic American population is rapidly growing, currently comprising 18.6% of the nation's total population (U.S. Census Bureau QuickFacts: United States). In 2020, 17.0% of Latin/Hispanic Americans were living in poverty. Rates of mental health disorders in this population are similar to those of non-Hispanic Caucasians, with some exceptions:
- Older Hispanic adults and Hispanic youths are more vulnerable to the stress associated with immigration and acculturation' and experience more anxiety, depression, and drug use than non-Hispanic youths.
- Depression in older Hispanic adults is closely correlated with physical illness; and suicide rates were about 50% that of non-Hispanic Whites, although suicide ideation and unsuccessful attempts were higher (State of Mental Health in America - 2020_0.pdf (mhanational.org).
- There is a higher incidence of post-traumatic stress disorder (PTSD) in Hispanic men, some of which may be attributable to social disorder experienced before immigration. As of 2020, there were 1.2 million Hispanic or Latinos who are US military veterans (U.S. Census Bureau QuickFacts: United States).
- The rates of substance use disorders are slightly lower in Hispanic women and slightly higher in Hispanic men. Hispanics are approximately twice as likely as Whites to die from liver disease, which could be associated with substance use (Hispanic Health | VitalSigns | CDC).

There are few Hispanic children in the child welfare system, but Hispanics are twice as likely as Whites to be incarcerated at some point in their lifetime (Sakala, 2014). The lack of Spanish-speaking mental healthcare providers has been a problem, likely causing fewer than 1 in 11 Hispanic individuals with a psychiatric disorder to seek treatment (Mental and Behavioral Health - Hispanics - The Office of Minority Health (hhs.gov)). Misdiagnosis is common and is often related to language barriers. Among Hispanics living in the United States, one in three do not speak English well (Hispanic Health | VitalSigns | CDC). Hispanic Americans are more likely to use folk remedies solely or as a complement to traditional care, and some may consult church leaders or healers for more traditional care (Hispanic/Latinx | NAMI: National Alliance on Mental Illness).

Asian Americans and Pacific Islanders comprise just over 20 million of the US population and are considered one of the fastest growing racial/ethnic groups within the United States (U.S. Census Bureau, 2020; Wyatt, Ung, Park, Kwon, & Trinh-Shevrin, 2015). By 2060, it is projected that 1 in 10 children in the United States will be Asian (Wyatt et al., 2015). There are numerous ethnic subgroups included in the Asian American/ Pacific Islander demographic, with over 100 languages and dialects (Asian American/Pacific Islander Communities and Mental Health | Mental Health America (mhanational.org)). Thirty-two percent of Asian Americans have difficulty accessing mental healthcare services because they do not speak fluent English (Asian American/Pacific Islander Communities and Mental Health | Mental Health America (mhanational.org)). For example, older Asian Americans may not understand questions or the intent of a medical interview, and they may give affirmative answers to avoid confrontation. Asian Americans and Pacific Islanders are the least likely of any group to seek help with mental health issues (Hernandez, Nesman, Mowery, Acevedo-Polakovich, & Callejas, 2015). Although fewer mental health concerns are reported in this group, few epidemiological studies have included this population (Asian American/Pacific Islander Communities and Mental Health | Mental Health America (mhanational.org)). Asian Americans tend to exhibit somatic (physical) symptoms of depression more frequently than emotional symptoms (Boyd, 2018; Kalibatseva & Leong, 2011). The focus on physical symptoms and misdiagnosis serves as a barrier to mental healthcare for this population. Suicide rates within this population should be monitored closely by examining risk factors such as acculturation, family discrimination, social acculturalization, and discrimination (Boyd, 2018; Wyatt et al., 2015).

Standards of practice

The American Nurses Association's scope and standards of practice of psychiatric-mental health nursing *(Psychiatric-Mental Health Nursing Scope and Standards of Practice)* provides the foundation for the application of the nursing process to patients with psychiatric disorders (American Nurses Association, 2014). The *PMHNP Scope and Standards of Practice* also serves as a reference document for the National Council Nursing Licensure Examination (NCLEX) and many state nurse practice acts. The *PMHNP Scope and Standards of Practice* includes each step of the nursing process: assessment, diagnosis, planning, implementation, and evaluation.

When using the *PMHNP Scope and Standards of Practice*, the nurse should consider the individual's age, language, and culture. The nurse should also address each patient's developmental level. Note that the age and the developmental level may be incongruent in certain mental illnesses. Use age-appropriate communication techniques to establish a therapeutic alliance with both the patient and the family. Additionally, observations of behaviors and reactions are just as important as the conversation. Parents are often present during a child assessment. However, if abuse or neglect is suspected, it may be prudent to talk to the child or adolescent alone. In cases involving child sexual abuse or other uncomfortable issues, the nurse may need the assistance of a healthcare provider with advanced training to interview the child.

When working with adolescents, the therapeutic alliance may be hindered by concerns of confidentiality. Reassure the adolescent that conversations are confidential, and information is only shared with team members, except in certain circumstances. In cases of suicidal or homicidal thoughts, sexual abuse, or other high-risk behaviors, the nurse must share the assessment information with other healthcare professionals and the parents. In fact, identifying risk factors in this age group is an important aspect of the assessment.

THE NURSING PROCESS IN MENTAL HEALTH

The physiological health exam and work-up is an initial step for thoroughly and accurately diagnosing and managing mental health conditions, including common screening labs and physical exams to rule out common medical issues that could be causing, mimicking, or contributing to mental health symptoms. Some physiological conditions present with psychiatric symptoms. Ensuring that the patient has a baseline physical assessment assist in the accurate diagnosis and appropriate treatment of all conditions, thus demonstrating the mind-body connection. Because of this link, the history and presenting symptoms of the patient are of utmost importance.

The nursing process is a systematic way of developing an individualized plan of care for those experiencing a disruption in mental health status. The traditional nursing process consists of performing a comprehensive assessment, formulating nursing diagnoses, developing a care plan, implementing selected nursing interventions, and evaluating the outcome or effectiveness of those interventions (Boyd, 2018). Most facilities have their own documentation that follows accepted guidelines for mental health assessment.

Assessment

Creating a therapeutic alliance is an important step in the holistic care of the patient. This connection provides an optimal setting for obtaining the psychosocial and psychiatric history. The first step is to obtain a thorough history of the patient, incorporating elements of current and past health problems, social issues affecting health, and cultural or spiritual beliefs that may support or interfere with prescribed healthcare treatments (Halter, 2018). The nurse should obtain the history in an environment conducive to effective communication between the nurse and the patient. Family members and significant others may or may not be present, or they may be present for a portion of the time and then be asked to step out to maintain the patient's confidentiality. Interviews should be conducted in a private conference room or patient's room (if inpatient or residential) rather than in a public area where others may overhear. If personal safety is a concern, the nurse may request another staff member to be present. The nurse should remove distracting elements such as a television or radio. If the nurse determines that the patient is too ill to be able to provide accurate information or that the interview process itself will be detrimental to the patient's health, then the nurse should obtain information from other reliable sources, such as family members, social workers, therapists, and primary healthcare providers (Boyd, 2018). Documentation of the source of information is important, particularly when the patient is unable to provide an accurate history. Although the psychiatric nurse may gather information from other sources, it is important that the nurse not disclose any information regarding the patient's status without the patient's written consent to avoid a breach in confidentiality.

Nursing diagnosis and planning

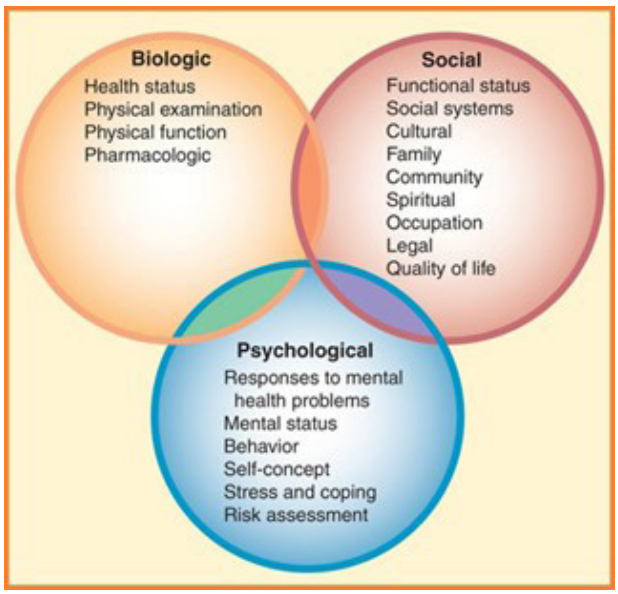
Most healthcare facilities have an existing form to guide the nurse in data collection. The data collection process assists the nurse in developing a nursing diagnosis list. After identifying real and potential problems, the nurse develops written nursing diagnoses to address each problem. Nursing diagnoses are important in structuring appropriate, efficient nursing care while serving as a common language nursing team members. Prioritization is also based on Maslow's Hierarchy of needs so that physiological and safety needs that are outlined in nursing diagnoses will be addressed first. The nursing diagnosis drives the planning process in the care of patients with psychiatric-mental health disorders. Implementation of interventions is driven by goals established during the planning process. Short- and long-term goals must be observable, measurable (i.e., goals or outcomes that can be evaluated) and realistically attainable in the given time frame and setting. Identifying contributing factors and behavioral symptoms can directly lead to the development of short- and long-term goals that help evaluate progress. Interventions for this population will always include therapeutic communication and the mental status examination (Boyd, 2018).

The biopsychosocial framework

The biopsychosocial framework is a well-accepted, holistic model for organizing healthcare issues (Boyd, 2018). Three interdependent domains have separate treatment focus but interact to provide a framework for implementing nursing care through a systematic process.

The *biologic domain* is related to functional health patterns in mental health such as sleep, exercise, and nutrition. Pharmacologic principles in medication administration are related to neurobiological theories. The *psychological domain* contains the interpersonal dynamics that influence emotions, cognition, and behavior. This generates theories and research critical in understanding symptoms and responses in mental disorders. Therapeutic communication techniques exist in this domain, as there are many cognitive and behavioral approaches

in patient care. The *social domain* accounts for the family and community influences in mental disorders. While these influences do not cause mental illness, manifestations and disorders are significantly affected by these factors.



Boyd, 2018

A comprehensive nursing assessment enables the nurse to make sound clinical judgments and plan appropriate interventions. Assessment skills in psychiatric nursing are essential in-patient care. Although data collection and assessment vary among clinical agencies, the psychiatric examination consists of two parts: the psychiatric history and the mental status exam. Patients are often reluctant to discuss mental illness because of the associated stigma. Clinical reasoning in nursing practice depends on critical thinking skills such as problem solving and decision making, where nurses must analyze, interpret, and evaluate biopsychosocial data in the context of the nursing process.

THE MENTAL STATUS EXAMINATION

The mental status examination is a structured means of evaluating the psychological, physical, and emotional state of a patient with a psychiatric disorder to facilitate appropriate healthcare treatments. The nurse may also identify significant problem areas to be addressed in the treatment plan. Mental status exams are an essential tool for evaluating the safety of the patient and caregivers. Although each healthcare facility may vary slightly in its approach, all mental status exams include the same basic elements. These include an assessment of the patient's appearance, behaviors, thoughts, and moods. These are called the ABC's of MSE: (1) A-appearance, (2) B- Behavior and (3) C- Cognition which includes mood, affect and speech. Speech is a reflection of cognition (https://psychscenehub.com/psychinsights/ten-point-guide-to-mental-state-examination-mse-in-psychiatry; Boyd, 2018).

Appearance

Appearance includes primarily objective data based on observations of the patient's general appearance. The nurse assesses the patient's overall hygiene and grooming, considering gender, apparent age, height/weight, dress, odors, and tattoos/piercings. Height and weight should be documented along with nutritional status. The nurse evaluates if the patient looks the stated age since chronological age may not be a reflection of the client's physical/mental status. For example, a patient appears in their 50s, but the actual age is 35, suggesting poor self-care or illnesses (Boyd, 2018).

Behavior

The patient's behavior should be noted during the interview. Consider any mannerisms, notable movements such as agitation, physical slowing (retarded movements), tics, or other abnormal movements. It is important for the nurse to be developmentally and culturally aware during the mental status examination. For example, American culture considers eye contact to be a sign of respect and attention, but other cultures deem eye contact as offensive, challenging, or arrogant (Boyd, 2018).

Mood and affect

Mood is subjective (whatever the patient states) so this must be asked directly (e.g., How is your mood?) and is typically documented in quotations (Mood is "happy"). Affect is objective data (the nurse's observations) based on clinical descriptors that take into account the tone, range, and quality, together with facial expressions and body language that reveal the emotional state or feelings of the person. Mood and affect do not necessarily have to be consistent or similar. For example, a patient may state that their mood is "fine" but through their presentation they are expressing significant difficulty in their emotions with anger, sadness, or depression. Affect is the facial expression, body language, voice, or tone that reveals the emotional state or feelings of a person (Boyd, 2018).

A *dysphoric mood* indicates that the patient is persistently depressed, lethargic, apathetic, or "down" and is usually accompanied by a depressed affect. However, the affect may also be described as anxious or flat, meaning that there is no facial expression of feelings. A *euphoric mood* is an elevated emotional state that may be associated with an affect that is giddy, cheerful, or excessively bright. A *labile affect* is one that is rapidly changing and unpredictable – the patient may be cheerful, then suddenly become enraged with little provocation or may burst into tears unexpectedly. A labile affect can accompany various psychiatric disease states such as depression or psychosis. Substance use can also affect the patient's mood in many ways, depending on the degree of intoxication, the substance used, and any withdrawal symptoms. Some medications can interfere with the physical expression of an emotion, resulting in a flat or blunted affect (Boyd, 2018).

Thought processes

Thought processes refer to the way thoughts are organized and structured. One can think of thought process as HOW one is thinking and thought content as WHAT they are thinking. Speech assessment reveals both. Normally, thoughts are logical, sequential, and easily understood by others (in the absence of a known speech or communication disorder). Patients with disorganized thoughts may respond to questions with nonsensical speech because speech often reflects the thought process. There may be difficulty in performing simple activities such as bathing or eating without assistance, even in the absence of a physical impairment. Patients may mix up or confuse medications when a structured system (such as a weekly pill dispenser) is not available. Thoughts can be rapid, racing, or slowed. Poverty of speech can occur where questions are answered with one or two words and patients may be unable to expand on responses or use their imagination. Thoughts can be either abstract or concrete (Boyd, 2018).

A patient's thought processes may also show flight of ideas, as in the following example: "I came here in an ambulance. I wish I had more money! Did you see that TV show about Pekingese dogs the other night?" When a patient is experiencing a flight of ideas, speech is often accelerated and thoughts are random, abruptly changing with little association between thoughts (Boyd, 2018). When assessing a patient's thought processes, the nurse might also note the phenomenon of word salad. In a word salad, the patient's statements have no logical connections, and the thoughts are jumbled – for example: "I don't. Here, he said. My house. Mouse. Spouse." The previous statement also serves as an example of clang association, which is a pattern of using words because they have similar sounds and not because of the actual meanings of the words. A patient may use neologisms or words that don't exist in the English language. Words such as "frugelzip" or "rappeliciosity" will have a meaning that is clear only to the patient.

Thought content

Thought content refers to what the patient is thinking about. Initially, it is helpful to assess preoccupations or obsessions about real-life events, such as finances, employment, or relationships (Boyd, 2018). Sometimes a patient can experience intrusive or ruminating thoughts. An intrusive thought is an unwelcome idea that occurs without conscious effort, and ruminative thoughts are thoughts that seem *stuck* in the patient's mind. An obsessive patient may have ruminative thoughts that may be unusual, such as a desire to check the door repeatedly to ensure it is locked or the belief that germs may be everywhere. Obsessive thoughts will often lead to compulsive behaviors – such as ritualized handwashing – in part as an attempt to relieve intrusive thoughts and their accompanying anxiety. The nurse's role is to help the patient understand that these thought processes are irrational.

Thought content problems are of essential importance. *Hallucinations* are false sensory perceptions (Boyd, 2018). Auditory, visual, olfactory, gustatory, or tactile symptoms may be present. Auditory hallucinations, such as hearing voices, are the most common in psychiatric disorders (Boyd, 2018). Visual hallucinations are false visual perceptions, such as seeing people who are not present. Patients can also experience a tactile hallucination, known as a false perception of touch (Boyd, 2018). Tactile hallucinations can present as "hands touching me" or "bugs crawling on me" and can exist with psychological or medical conditions such as withdrawal. When caring for a patient experiencing hallucinations, it is important to remember that the brain perceives the reported sensation, meaning that to the patient, it is very real. It is important for the nurse to address hallucinations with the patient; however, nursing judgment on how to therapeutically address them is critical. Initially, pointing out that the hallucination does not exist may jeopardize the development of a secure nurse-patient relationship; however, rationalizing with and helping the patient reason are important elements in the progression of treatment.

Delusions are fixed false beliefs (Boyd, 2018). The patient experiencing a delusion is certain that something is true, even when there is no substantiating evidence to prove the belief. Paranoid patients may be frightened as they often believe they are being watched, monitored, or spied upon by others. These individuals may report cars following them or mysterious phone calls late at night. Occasionally, a patient with paranoia may fear being poisoned and refuse medications or food. Religious delusions can also occur where the patient may feel persecuted by demons or may be very excited about a special relationship with God or with angels. Careful assessment by the healthcare provider is important to determine a patient's baseline religious beliefs so as not to label a thought as delusional when it is a well-accepted belief for the patient. Somatic delusions are uncomfortable beliefs that there is something wrong with one's body (Boyd, 2018). For example, some patients may believe that their bowels are necrotic or dead or may believe that their brain is missing.

Other delusions may exist such as a belief that aliens are broadcasting signals, or a belief that loved ones have been replaced by clones. It is always essential to determine what feelings are elicited in the patient because of the delusional thoughts. Paranoid thoughts will drive fear and fight-or-flight responses. The patient may set up protective traps around the home to prevent others from entering. Religious delusions may be pleasant and make the patient feel special, or they may be so persecutory that the patient becomes depressed and suicidal. Somatic delusions can lead to excess visits to healthcare providers and may result in the label of "hypochondriac" for the patient.

Ideas of reference can also occur in which the patient may believe that all events in the environment are related to or about them (Boyd, 2018). Patients experiencing ideas of reference may believe that, when in a group setting, others are talking about or ridiculing them (Boyd, 2018). Sometimes, ideas of reference are associated with grandiosity, or the belief that one is especially important or powerful (Boyd, 2018). An elderly homemaker who suddenly believes herself to be the next Marilyn Monroe may be experiencing grandiosity. Grandiose patients attempt to convince others of their importance and may present with perceived rude or arrogant behavior patterns.

Cognition and memory

Cognitive abilities are the elements of thinking that determine attention, concentration, perception, reasoning, intellect, and memory (Boyd, 2018). Attention span is particularly important in evaluating the mental status because a decreased attention span often limits comprehension. Decreased concentration levels and distractibility may occur in patients with disorders that affect attention, as well as for those with depression and other mental health concerns.

The nurse can assess the patient's perception by asking open-ended questions that encourage description, such as "What makes you feel anxious?" (Boyd, 2018). Intellect is assessed through clinical assessment as well as intelligence testing (American Psychiatric Association, 2020). Intelligence quotients (IQs), as well as cognitive, social, and psychomotor capabilities, are assessed to determine intellectual function. Intellectual disabilities are categorized as mild, moderate, severe, or profound. Although IQ scores can serve as a parameter for these categories, the level of severity is determined by adaptive functioning (American Psychiatric Association, 2020).

An assessment of memory consists of three basic parts: immediate recall, recent memory, and remote memory (Boyd, 2018). A simple test of recall is to give the patient three items to remember and then 5 minutes later ask the patient to state those items. *Immediate recall* can be quickly determined by asking what a patient consumed for breakfast. *Recent memory* is recall of one to several days. Questions regarding family members' names or place of residence help assess recent memory. *Remote memory* is recalled from several days to a lifetime. Asking patients where they grew up, what their parents' names were, or where they went to school readily provides this information.

Memory assessments help in differentiating a thought disorder from a dementia disorder. Patients with a primary psychiatric disturbance may be delusional in their beliefs but extremely accurate in memory and recital of facts and dates. A patient with early dementia may lose some short-term memory first, progressing to the loss of immediate recall, then finally to long-term memory loss (Boyd, 2018). *Orientation* means that patients are aware of who they are (person), where they are now (place), the approximate time and date (time), and awareness of the circumstances (situation). A disoriented person may be suffering from a cognitive disorder, drug or alcohol use or withdrawal, or several physical or psychological health problems.

Insight and motivation

Insight refers to patients that demonstrate understanding of their illness and the steps necessary to treat or manage the illness. The determination of a patient's level of insight is often associated with treatment adherence. The goal is that understanding leads to adherence. Occasionally, nurses encounter patients who demonstrate good insight and knowledge, but continue to display nonadherence to recommended treatments. Nurses should ask these patients about barriers to treatment, such as financial constraints or concerns regarding health insurance. The stigma of having a psychiatric diagnosis may lead the patient to feel ashamed or angry. Anger may be causing the patient to intentionally deny and refuse adequate treatment. Hidden motivations, such as the defense mechanisms may also have a significant impact on the patient.

Judgment

Healthcare choices can reflect *judgment*. This can be a positive or negative reflection on an ability to reach a logical decision about a situation (Boyd, 2018). For example, the patient with diabetes who continues to consume a diet high in sugar is demonstrating poor judgment. Actions and behaviors are often signs of judgment capabilities. A manic patient may spend their life savings on a trip or a lottery ticket. However, once in the normal or melancholic state, the patient may have no memory of the incident. Proper evaluation of the mood state when the actions were carried out is an important part of the assessment. Conversely, the patient who recognizes that an increase in paranoia is a sign of decompensation and seeks out emergency treatment is demonstrating good judgment. A patient's insight, or awareness of their own feelings, relates to the ability to display logical judgment (Boyd, 2018). Assessing and understanding a patient's ability to make positive or negative choices is an important piece of planning effective mental healthcare.

Safety

Finally, an evaluation of safety is important in any mental status assessment. The essential areas to examine include safety of self and safety of others. The nurse should determine if the patient has thoughts or urges of intentional harm. When suicidal thoughts are noted, inpatient treatment must be considered. Assessing suicide risk consists of asking the patient about a suicide plan, suicidal intent, and the available means to harm oneself. A well-developed suicide plan with means at hand may necessitate forcing an involuntary hospital stay, whereas an impulsive episode of self-mutilating may be best treated by an intensive outpatient program with family supervision. For example, a hunter who thinks about shooting himself is at much higher risk than the office worker who doesn't own or have access to a gun. Determining the lethality of the means available is also essential.

Patients experiencing extreme emotional pain may also self-mutilate by cutting or burning their arms, legs, or other areas. Although this is not considered suicidal behavior, it is high-risk behavior that indicates significant emotional distress.

The nurse should also determine the degree of risk of harm to others. There are two distinct areas in which patients with a psychiatric disorder may lose their rights to confidentiality: a threat to harm or kill another person and the report of child or elder abuse (Halter, 2018; U.S Department of Health and Human Services, 2019). *Duty to warn is an obligation to warn third parties when they may be in danger from a patient* (Halter, 2018, p. 99; Duty to Warn). The nurse must use all means necessary to reasonably contact the individual at risk, including notifying the police. In most healthcare settings, there are policies to ensure the report is made accurately and documented appropriately. Across the United States, nurses are considered mandatory reporting agents when a patient offers knowledge of abuse, molestation, or neglect of vulnerable patients. The nurse is obligated to report this to the local Child Protective Services agency (Duty to Warn). However, there is a conflict between state and federal law when child abuse is revealed during drug and/or alcohol treatment, and a court order is required for disclosure (Halter, 2018). State laws vary and healthcare providers should be very clear on their respective state laws and facility policy in terms of confidentiality.

THE THERAPEUTIC RELATIONSHIP

Hildegard Peplau applied Sullivan's teaching to her own theory, which nurses still use today in practice. Peplau viewed the nurse-patient relationship as representative of the patient's relationship with other important people in their life (husband, wife, mother, father, etc.). By analyzing the dynamic between the self and the patient, the nurse draws inferences about how the patient interacts with others and helps the patient to develop insight into these behaviors to promote change. Furthermore, Peplau applied Sullivan's views on anxiety as a driving force behind behaviors and related these views to nursing practice and a patient's ability to perceive and learn. For example, mild anxiety promotes learning, whereas severe or panic levels of anxiety prevent learning and distort perceptions (Keltner, 2014, p. 87).

From her own research, Peplau developed the therapeutic model of the nurse-patient relationship and introduced this in 1952 in her book entitled *Interpersonal Relations in Nursing: A Conceptual Frame of Reference for Psychodynamic Nursing*. Today, this framework is relevant as a basis of nurse-patient relationships. The nurse performs several roles while engaged in the relationship, including advocate, teacher, role model, and healer. Peplau saw these roles as significant in each phase of the nurse-patient relationship, all of which overlap and work together to facilitate interventions. There are traditionally three phases in the therapeutic relationship: the initiation (orientation) phase, the working phase, and the termination phase (Edberg, Nordmark, & Hallberg, 1995). Peplau (1952) identified five

phases: orientation, identification, exploitation, resolution, and termination.

In the orientation phase, the nurse establishes rapport and begins to discuss the parameters of the relationship. The nurse also collaborates with the patient to identify the problem and extent of intervention needed, and how the patient and the nurse will work together to find solutions (Jones & Bartlett Learning, n.d.). Here the nurse can discuss confidentiality while developing the plan of care. The nurse will also address termination of the relationship. This involves informing the patient that the interactions will take place over a specific period. This helps the patient plan for the termination phase so that complications are less likely to arise when the nurse-patient relationship ends. An example of an orientation-phase introduction is:

> *Good morning, Mr. Jamison. I am Chris and I will be your nurse while you are a patient. I would like to arrange a time to meet this morning to discuss how we will work together to develop the plan of care for the next week. Together we will develop strategies to manage your depression and we will continue to meet daily to evaluate what you have accomplished before you are discharged.*

In the working phase, identification, exploitation, and resolution take place. During identification, the patient begins to identify with the nurse independently, dependently, or interdependently (Jones & Bartlett Learning, n.d.). It is during identification that the nurse reinforces the understanding of the meaning of the patient's situation (Jones & Bartlett Learning, n.d.). During exploitation, the patient utilizes the nurse's services based on personal needs, and once needs are resolved during resolution, mature goals emerge (Jones & Bartlett Learning, n.d.). During this working phase, the patient can practice new techniques or behaviors to manage thoughts, feelings, and behaviors that have contributed to their symptoms and created problems in relationships, occupational functioning, or interpersonal well-being. These skills and strategies can be practiced within the safety of the inpatient, partial hospital, or outpatient environment. The nurse helps to promote problem-solving skills, self-esteem, and behavioral changes. Unconscious thoughts and behaviors may arise in the working phase. It is important to address lingering or past issues to aid in the resolution of present symptoms. The patient learns about *self*, develops coping mechanisms, and tests new behaviors. During this phase, transference and countertransference often occur. Transference takes place when the patient unconsciously displaces feelings for another onto the nurse (Boyd, 2018). Likewise, countertransference can occur when the nurse's emotions may also be displaced onto the patient (Boyd, 2018). The nurse's self-awareness and ability to maintain healthy boundaries and remain patient focused are important elements of the nurse-patient relationship.

The termination phase is the final phase of the relationship. In this phase, the nurse and the patient discuss the goals and outcomes achieved, review coping skills, and determine how to incorporate new behaviors into life outside of the facility. Closure of the relationship occurs so that the patient and the nurse can move forward. However, this phase can elicit strong emotions of loss or abandonment. For the nurse, feelings of guilt can arise if the patient has not met all goals. It is not appropriate for the nurse to meet with the patient once discharged. The nurse can plan for discharge by recalling successes achieved with the patient and taking pride in helping the patient gain positive outcomes to date. The patient may experience feelings of abandonment which may be revealed in behavior or emotions. For example, the patient may avoid signing necessary papers or have sudden outbursts. The nurse may need to discuss the importance of the termination phase with the patient, help redirect the patient to reflect on successes achieved while working together, and refer the patient to the next level of care, if appropriate (https://psychscenehub.com/psychinsights/ten-point-guide-to-mental-state-examination-mse-in-psychiatry/).

THERAPEUTIC COMMUNICATION

Therapeutic communication and the therapeutic relationship are a significant part of mental health nursing. Hildegard Peplau reiterated this sentiment in her work many times, stating that understanding was central to the nurse-patient relationship (Ramesh, 2013). Therapeutic communication differs from social communication in that patient goals are the central focus of the interaction. The goal may be to solve a problem, examine self-defeating behaviors, or promote self-care. Additionally, therapeutic communication involves active listening and responding in a way that creates rapport and moves the patient toward the end goal.

Therapeutic communication involves trust, boundaries, empathy, genuineness, and respect for the patient, regardless of the patient's condition (Halter, 2018; Morgan & Townsend, 2019). Sometimes, recognizing an individual's behaviors and making statements can add to the assessment data and provide insight into the patient's current state. An example is "I notice you are pacing more today." Allow the patient to respond. Remember that no response from an individual provides further insight into the individual's state of mind.

One important aspect of therapeutic communication is the therapeutic use of self. This is when the nurse uses self-disclosure in a goal-oriented manner to promote trust and teach the patient how to view the feelings or actions of others (Riley, 2015). Use of self, however, should not reveal personal details. Effective use of self involves self-reflection, self-awareness, and self-knowledge. As in any nurse-patient interaction, it is important to remain objective and nonjudgmental while considering the patient's needs. Nonverbal communication can tell the nurse a lot about the patient. Awareness of how the patient gestures or moves while conversing is vital in determining verbal/nonverbal congruence. Sitting across from the patient with an open stance demonstrates openness and a willingness to listen. An angled position or sitting side by side can promote comfort. Additionally, the doorway should never be blocked; this promotes safety as well as prevents the patient from feeling trapped or confined (Boyd, 2018).

A general opening, such as asking how the patient slept, can help facilitate the conversation. Gradually start asking open-ended questions to encourage the patient to engage, such as "Tell me a little about what has been going on." If anxiety or nervousness is observed, the nurse may need to step back and alter the questions or provide encouraging statements such as *go on* or *tell me more about that*. Those types of statements confirm that the nurse is listening and is open to knowing more about the topic. *Why* questions can be perceived as challenging and judgmental (e.g., "Why would you do that?"). Reword the question so that the patient can answer without feeling belittled or betrayed. It is important to get as much of the patient's history as possible. However, this may be difficult if the patient has severe symptoms that may limit their ability to carry on a conversation. In that case, observation will take precedence in the interview.

Samples of therapeutic and nontherapeutic communication techniques are provided in Table 1. *Therapeutic and nontherapeutic communication techniques*. Each of these techniques will elicit responses that give the nurse insight into the patient's thoughts and emotions (Boyd, 2018). Use open-ended questions so that the patient can respond with more than a yes or no answer. Give the patient enough time to answer the question as well. Avoid using jargon or medical terminology (https://publichealth.tulane.edu/blog/communication-in-healthcare/).

Table 1. Therapeutic And Nontherapeutic Communication Techniques	
Therapeutic	**Example**
Open-ended question	"How are you feeling?"
Offering self	"I'll sit here with you for a while."
Giving general leads	"Go on … you were saying."
Silence	Sitting quietly.
Active listening	Leaning forward, making eye contact, and being attentive.
Restating	"So, what you're saying is …"
Clarification	"I don't quite understand. Could you explain …"
Making observations	"I notice that you shake when you say that."
Reflecting feelings	"You seem sad."
Encouraging comparisons	"How did you handle this situation before?"
Interpreting	"It sounds like what you mean is …"
Nontherapeutic	**Example**
Closed-ended question	"Did you do this?"
Challenging	"Just what do you mean by that, huh?"
Arguing	"No. That's not true."
Not listening	Body turned away, poor eye contact.
Changing the subject	(Patient states he is sad.) "Where do you work?"
Being superficial	"I'm sure things will turn out just fine!"
Being sarcastic	"Well, that's not important or anything. Not!"
Using clichés	"All's well that ends well."
Being flippant	"I wouldn't worry about it."
Showing disapproval	"That was a bad thing to do."
Ignoring the patient	"Did anyone see the news today?"
Making false promises	"I'll make the doctor listen to you!"
(Boyd, 2018)	

During the evaluative process, the nurse will assess the use of defense mechanisms that may indicate the need for ongoing revision of the plan of care. Consistent evaluation of goals and progress is integral for successful nursing care of the patient with a psychiatric-mental health disorder. Sigmund Freud, the grandfather of psychotherapy, believed that most psychiatric disturbances arise out of childhood experiences and the way human beings respond to their environment, and are based on unconscious drives or motivations (Halter, 2018). Freudian therapy, developed in 1936 and referred to as psychoanalysis, attempts to bring the unconscious into consciousness to allow individuals to work through past issues and develop insight into present behaviors. Although classic psychoanalysis as developed by Freud is rarely used today, Freud's understanding of anxiety as well as the unconscious mind are significant drivers in understanding the human response with defense mechanisms (Halter, 2018).

Any behavior or psychological strategies employed (often unconsciously) to protect a person (the real self or 'ego') from discomfort, uncomfortable emotions, anxiety, or tension that may result from unacceptable thoughts or feelings is considered a defense mechanism. Most individuals use defense mechanisms from time to time, but problems may occur when they are used exclusively or in place of healthier coping mechanisms. Therefore, recognition and nursing interventions focused on adaptive coping strategies should be implemented before working to replace the person's usual defense mechanisms. Defense mechanisms are behaviors that an individual uses to deal with stressors. Defense mechanisms can be beneficial and protective for the patient, or they can be counterproductive and maladaptive. Table 2. Defense mechanisms provides an overview of commonly utilized defense mechanisms; a brief discussion of some of these defense mechanisms follows (https://www.ncbi.nlm.nih.gov/books/NBK559106/)

Table 2. Defense Mechanisms		
Defense Mechanism	**Definition**	**Example**
Repression	Involuntarily forgetting painful events.	A woman who was sexually abused as a child cannot remember that it occurred.
Suppression	Voluntarily refusing to remember events.	An emergency room nurse refuses to think about the child who is dying from injuries sustained in an auto accident.
Denial	Refusing to admit certain things to oneself.	An alcoholic man refuses to believe that he has a problem, in spite of evidence otherwise.
Rationalization	Trying to prove one's actions are justifiable.	A student insists that poor academic advice is the reason he cannot graduate on time.
Intellectualization	Using logic without feelings.	A father analyzes why his son is depressed without expressing any emotions of concern.
Identification	Attempting to model one's self after an admired other.	An adolescent tries to look and dress like his favorite musician to feel stronger and more in control.
Displacement	Discharging pent-up feelings (usually anger) on another.	A child who is yelled at by her parents goes outside and kicks the dog.
Projection	Blaming someone else for one's thoughts or feelings.	A jealous man states that his wife is at fault for his abuse of her.
Dissociation	Unconsciously separating painful feelings and thoughts from awareness.	A rape victim "goes numb" and feels like she is floating outside of her body.
Regression	Returning to an earlier developmental level.	A 7-year-old child starts talking like a baby after the birth of a sibling.
Compensation	Covering up for a weakness by overemphasizing another trait.	A skinny, nonathletic child becomes a chess champion.
Reaction formation	Acting exactly opposite to an unconscious desire or drive.	A man acts homophobic when he secretly believes he is gay.
Introjection	Taking on values, qualities, and traits of others.	A 12-year-old girl acts like her teacher when the teacher is out of the room.
Sublimation	Channeling unacceptable drives into acceptable outlets.	An angry woman joins a martial arts club and takes lessons.
Conversion	Converting psychiatric conflict into physical symptoms.	A lonely, elderly woman develops vague aches and pains all over.
Undoing	Trying to counteract or make up for something.	A man who yells at his boss sends her flowers the next day to "make up."
(Boyd, 2018)		

Denial

Denial indicates an inability to believe or act on some type of news or information. This may be attributed to unconscious forces that override a person's rational thoughts or the premise that changing a behavior is more difficult and anxiety provoking than continuing the behavior. For example, a man with lung cancer may continue to smoke because quitting smoking may mean acknowledging a life-threatening illness, or a woman with alcoholism may continue to drink to avoid facing a dysfunctional marriage. Denial provides protection by allowing the psyche to slowly grasp traumatic events (e.g., death of a loved one), but it becomes maladaptive when the person can't move on. Understanding denial as a psychological process is important, especially when it may seem that a patient is not adhering to a plan of care (https://www.ncbi.nlm.nih.gov/books/NBK559106/).

Repression and suppression

Repression and suppression are defense mechanisms that are commonly confused with each other. In repression, a person cannot voluntarily recall a traumatic event such as a rape or terrorist attack (Halter, 2018). Only through therapy and sometimes hypnosis can the memories start to painfully resurface; when they do, the event will be as acutely distressful as if it had just happened. In suppression, a person chooses to ignore or forget painful events; however, when queried, they can instantly recall them (Halter, 2018). This can be very productive for the nurse in an emergency, when they are able to temporarily push aside personal feelings and reactions to deal with the crisis at hand (https://www.ncbi.nlm.nih.gov/books/NBK559106/).

Displacement

Displacement occurs in our everyday lives. For example, when a person has a bad day at work and goes home and takes it out on their spouse or children, displacement has occurred as the person has shifted their feelings away from the intended object (job, boss, etc.) and onto an innocent and unsuspecting other. Displacement can be the defense mechanism behind anger outbursts such as road rage (https://www.ncbi.nlm.nih.gov/books/NBK559106/).

Rationalizing

Rationalizing is the attempt to explain away situations while not taking responsibility for one's own actions. A senator who is arrested for taking gifts or money from lobbyists may try to rationalize this behavior by saying, *everyone does it, or that's the way you get business done* (https://www.ncbi.nlm.nih.gov/books/NBK559106/).

Identification

An adolescent who tries to emulate a respected authority figure is using identification. Identifying with others and trying to be like them is adaptive and useful when the role model is a positive influence (e.g., father, mother, minister), but it can be very maladaptive when the role model is a negative influence (e.g., gang leader, rock star with drug problems). The psychiatric nurse who understands the various defense mechanisms patients in emotional distress use will be able to develop a treatment plan that addresses the use of defense mechanisms and presents alternatives that are more conducive to mental health and improved quality of life (https://www.ncbi.nlm.nih.gov/books/NBK559106/).

Self-Assessment Quiz Question #3

Which best describes the meaning of defense mechanisms?

a. Behaviors used to deal with stressors.
b. False sensory perceptions.
c. Beliefs that lack substantiation.
d. Overall emotional state.

THERAPEUTIC APPROACHES IN MENTAL HEALTH

Milieu therapy

The word milieu means surroundings or environment; milieu therapy is also referred to as therapeutic community. Milieu therapy is a structuring of the environment in order to affect behavioral changes and improve the psychological health and functioning of the individual. The goal of milieu therapy is to manipulate the environment so that all aspects of a patient's hospital environment are considered therapeutic (Townsend, 2019). Within this setting, the patient is expected to learn adaptive coping, interaction, and relationship skills that can be generalized to other aspects of the patient's life. Although milieu therapy was originally developed for patients in the inpatient setting, these principles have been adapted for a variety of outpatient settings (https://easpublisher.com/media/articles/EASJNM_22_129-135.pdf)

Care of patients in the therapeutic milieu is directed by an interdisciplinary treatment team, but overall management is the responsibility of the nurse. The initial assessment is made by the nurse or psychiatrist and the comprehensive treatment is developed by the treatment team. Basic assumptions of milieu therapy include the opportunity for therapeutic intervention, the powerful use of peer pressure within the environment, and inappropriate behavior can be addressed as it occurs (Boyd, 2018).

There are certain conditions that promote a therapeutic community.

1. The patient is protected from injury from self or others.
2. The patient's physical needs are met.
3. Programming is structured, and routines are encouraged.
4. Staff members remain relatively consistent.
5. Emphasis is placed on social interaction among patients and staff.
6. Decision-making authority is clearly defined.
7. The patient is respected as an individual and is encouraged to express emotion
8. The patient is afforded opportunities for freedom of choice.
9. The environment provides opportunities for testing new behaviors.

(Townsend, 2019;
https://currentnursing.com/pn/milieu_therapy.html)

It is understood that basic physiologic needs are fulfilled, and safety is paramount. Within this environment, a democratic self-government exists through community group participation. This promotes member interaction and communication. The therapeutic milieu provides structure and consistent limit setting at a time when individuals need it the most. These elements provide an assessment of the patient's progress toward treatment goals. The nurse assumes responsibility for the overall management of the therapeutic milieu including assessment, safety and limit setting, medication administration, and education.

Effects of the environment can easily be understood by thinking about common events in one's own life. Going to a party may evoke a sense of festivity, joy, and excitement; going to a funeral can cause somber feelings of sadness; when walking into a quiet library, a person may feel the need to whisper and walk softly; and a starkly painted, tiled hospital room may lead us to feel fearful, anonymous, or disengaged. Even schools reflect environmental or milieu manipulation and effects (consider a Montessori-style school compared with a stricter military school). Inpatient psychiatric settings and residential settings are the most common places in which milieu therapy occurs. A patient who is disorganized, paranoid, or agitated responds better to an environment that is calm, well structured, and predictable, with staff persons who are pleasant in nature but consistent, directive, and firm.

Self-Assessment Quiz Question #4

The nurse is explaining milieu therapy to a group of students. What is the primary role of the nurse in milieu therapy?

a. Conducts individual, group and family therapy
b. Directs drama that portrays real life situations
c. Assumes responsibility for management of milieu
d. Focuses on rehabilitation and vocational training

Group therapy

Irvin Yalom, MD, has been highly influential in the development of group therapy. Dr. Yalom's first book, *The Theory and Practice of Group Psychotherapy* (1970), became a foundational text for many psychotherapists and advanced practice nurses interested in group therapy. Dr. Yalom postulated that when individuals are grouped together, certain characteristics of the individuals will emerge that are reflective of family-of-origin and childhood issues (1970). In therapy sessions with groups of people, these negative or destructive childhood events can be reworked and reframed, leading to healthier adult coping responses while the group members develop identities and go through phases.

In a counseling group setting, members can discuss stressors in a safe environment. The group often provides a sense of community and the feeling that the individual is not alone in dealing with their problems (Corey, Corey, & Corey, 2013). Dr. Yalom termed this concept universality (Yalom & Leszcz, 2014). Thus, universality, or the camaraderie sense of *we are all in this together*, serves to encourage trust and move the group into productivity. Individual group members grow and develop self-awareness through the relationships developed and feedback gathered from those around them (Corey et al., 2013).

Yalom's stages include orientation, conflict development, cohesion, and working (Yalom & Leszcz, 2014). There are many other theories regarding groups; although they may differ in certain ways, they all show how the group forms interpersonal relationships cohesively. The group leader recognizes what phase the group is in and helps facilitate progression toward the group's goals.

The best size for a therapy group is usually 6 to 12 members (Boyd, 2018). In larger groups, some members may be ignored or can more easily avoid participation. In smaller groups, the gatherings can turn into a series of individual therapy sessions with the group leader while everyone else watches. Training in facilitation of therapy groups is standard in graduate programs for advanced practice nurses, psychiatric and psychological master's programs, and clinical doctoral programs.

Psychoeducational groups

Psychiatric nurses are often responsible for facilitating psychoeducational groups in mental health settings, where there is a defined group leader and specific content or topics to be discussed. Topics are frequently based on developing skills important to daily living and maximizing the quality of life. Some topic examples include strategic management of symptoms, medication education, coping with stress, and relapse prevention. Psychoeducational groups emphasize group member interaction and participation, but they also emphasize learning new behaviors. The facilitator may organize hands-on activities and sometimes give homework assignments. Other non-nursing personnel may conduct psychoeducational groups; however, psychiatric nurses are in a unique position based on their education, training, and holistic approaches, to help bridge the gap between patients' physical and mental health. Psychoeducational groups may be larger than strictly therapeutic groups, although larger groups can be difficult to manage depending upon the personality mix of those attending (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7001357/).

Cognitive-behavioral therapy (Individual therapy)

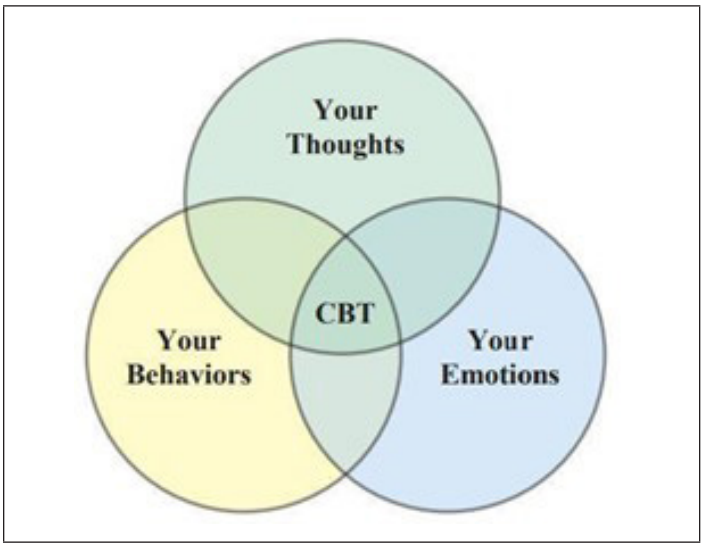
Cognitive-behavioral therapy (CBT), pioneered by Aaron Beck (1967) and Albert Ellis (1973), focused on the relationship between a patient's perceptions about events and the resultant feelings and behaviors. This cycle of thoughts that influence feelings and behaviors is demonstrated in this example:

> *Imagine you are driving down the interstate at 75 miles per hour. You check your rear-view mirror and see the flashing lights of a state trooper. Knowing that you are driving over the speed limit, you are certain you will be pulled over and given a traffic ticket. You think of the two glasses of wine you just consumed with dinner. "What if my blood alcohol level is too high? I can't be arrested! I would lose my job! They'll take away my nursing license!" Your palms get sweaty and your heart starts to race. Barely able to contain your panic, you swerve quickly into the right-hand lane without signaling and cut off a car coming up behind you. The car honks, you pull onto the shoulder, and finally stop. In dread, you look out the window for the trooper, who drives past you down the highway.*

In this example, the driver's thoughts of breaking the law by speeding and getting arrested for drunk driving cause the driver to feel anxious and panic, which results in erratic behavior and nearly causes an accident. Now consider this example:

> *Imagine yourself driving down the interstate. You check your mirror and see the flashing lights of a state trooper. You know you're driving over the speed limit, but so are many drivers around you. You think of the two glasses of wine you had with dinner, but you did eat a large portion and you don't feel drowsy – besides, that was several hours ago. You determine that the state trooper must be on the way to the scene of a crime or accident, so you signal a right turn, check your mirrors, and carefully pull over onto the shoulder of the road. The state trooper drives past you and you continue your journey.*

CBT is based on the supposition that behaviors are a result of distorted thinking about situations (Yalom & Leszcz, 2014). These distortions can take the shape of catastrophizing, which involves thinking that the worst that can possibly happen will happen or has happened; perceiving threats where none exist; thinking only of negative outcomes; or making over-generalizations. In anxiety disorders, fear is the driving force for distorted thoughts. These distorted thoughts impact feelings and lead to behaviors such as situational avoidance where objects or places may become a self-reinforcing behavior as the person has no additional life experience to combat the distorted thinking. Cognitive restructuring is used to help the patient examine their beliefs in more detail and to break down the resultant feelings and behaviors into A (antecedent), B (behavior), and C (consequence).



Exposure is a CBT technique that provokes the patient's anxiety over a feared idea or object in a controlled, supportive environment (Boyd, 2018). A person afraid of heights might be asked to work toward standing on a footstool for a minute or two in the clinician's office. Gradual exposure to the situation allows the patient to systematically desensitize to the stressor with tools to manage thoughts and feelings that arise when confronted with the feared stimulus. Flooding exposes the patient to the stressful object or idea all at once; although this technique can be used, trained clinicians should judiciously use it as it may produce panic symptoms. Skills training may also be employed in CBT. This specifically trains the individual based on their needs. Cognitive-behavioral techniques are useful with most psychiatric conditions and mental health states to improve mental flexibility and resilience, moving the person towards health on the health-illness continuum. Helping the patient to identify beliefs (true or false) about situations enables the patient to challenge the beliefs that are detrimental to recovery (McKay et al., 2015). Psychiatric nurses of all levels can utilize the basic skills of CBT in teaching their patients how to reframe distorted thoughts that lead to emotional turmoil and erratic behaviors.

Family therapy (Social theory)

Individuals with psychiatric, mental health, or behavioral problems often live in a family environment. Children and adolescents are still part of the family unit although the nature of "family" may differ in situations concerning foster care or residential treatment centers. Adults may live alone or with others, be married or single, and live with or without children of their own. Even adults who live alone often have significant family relationships with parents, children, or others. The concept of "family" is identified by the patient but usually involves other persons with whom the patient interacts on a frequent basis and in whom the patient has significant emotional investment.

Family therapy is based within the understanding that, although there is an identified patient, problems may arise out of dysfunctions within the system because the family is a unit and problems are relational to each other (Friedman, Bowden, & Jones, 2003; Sexton & Alexander, 2015). Family therapies focus on strengths of the individual patient and the family as a basis for treatment. Understanding how the family functions and relates to one another helps contribute information that is helpful in the development of a plan of care. Family therapy is complex, and master's or doctorate-level clinicians should be utilized for this type of intense treatment. The Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE) offers specialized accreditation to marriage and family therapy programs; this encourages programs to continue monitoring and maintaining their rigor and development and demonstrates that programs are meeting industry standards and their own objectives (COAMFTE, n.d.)

Treating the family via emotional or cognitive methods allows problems to be addressed within the family dynamic; treating the patient apart from his or her family alone will not correct these systemic problems, and relapse is likely (Sexton & Alexander, 2015). Cognitive awareness (as in CBT) helps individuals and families recognize the cyclic nature of thoughts creating feelings, which create behaviors, which reinforce thoughts, and which continue circularly. Addressing this from a systems nature allows all members of the family unit to explore their role within this continuum and work toward healthier interactions simultaneously.

Community support groups (Social theory)

Many community support groups exist to help individuals who are experiencing specific mental health problems. Groups exist for gambling addiction, rape and sexual abuse support, bipolar disorder, depression, grief and bereavement, suicide, attention deficit disorder, PTSD, substance abuse, and many more. Support groups differ from therapy groups in several important ways. Support groups are a network of members with similar traits or characteristics; support groups are leaderless – they may have a nominated leader, but that person is also a victim or patient and a group member; support groups are not managed by a healthcare professional; support groups are free or have minimal cost; support groups may meet less frequently than therapy groups but for a longer period of time (years to indefinitely); and support groups are usually self-sustaining. If members lose interest, the group can't find a place to meet, or membership wanes, then the group may end (https://www.frontiersin.org/articles/10.3389/fpsyt.2021.714181/full).

The National Alliance on Mental Illness (NAMI) is the nation's largest grassroots support organization for families and persons affected by mental illness. Established in 1979, NAMI is a powerful lobbying force in Washington, DC, with affiliates in every state and more than 1,100 communities across the country. NAMI focuses on fighting against the stigma associated with mental illness and provides support for families and patients with psychiatric illnesses.

Self-Assessment Quiz Question #5

Which of the following is considered a support group?

a. Cognitive behavioral therapy.
b. Alcoholics Anonymous.
c. Family therapy.
d. Medication education.

BRAIN ANATOMY AND PHYSIOLOGY

Within the brain, several areas influence behaviors and are related to psychiatric-mental health disorders, such as the areas involved in mood, anger, and thoughts. Therefore, it is important for nurses to understand how the brain regulates mood and behaviors. The cortex, the outer surface of the brain, is associated with rational thinking (Halter, 2018). The orbitofrontal cortex, which is in the forehead, regulates sympathetic and parasympathetic signals and houses the executive functions (Norris, 2019). Examples of executive functions include decision making, organizing, and determining right from wrong. Additionally, the cortex is adjacent to other areas of the brain, connecting rational thought to mood.

Several other areas of the brain also have a role in psychiatric-mental health disorders. The frontal lobe, for example, is heavily involved in decision making. The parietal lobe integrates sensory and motor information. The occipital cortex is the vision center. The cerebellum works to create muscle tone, posture, and coordination. The temporal lobe is involved with memory, smells, sounds, and language. The hypothalamus regulates body temperature and metabolism, and research suggests that it plays a role in emotions. The pituitary gland regulates hormones, and the brainstem controls basic vital functions such as respiratory rate, heart rate, reflexes, and movement (Norris, 2019).

The limbic system, which is involved in emotions, has a central role in psychiatric-mental health disorders. The limbic system contains the amygdala, which regulates mood and emotions such as anger; the hippocampus, which regulates memory; and the anterior cingulate, which regulates sensations (Norris, 2019; Stahl, 2020). These areas all work together to compose emotions and the body's responses to emotions. There are millions of connections among these areas. These connections, or pathways of electrical impulses, allow parts of the brain to communicate with one another and respond to stimuli.

NEUROTRANSMITTERS

The presynaptic area located at one end of each neuron holds neurotransmitters. A neurotransmitter is a chemical that carries a message to another neuron. An electrical charge, usually powered by a sodium-potassium channel, causes a reaction from one end of the neuron to the other, releasing the neurotransmitter into the synapse like a gun firing (Norris, 2019; Stahl, 2020). The neurotransmitter then crosses the space or synapse between the neurons and attaches to a specific receptor on the postsynaptic cell. Once the neurotransmitter has delivered the message to the postsynaptic cell, it is released back into the synapse (Stahl, 2020). Once released, the neurotransmitter can be destroyed by specific enzymes or be taken back into the presynaptic area by a process called *reuptake* (Stahl, 2020).

Psychiatric-mental health treatment is based on enabling neurotransmitters with messages to attach to the postsynaptic neurons (Stahl, 2020). Each neurotransmitter attaches to a receptor like a key fitting into a lock. This causes a reaction in the neuron referred to as a *second messenger system*. These

exchanges must happen several times before the goal of change in the neurons and brain occurs. Sometimes a message gets lost or is incorrectly transmitted. This can lead to emotional dysregulation and psychiatric symptoms (Stahl, 2020).

Dopamine, serotonin, and norepinephrine are the most important neurotransmitters in mental health. In addition, two amino acids, gamma-aminobutyric acid and glutamate, have a role in psychiatric-mental health, with each having its own effect on mood and behavior.

Dopamine

Dopamine is a neurotransmitter associated with psychosis and influences several areas of the brain. Dopamine regulates movement and coordination, emotions, and decision making. Decreased levels of dopamine can cause Parkinson's disease. Conversely, increased levels can lead to schizophrenia or mania (Stahl, 2020). Dopamine also stimulates the hypothalamus to release sex, thyroid, and adrenal hormones (Stahl, 2020). Antipsychotic medications aim to decrease symptoms of psychosis by enhancing the impact of dopamine on the postsynaptic cells.

Serotonin

Serotonin is a neurotransmitter found in the limbic system, the brain cortex, and the stomach. Research suggests that low levels of serotonin are implicated in depression, whereas excess levels have a role in anxiety, mania, aggression, and possibly schizophrenia. Serotonin is also associated with appetite, mood, aggression, libido, sleep, and arousal, as well as perception of pain (Stahl, 2020). Medications that support serotonin are the first line of action against depression and are components of some antipsychotic medications.

Norepinephrine

Norepinephrine is a neurotransmitter found in various parts of the brain and the brainstem. Norepinephrine regulates mood, cognition, perception, sleep, arousal, and cardiovascular status (Stahl, 2020). Excess levels can trigger a fight-or-flight response and long-term elevations are associated with mania and anxiety. When norepinephrine is depleted, depression can occur. Research suggests that norepinephrine plays a role in the chronic pain that can accompany depression. Medications that increase the messages or actions of receptors that involve norepinephrine are usually antidepressants.

Gamma-Aminobutyric Acid

Gamma-aminobutyric acid (GABA), an amino acid, is an inhibitory protein. It is concentrated in the frontal and temporal lobes of the brain, where it slows down activity. GABA works like a light switch, turning on and off other excitatory molecules (Stahl, 2020). When there is not enough GABA in the brain, anxiety can occur. Medications such as benzodiazepines aim to increase levels of GABA to slow down the brain activity involved in, for example, panic attacks and anxiety.

Glutamate

Glutamate is an excitatory amino acid that functions to open the calcium channel so that neurons fire faster (Stahl, 2020). This causes excitement in the brain. Researchers are currently investigating the role of glutamate in ADHD, anxiety disorders, depression, mania, and mood disorders (Stahl, 2020).

Self-Assessment Quiz Question #6

Dopamine is responsible for which of these symptoms?

a. Sleep.
b. Psychosis.
c. Arousal.
d. Catatonia.

PSYCHOPHARMACOLOGY AND THE BRAIN

Typically, medications that treat psychiatric-mental health disorders work by either increasing or decreasing the activity of neurotransmitter receptor systems in several ways (Stahl, 2020). For example, benzodiazepines aim to slow down brain activity, thus reducing anxiety, by increasing levels of GABA. It is important to remember that the change in the neurotransmitter system either facilitates or inhibits different functions in the brain. Medications can have a single specific target, such as serotonin reuptake inhibitors, or they can target multiple transporters, such as serotonin and norepinephrine reuptake inhibitors.

Simply stated, psychiatric medications block receptors or increase the number of neurotransmitters available for use, thus changing the message at the postsynaptic site. For example, consider a patient with depression who takes a selective serotonin reuptake inhibitor (SSRI). The medication increases the serotonin in the synapse, making more serotonin available for the receptors (Stahl, 2020). The message is sent via the postsynaptic cell and a second messenger to change the cell. The result is a decrease in depressed mood. Note that it might take several weeks of changes to this system for the desired health outcome to occur (Stahl, 2020).

Because neurons and the messages they carry are interrelated, even medications that target only one neurotransmitter can affect other neurotransmitters and messages. These alterations can cause changes in basic drives, sleep patterns, body movements, and autonomic functions (Stahl, 2020). These are side effects of medications affecting neurotransmission. For example, several psychotropic medications have the side effect of drowsiness. This occurs because the medication affects more than one neurotransmitter and message. Side effects are often the result of unintended changes in the neurotransmitter systems.

Classifications in psychopharmacology

Medications play a role in the treatment of nearly every psychiatric condition. For the purposes of this course, psychotropic medications are classified into seven broad categories: antidepressants, anti-anxiety agents (also called anxiolytics), antipsychotics and their "partners" anticholinergics (used to reverse some side effects), mood stabilizers, sedative-hypnotics, psychostimulants, and miscellaneous medications designed to reduce or prevent alcohol or drug dependence, including nicotine dependence (Stahl, 2021)

Herbals and dietary supplements have gained interest in Western cultures as people search for natural remedies. Many people feel that natural herbal remedies are healthier and safer overall than pharmaceutical drugs. The Food and Drug Administration (FDA) considers herbal supplements, vitamins, and other dietary supplements to be food sources and, as such, only monitors information on the product's label and does not regulate their manufacturing or usage. This can result in wide variances in the amount of active ingredient that may be available in a certain product; some products have even been found to contain no active ingredients after undergoing laboratory evaluation. Some herbal supplements have been used in the treatment of mental health conditions, as these products are available over the counter in many stores. Patients may seek information available on the Internet and then choose supplements based upon their understanding. The nurse should always assess the use of herbal and other supplements and educate patients about known mechanisms of action, side effects, and possible interactions with pharmaceutical drugs. It is important to review available research regarding supplements and use this evidence when providing patient education. The role of certain natural herbs in the treatment of psychiatric disorders is discussed below.

St. John's wort (*Hypericum perforatum*) is derived from the St. John's wort plant. It is primarily used to address depression. St. John's wort is thought to affect serotonin and monoamine oxidase inhibitors in the brain, similar to antidepressants. There are numerous studies that demonstrate reports of drug-to-drug interactions in patients who used St. John's wort while taking other medications (including prescribed antidepressants), so it is important that the nurse teaches patients not to combine this supplement with other medication, as it may increase the risk for serotonin syndrome.

Valerian root (*Valeriana officinalis*) is powdered and taken in a capsule form. It is believed to work on the gamma-aminobutyric acid (GABA) system to alleviate anxiety and treat insomnia. Valerian should not be taken with other central nervous system depressants (especially anesthetics, barbiturates, and benzodiazepines) because it can potentiate their effects. Side effects include headaches, uneasiness, dizziness, and, sometimes, excitability.

Kava kava (*Piper methysticum*) is a South Pacific oceanic herb with sedative, analgesic, and mild euphoria-inducing properties. Kava kava may act on GABA in a manner similar to benzodiazepines, and it does have drug-to-drug interaction effects with those products. Side effects of kava kava can include stomach disturbances, dizziness, and a temporary yellowing of the skin. A person with liver impairment or one who is a heavy alcohol user should never use kava kava because it has been linked with hepatotoxicity (Rivers, Xing, & Narayanapillai, 2016). Banned in some European countries, kava kava is still widely available for over the counter or Internet purchase in the United States, Australia, and New Zealand (Rivers et al., 2016).

Ginseng (*Panax ginseng*) is a stimulating herb that can produce energy similar to caffeine, meant to result in improved endurance and reduced fatigue. Jitteriness and nervousness can be side effects of this supplement, as can insomnia, hypertension, restlessness, and, possibly, mania.

Ginkgo biloba (*Ginkgo biloba*) has gained popularity for its theoretical ability to improve blood flow to the brain to promote alertness, mental sharpness, and memory; to treat fatigue and stress; and to improve endurance. Ginkgo biloba has antioxidant properties, reducing free radicals in the body that cause cellular death (Tulsulkar & Shah, 2013). Ginkgo biloba can interfere with blood clotting and reduce platelet action, leading to increases in bleeding times. It may interfere with anticoagulant therapy and should not be taken by patients with circulatory problems who are taking such medications such as Coumadin, Plavix, or aspirin. Side effects of ginkgo biloba include headaches, nausea, vomiting, stomach upset, and, occasionally, skin allergies (Izzo, Hoon-Kim, Radhakrishnan, & Williamson, 2016).

Chamomile preparations are often used in Europe to facilitate digestion, ease gas, and decrease cramping (Mahady, Wicks, & Bauer, 2017). It has been shown to be safe for children and is a first line of therapy in Germany for treating sensitive skin infants and young children (Mahady et al., 2017).

To address vitamin and mineral needs, a one-a-day multivitamin supplement for adults and a chewable daily supplement for children can be helpful. Iron deficiency is associated with fatigue and oral conditions such as stomatitis. Omega-3 fatty acids (fish oil, flaxseed oil) have shown positive benefits in treating behavioral problems (Bondi et al, 2014; Raine, Portnoy, Liu, Mahoomed, & Hibbeln, 2015). The fat-soluble vitamins A, D, and K can be dangerous in high doses. B-complex vitamins are associated with energy. Given with calcium, vitamin B6 has been shown to reduce premenstrual symptoms (Masoumi, Ataollahi, & Oshvandi, 2016). L-methylfolate (Deplin), a prescription medical food, is a derivative of folic acid (a B vitamin). It is a dietary supplement that has demonstrated effectiveness in enhancing the treatment of depression and is monitored by the FDA (Shelton, Manning, Barrentine, & Tipa, 2013).

Massage is the manipulation of the body's soft tissues to promote circulation and relaxation. There are numerous types of massage techniques, varying from light touch to deep muscle work and from specific to generalized body parts. Swedish massage is meant to provide relaxation and increase circulation; Shiatsu massage, influenced by Chinese medicine, is used by a specialized practitioner who applies pressure to acupoints on the body with the intention of increasing the life flow (or Japanese ki; Halter, 2018).

Reflexology, also called *zone therapy*, is the application of massage or pressure to the hands and feet to alleviate distress in different parts of the body. The theory of reflexology is that all of the body is represented in areas in the hands and feet, and thus stimulating these trigger points can eliminate distress in the related body system(s) https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4624523/).

According to traditional Chinese medical theory, acupuncture points are situated along meridians (channels) in the body that align with a vital energy flow, the *Qi* (Halter, 2018). Illness or distress interrupts the Qi. Acupuncturists insert tiny filiform needles along the meridians to stimulate and readjust the energy flow. Practitioners diagnose which systems in the body are affected based on inspection, auscultation, olfactory senses, palpation, and taking a limited history of symptoms. Side effects to the treatment are generally mild and may include slight headaches, nausea, or pain in certain areas. In the Western hemisphere, a common use of acupuncture is for the treatment of pain (Halter, 2018 (https://www.sciencedirect.com/science/article/pii/S2213422021000883?via%3Dihub).

Hypnosis is a technique that induces a deep relaxation and calm, trance-like state of mind. The patient's focus of awareness becomes so restricted that external noise and distractions are no longer present in the conscious mind. Hypnotherapy is practiced by highly trained clinicians, often psychologists, to achieve certain therapeutic goals with the patient, such as recovering memories lost through the defense mechanism of repression, learning to be less anxious when faced with anxiety-provoking situations, or reducing or eliminating undesirable behavior such as smoking. The patient undergoing hypnotherapy must be relaxed and receptive to the procedure (https://positivepsychology.com/hypnotherapy/).

Psychiatric nurses should familiarize themselves with the various modalities of psychotherapy, the medications used in the treatment of psychiatric illness, as well as the complementary

and alternative therapies and the various somatic therapies used in the treatment of psychiatric disorders. Psychiatric nurses provide psychoeducational services to patients and their families and should have a thorough understanding of the treatment modalities commonly used in psychiatric practice.

Self-Assessment Quiz Question #7

Which complementary alternative medicine interferes with anticoagulants?

a. Chamomile.
b. Ginseng.
c. Ginkgo biloba.
d. St. John's wort.

Self-Assessment Quiz Question #8

Which complementary alternative medicine should be avoided in patients who report heavy alcohol use?

a. St. John's Wort.
b. Ginseng.
c. Valerian root.
d. Kava kava.

OTHER THERAPIES IN MENTAL HEALTH

Electroconvulsive therapy

Mental health professionals once used ECT, introduced in the 1930s, to treat a broad range of psychiatric disturbances (George et al., 2020). With strong advances and refinements in the field, professionals may still use ECT to treat certain conditions such as severe depression (major depression), mania, or psychosis (George, et. al, 2020). To perform ECT, the patient is given a short-acting sedative, followed by a muscle relaxant. The muscle relaxant prevents tonic-clonic jerking of the body caused by seizure activity that, historically, was the cause of physical injuries to the patient. After the patient is anesthetized, electrodes are placed on the sides of their head and an electrical stimulus that is sufficient to trigger a seizure is given. Ideally, the seizure activity lasts about 15 seconds (Townsend, 2014). Breathing is supported during the procedure by nurse anesthetists or anesthesiologists. The ECT session is repeated two to three times a week for 3 to 4 weeks and is often done on an outpatient basis (Townsend, 2019).

Providers usually use medications and therapy before deciding to use ECT. ECT has an effectiveness rate of approximately 60% to 70% in the treatment of depression (George, et. al, 2020). There are few contraindications to ECT; however, caution should be used in pregnancy, patients with cardiac conditions, or patients with intracranial pressure because of disease (Townsend, 2019). Side effects of ECT include memory loss and some confusion in recalling events right before and after the procedure. Some people complain of long-term memory and cognitive problems. Also, complications related to the use of anesthetics (allergic reaction, respiratory suppression) can occur.

Transcranial magnetic stimulation

Transcranial magnetic stimulation (TMS) is a noninvasive treatment for depression. The patient is exposed to electrical energy that is passed through a coil of wires to produce a powerful magnetic field (George, et. al, 2020). Magnetic waves pass through the brain and skull painlessly, while the patient remains awake for the procedure. It is most effective when administered for 40 minutes daily for 4 to 6 weeks. It is thought to work by stimulating nerve cells to produce the neurotransmitters that relieve depression. Side effects of TMS are few, with patients reporting only mild headaches. TMS cannot be used if the patient has implanted or permanent metal in the skull or brain (George, et. al, 2020).

Vagus nerve stimulation

Vagus nerve stimulation (VNS) is an adjunctive, long-term, invasive therapy for adult patients with serious and persistent depression (George, et. al, 2020). Most of these individuals have shown no improvement in condition after trials of four or more antidepressants before attempting VNS therapy. A VNS implant is a small, battery-powered device, similar to a cardiac pacemaker, that is surgically implanted subcutaneously under the skin of the upper left or right chest. Internally, a wire runs from the device to the vagus nerve, which then carries electrical impulses to the brain. These impulses are emitted every few minutes. The device is thought to work by electrically stimulating the production of neurotransmitters that are associated with depression treatment. The side effects of VNS include a tickle in the throat (may trigger a cough reflex), mild hoarseness or other voice changes, and, rarely, difficulty swallowing, shortness of breath, neck pain, and a prickling sensation in the skin.

Case study 1

Mrs. Jones was admitted as an involuntary patient to the psychiatric unit. She was brought to the emergency department by her daughter, who reported her mother was showing "new and bizarre" behaviors. She has a history of schizophrenia, which has been well controlled until this episode.

The psychiatric nurse begins the mental status exam of Mrs. Jones. The nurse notes that she is wearing a short dress that is on backwards. She appears disheveled and unkempt; she has not eaten any of her breakfast. Further, the nurse observes that Mrs. Jones has taken the blankets off the bed and laid them out on the floor. She has also taken the toilet paper and unrolled it into a pile on the floor.

When the nurse introduces herself, Mrs. Jones is at the window talking in nonsensical words. She is wringing her hands and appears to be fixated on something outside. She does not acknowledge the nurse.

Later, she turns around and exclaims, "Sally, I am so glad you are here. Tea is almost ready. Flubrubaroo?" She moves to the pile of blankets and stands in the middle of them, smiling at the nurse.

The nurse smiles and begins to talk to Mrs. Jones. The nurse explains again that she is a psychiatric nurse and is there to care for her. She states, "Oh no, dear, have you tokenitnd?"

The nurse notes that Mrs. Jones' affect is flat as she stares out at the window but animated when speaking in nonsensical words. The nurse asks her name. Suddenly, the patient turns to the nurse and starts talking very quickly, saying, "I know it is late. What was the dog's name again? I must go to the store. More milk."

Questions

1. Which components of the mental status examination can the nurse document from this interaction with Mrs. Jones?
2. How might you describe Mrs. Jones' affect?
3. How would you summarize the nurse's observation and evaluation of Mrs. Jones' thought processes?

4. What other health status information is helpful for the nurse to assess?

Responses

1. The psychiatric nurse can document Mrs. J's appearance, her behavior, and her affect, but not her mood. Documentation can also include thought processes and thought content. The psychiatric nurse is unable to assess Mrs. J's memory, cognition, insight, motivation, and judgment as well as her safety.
2. In addition to being flat and animated, Mrs. J's affect may also be described as anxious. Because her affect seems to be fluctuating, there may be an incongruence between her affect and behavior.
3. Word salad is a common finding and learners should be familiar with the term. Mrs. J's nonsensical and disorganized speech gives some indication of her thought processes. Her thought process appears to be confused. She exhibits word salad and her thought processes are disjointed and incoherent. Mrs. J's thought content is not clear as she does not respond coherently to the questions being asked.
4. It would be helpful for the psychiatric nurse to obtain information from the patient's daughter. What has Mrs. J been exhibiting at home? What is Mrs. J's baseline level of functioning? Were there any past episodes of self-harm or dangerous behavior? Over what period has this change in behavior occurred? Were there any triggers?

Case study 2

Donald is a 45-year-old male patient employed as a financial manager by a large bank. Because of economic downturns, there have not been as many opportunities to gain new business, which has led to fierce competition between financial managers.

Donald presents to his primary care provider's office reporting recent episodes of shortness of breath, sweating, anxiety, and the strong feeling that he is about to die. These symptoms started 3 months ago, occurring once or twice a week. Within the past few weeks, Donald reports he has experienced symptoms daily and he has begun to fear leaving his home because he is afraid that he will have another attack. His attendance at work has suffered and he reports that his supervisor told him that he might lose his job as a result. This has caused problems between him and his wife and she has started talking about leaving him to move back in with her parents.

An electrocardiogram, stress test, and laboratory testing are performed, all of which show normal results. Donald is prescribed alprazolam (Xanax) by his primary care provider and referred to the local mental health center for treatment. Once there, he meets with a therapist for a comprehensive assessment. Donald is diagnosed with panic disorder and agoraphobia. He is referred to the psychiatric nurse practitioner for a medication evaluation and treatment. The nurse practitioner recommends that Donald start taking sertraline (Zoloft), 50 mg daily, and that he uses the Xanax only as needed to avoid tolerance and dependency.

Questions

1. What are other therapies that are most likely to be beneficial for Donald?
2. Are there any ancillary services that could also be helpful to Donald?
3. Which recommendations regarding his relationship status with his wife could the nurse practitioner discuss with Donald?

Responses

1. Panic attacks and panic disorder are treatable and respond well to medications and therapy. Cognitive-behavioral therapy is indicated to help this patient learn to identify anxiety-provoking triggers and reframe how he thinks about these events. Relaxation training, such as guided imagery and mindfulness, could be helpful in teaching Donald a means of reducing the anxiety once it occurs.
2. Another recommendation for Donald would be to include regular daily exercise in his routine (aerobic or weightlifting) because exercise can have a significantly positive effect on panic disorder treatment.
3. Donald may wish to consider the need for marital therapy sessions to work on improving communication with his wife. If she is willing to participate in Donald's treatment plan, they may also want to join a National Alliance on Mental Illness (NAMI) support group to learn more about psychiatric disorders and the rights of individuals who have such disorders. Finally, mental and behavioral health problems are considered medical problems and are protected under the federal Family and Medical Leave Act of 1993. If Donald's symptoms increase and become more debilitating, the psychiatric nurse practitioner treating Donald can provide him with a work statement and absence excuse that should help to protect his employment status and prevent him from losing his job while he is receiving treatment.

Case study 3

Mr. Fisher is a young adult male patient who has been newly diagnosed with panic attacks. The psychiatric mental-health nurse working in the outpatient clinic meets with Mr. Fisher, who was recently prescribed benzodiazepine by the psychiatrist for his panic attacks. Mr. Fisher asks the nurse what it means to have "a chemical imbalance" in the brain. He also asks how the new medication will "fix" his panic attacks.

Questions

1. How should the nurse explain "a chemical imbalance" in the brain to Mr. Fisher?
2. How should the nurse describe how benzodiazepine medications work?

Responses

1. The psychiatric-mental health nurse should explain to Mr. Fisher that neurotransmitters are chemicals in the brain that form messenger systems between neurons to help the brain and body regulate functions (e.g., thinking, feeling) and react or behave. The nurse also explains that there are excitatory and inhibitory amino acids that assist in regulating these brain functions. The nurse describes that a person's emotions and behaviors are the result of the functioning of these chemicals carrying messages between the neurons and amino acids. When there is an imbalance among neurotransmitters, the messenger system receives too many or too few messages, impairing regulation.
2. The nurse should explain that, in a person with panic disorder, the function of GABA may be altered. Normally, GABA slows down other chemicals that are more excitatory. If GABA is not working correctly or at the correct level, there is no way to slow down the other chemicals. The result may be panic attacks. There are anti-anxiety medications, such as benzodiazepines, that aim to increase levels of GABA to help slow down brain activity; they decrease anxiety by changing how the chemicals in the brain communicate and work.

Healthcare Considerations

1. Therapeutic use of self is one of the foundations of mental health nursing.
2. An understanding of the mental health exam is fundamental to the diagnosis and treatment of mental illness.

Conclusion

The brain is an amazing organ that not only monitors changes in the external world but also regulates internal body functions. The brain initiates basic drives and controls contractions of muscles, internal organs, sleep cycles, moods, and emotions. Knowledge of how the brain works with regard to neurotransmission is an important aspect of understanding psychiatric-mental health disorders and the medications used to alleviate patient symptoms. Neurotransmitters carry specific messages from neuron to neuron to produce emotions and behaviors. Psychiatric-mental health medications work by altering these messenger systems. The neurotransmitters involved in mood and behavior include serotonin, norepinephrine, and dopamine. Through epidemiological research, healthcare providers can learn more about the prevalence of psychiatric and mental health disorders, as well as ways to identify persons who are at risk. This information becomes an important part of the nurse's assessment and identification of patients with psychiatric disorders. Recognizing an individual's behaviors and making statements can add to the assessment data and provide insight into the patient's current mental health state.

Assessing the patient, performing mental status assessments, identifying priority problems, developing goals and objectives, and developing evidence-based plans of care comprise the core steps of the systematic approach to caring for patients with psychiatric disorders. After these processes have taken place, the provision of relevant and appropriate nursing interventions follows. The therapeutic relationship is established during initial patient encounters, during the assessment and implementation of interventions during the nursing care planning process.

Psychiatric nurses who use therapeutic communication will be able to conduct effective, comprehensive mental status examinations that provide the information necessary to develop a comprehensive mental healthcare plan, regardless of practice setting.

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BASIC PSYCHIATRIC CONCEPTS

Self-Assessment Answers and Rationales

1. The correct answer is B.
Rationale: Aaron Beck developed cognitive behavioral therapy after working with depressed patients. Cognitive behavioral therapy is based on cognitive psychology and behavioral therapy.

2. The correct answer is A.
Rationale: The unit policy regarding voluntary patient participation in group therapy preserves the ethical principle of autonomy. The principle of autonomy presumes that individuals are capable of making independent decisions for themselves and that healthcare workers must respect these decisions. Beneficence refers to one's duty to benefit or promote the good of others. Justice reflects the nurse's duty to treat all patients equally. Veracity refers to the duty to be truthful (Boyd, 2018).

3. The correct answer is A.
Rationale: Defense mechanisms are behaviors that an individual uses to deal with stressors. Defense mechanisms can be beneficial and protective for the patient or they can be counterproductive and maladaptive.

4. The correct answer is C.
Rationale: The nurse assumes responsibility for the milieu. The nurse is responsible for the overall environment as well as assessment and medication administration. The therapist is primarily responsible for group and individual therapy in a traditional care model. Psychodrama uses role-play to express feelings. The occupational therapy assists the patient to develop independence in life skills. (Boyd, 2018)

5. The correct answer is B.
Rationale: Many community support groups exist to help individuals who are experiencing specific mental health problems. Groups exist for gambling addiction, rape and sexual abuse support, bipolar disorder, depression, grief and bereavement, suicide, attention deficit disorder, Tourette's disorder, substance use disorders, and many more.

6. The correct answer is B.
Rationale: Dopamine is a neurotransmitter associated with psychosis and influences several areas of the brain.

7. The correct answer is C.
Rationale: Ginkgo biloba can interfere with blood clotting and reduce platelet action, leading to increases in bleeding times. It may interfere with anticoagulant therapy and should not be taken by patients with circulatory problems who are taking such medications such as Coumadin, Plavix, or aspirin.

8. The correct answer is D.
Rationale: :A person with liver impairment or one who is a heavy alcohol user should never use kava kava because it has been linked with hepatotoxicity (Rivers, Xing, & Narayanapillai, 2016)

Course Code: ANCCTX06PC

Crisis Resource Management for Healthcare Professionals

3 Contact Hours

Release Date: January 31, 2022 **Expiration Date:** January 31, 2025

Faculty

Pamela Corey MSN, EdD, RN, CHSE, has been a registered nurse since 1984 with a clinical background in pediatrics, pediatric critical care, and neonatal critical care. She has a master's in nursing education and a Doctorate in Education. Her specialty area includes simulation-based education, and she is certified as a Healthcare Simulation Educator. Her dissertation was on adult and pediatric team training and crisis resource management. Pamela developed and implemented code team training at a major teaching hospital utilizing CRM techniques to prepare staff for safe and efficient responses to emergent situations within the hospital setting.

Pamela Corey has disclosed that she has no significant financial or other conflicts of interest pertaining to this course.

Peer reviewer:
Scott Tilton MSN, AGACNP-BC, CCRN, is a board-certified adult-gerontology acute care nurse practitioner with a clinical background in emergency medical services, trauma critical care, neurocritical care, and rotor-wing transport. He works as an advanced practice provider in a cardiovascular intensive care unit that specializes in the resuscitation of patients recovering from cardiac surgery and those requiring mechanical support or extracorporeal membrane oxygenation (ECMO). As he pursues his Doctorate in Nursing, his clinical interests are point of care ultrasound training and standardizing the response to ECMO clinical emergencies within the intensive care unit.

Scott Tilton has disclosed that he has no significant financial or other conflicts of interest pertaining to this course.

Peer reviewer:
Brad Gillespie, PharmD, is trained as a clinical pharmacist, Dr. Brad Gillespie has practiced in an industrial setting for the past 25+ years. His initial role was as a Clinical Pharmacology and Biopharmaceutics reviewer at FDA, followed by 20 years of leading Early Development programs in the pharma/biotech/nutritional industries. In addition to his industrial focus, he remains a registered pharmacist and enjoys mentoring drug development scientists and health professionals, leading workshops, and developing continuing education programs for pharmacy, nursing, and other medical professionals.

Brad Gillespie has disclosed that he has no significant financial or other conflicts of interest pertaining to this course.

Course overview

Understanding Crisis Resource Management (CRM) and utilization of the concepts within team emergent responses can improve patient outcomes. The course will outline CRM concepts and demonstrate the application within emergent situations in healthcare. CRM concepts discussed will include leadership and followership, role identity and clarity; effective communication strategies; situational awareness; resource allocation; and dynamic decision making. Physicians, advanced practice providers, nurses, respiratory therapists, pharmacists, and other health team members should understand CRM to improve their performance in emergent team responses and ultimately improve patient outcomes. CRM framework is also applicable in medical and environmental emergent situations where teams work together to ensure patient safety.

Learning objectives

After completing this course, the learner will be able to:

- Examine the history of crisis resource management (CRM) and its application in healthcare.
- Examine the major realms of the CRM framework and how they are incorporated in team responses.
- Compare the communication techniques used in CRM.
- Examine resource allocation during an emergent event.
- Apply the process of dynamic decision making in an emergent situation.
- Demonstrate the importance of role clarity in team management through case study analysis.

How to receive credit

- Read the entire course online or in print which requires a 3-hour commitment of time.
- Complete the self-assessment quiz questions which are at the end of the course or integrated throughout the course. These questions are NOT GRADED. The correct answer is shown after you answer the question. If the incorrect answer is selected, the rationale for the correct answer is provided. These questions help to affirm what you have learned from the course.
- Depending on your state requirements you will be asked to complete either:
  - An affirmation that you have completed the educational activity.
  - A mandatory test (a passing score of 70 percent is required). Test questions link content to learning objectives as a method to enhance individualized learning and material retention.
- If requested, provide required personal information and payment information.
- Complete the MANDATORY Course Evaluation.
- Print your Certificate of Completion.

CE Broker reporting

Colibri Healthcare, LLC, provider # 50-4007, reports course completion results within 1 business day to CE Broker. If you are licensed in Arkansas, District of Columbia, Florida, Georgia, Kentucky, Michigan, Mississippi, New Mexico, North Dakota, South Carolina, or West Virginia, your successful completion results will be automatically reported for you.

Accreditations and approvals

Colibri Healthcare, LLC is accredited as a provider of nursing continuing professional development by the American Nurses Credentialing Center's Commission on Accreditation.

Individual state nursing approvals

Colibri Healthcare, LLC is accredited as a provider of nursing continuing professional development by the American Nurses Credentialing Center's Commission on Accreditation. In addition to states that accept courses offered by ANCC accredited Providers, Colibri Healthcare, LLC is an approved Provider of continuing education in nursing by: Alabama Board of Nursing, Provider #ABNP1418 (valid through February 5, 2025); Arkansas State Board of Nursing, Provider #50-4007; California Board of Registered Nursing, Provider #CEP17480 (valid through January 31, 2024); California Board of Vocational Nursing and Psychiatric Technicians (LVN Provider #V15058, PT Provider #V15020; valid through December 31, 2023); District of Columbia Board of Nursing, Provider #50-4007; Florida Board of Nursing, Provider #50-4007; Georgia Board of Nursing, Provider #50-4007; Kentucky Board of Nursing, Provider #7-0076 (valid through December 31, 2023; CE Broker provider #50-4007); Michigan Board of Nursing, Provider #50-4007; Mississippi Board of Nursing, Provider #50-4007; New Mexico Board of Nursing, Provider #50-4007; North Dakota Board of Nursing, Provider #50-4007; South Carolina Board of Nursing, Provider #50-4007; and West Virginia Board of Registered Nurses, Provider #50-4007. This CE program satisfies the Massachusetts States Board's regulatory requirements as defined in 244 CMR5.00: Continuing Education.

Activity director

June D. Thompson, DrPH, MSN, RN, FAEN, Lead Nurse Planner

Disclosures

Resolution of conflict of interest
In accordance with the ANCC Standards for Commercial Support for continuing education, Colibri Healthcare, LLC implemented mechanisms prior to the planning and implementation of the continuing education activity, to identify and resolve conflicts of interest for all individuals in a position to control content of the course activity.

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Course verification

All individuals involved have disclosed that they have no significant financial or other conflicts of interest pertaining to this course. Likewise, and in compliance with California Assembly Bill No. 241, every reasonable effort has been made to ensure that the content in this course is balanced and unbiased.

INTRODUCTION

The ability to respond to an emergency in a timely and efficient manner is essential for all healthcare professionals regardless of their practice setting. However, many may lack formal training and education in best practices for dealing with various emergencies that can occur in professional settings. Patient outcomes improve when healthcare providers work efficiently as a team.

Crisis resource management (CRM) is a set of behaviors derived from evidence-based practice that aims to promote safety, improve teamwork behaviors, and decrease the incidence of adverse events during an emergency response (Alsabri et al., 2020; Fanning et al., 2013). Healthcare providers in all areas of practice can be responders to critical events involving medical or environmental emergencies and benefit from learning about CRM concepts and applying them to their practice.

The purpose of this course is to provide evidence-based knowledge on CRM principles and how healthcare providers can utilize these concepts within their practice setting and effectively respond to an emergent situation as part of a team. Cardiac arrest, anaphylaxis, fire, weather emergencies, and mass casualty disasters are situations where CRM knowledge can improve patient safety and outcomes. This course is designed for nurses, Licensed Independent Providers (LIP) such as medical doctors, physician assistants, and nurse practitioners, pharmacists, respiratory therapists, and support staff practicing at all levels and in all practice settings. Those who incorporate CRM principles during an emergency will understand role identification; the purpose of clear, concise communication; situational awareness; and dynamic decision-making for an effective, coordinated response.

History of crisis resource management

There are many industries where staff preparedness for an infrequent event can prevent adverse events. The aviation industry was the first to use the concept of "crew resource management" to train and prepare all airline employees for an aviation disaster. Aviation research from the '70s and '80s demonstrated that many adverse events were related to human error in communication, awareness of the situation, and delegation and workload management (Helmreich & Fousbee, 1993). This research led to specific pilot and airline staff training that incorporated simulations of rare events requiring the use of technical skills and cockpit/crew resource management behaviors. Each session was followed by a debriefing that reviewed the performance of the individual and the team and reinforced the concepts.

Healthcare is another area where a lack of knowledge in responding to rare events can cause adverse outcomes. While the aviation industry was exploring human factors, the healthcare industry, specifically anesthesiologists, also explored behaviors and performance in high-acuity, low-volume events. High acuity – low volume events are those emergent critical situations that occur infrequently, but staff need to respond to competently. Through analysis and debriefings of actual patient events, it was discovered that even experienced physicians lacked the optimal knowledge and skills necessary for effectively managing

a crisis (Gaba et al., 2001). As this topic gained more attention through continued analysis of unexpected adverse events that negatively impacted patient outcomes, it was revealed that all teams who responded in crisis situations needed to be educated and trained in the behaviors that lead to improved and effective responses. Although crisis resource management (CRM) in healthcare first started in complex areas, such as operating rooms and emergency departments, these skills apply to all healthcare team members. For example, educational programs that focus on CRM and team interactions have been used in obstetrics training for emergent delivery and maternal cardiac arrest (Bracco et al., 2018). CRM training has improved team dynamics and performance in pediatric rapid response teams (Siems et al., 2017) and improves leadership, problem-solving, situational awareness, and communication in trauma and emergency teams (Parsons et al., 2018).

CRM is defined as a set of behaviors that can reduce adverse events during emergencies when combined with skills and evidenced-based knowledge (Corey & Canelli, 2018). When teams incorporate teamwork and communication interventions in response to emergencies, this core set of behaviors results in an effective and improved response, including improved patient safety and a reduction in adverse events (Alsabri et al., 2020; Moffatt-Bruce et al., 2017). Knowledge of these behaviors can assist the healthcare provider who responds to the inevitable crises that occur in all areas of practice.

Evidence-based practice! Crisis resource management (CRM) is a set of behaviors derived from evidence-based practice that can decrease the incidence of adverse events during an emergency response (Fanning et al., 2013). Teamwork and communication training and interventions improve patient safety to improve patient outcomes by reducing adverse events, including medical errors (Alsabri et al., 2020).

Self-Assessment Quiz Question #1

Aviation research from the '70s and '80s found that many adverse events were related to:
a. Mechanical failure.
b. Weather.
c. Human Factors.
d. Terrorism.

THE CRM FRAMEWORK

High-acuity and low-volume crises are areas where healthcare providers have historically demonstrated gaps in knowledge and practice necessary to respond efficiently and effectively. The Institute of Medicine report "To Err is Human: Building A Safer Health System," published in 2000, prompted health systems to look at internal response processes, identify areas where human factors could cause patient harm, and strategize for implementing training and systems improvements to prevent further harm (Kohn et al., 2000). In the aftermath of this report, the healthcare education field started exploring ways to teach all healthcare disciplines the necessary skills and behaviors to reduce preventable adverse outcomes. CRM training became one method to increase knowledge and skill for those responders to high-acuity, low-volume clinical situations. By definition, a low volume crisis, such as a hospital evacuation, rarely occurs but involves extreme risk to the patient.

Components of the CRM framework

There are multiple components in the CRM framework that, when combined and implemented, lead to an effective team response. The behaviors are classified in multiple realms:

- Team management - Leadership and followership, role clarity, and workload distribution.
- Communication - Task-oriented and information sharing.
- Resource allocation and environmental awareness.
- Dynamic decision-making.
- Cognitive aids.

The team management realm of behaviors includes identifying the situation leader, identifying other responding team members, and clarifying roles among all who are on the responding team. Also included in this realm are workload distribution of all the tasks needed (what needs to be done and who will do it) and the ability to get help promptly. When all responding team members are aware of the importance of these behaviors, there is cohesiveness to the response. Effective, concise communication, including information sharing, are behaviors that allow for safe and effective team responses. There are multiple communication techniques used during team responses that allow members to communicate needs and address inquiries effectively.

Situational or environmental awareness requires that the healthcare provider anticipates and plans for all possible trajectories. Knowledge of the environment and the ability to effectively mobilize resources allows all members of the responding team to perform at their highest level. Utilization of these behaviors reduces delays in care, leading to the ability to improve outcomes.

Another integral concept within the CRM framework is making decisions in a dynamic and evolving situation. The behaviors specific to this concept include awareness of the situation and using that knowledge to identify and use all available information in real-time decision-making. Within this concept, a key behavior taught in CRM education is to avoid fixation. Fixation is a situation in which a specific idea is the only driving decision-making concept. When a team gets fixated on one aspect of the response, there is an increased potential for an adverse response. Teams need to be aware of all factors influencing the situation. Fixation can delay the correct treatment because of misdiagnosis or the missing of key data to drive decisions and cause adverse patient outcomes.

The final concept includes the use of cognitive aids. Some examples of cognitive aids that will be discussed later include advanced cardiac life support (ACLS) algorithms, emergency medication dose cards, and prepared evacuation plans. These tools can assist all healthcare team members in remembering specific information without relying on memory during an intensely stressful moment. Knowing what aids are available and familiarity with the content is valuable during an emergency, allowing staff to respond more effectively (Goldhaber-Fiebert & Howard, 2013). When all the concepts and behaviors are trained together, teams can respond to the best of their abilities, and patient outcomes are improved.

Self-Assessment Quiz Question #2

The team management realm of the CRM framework includes identifying the leader, identifying other team members and:
a. Clarifying roles.
b. Rotating roles.
c. Allocating resources.
d. Coordinating data.

Team management

The team management realm includes the behaviors that assist the responding team in having a coordinated, effective response that leads to an outcome. The main concepts are leadership and followership, role clarity, workload distribution, and requesting timely help.

What defines a team? A team is a group where individuals bring varied strengths, and a common goal can be attained when combined. Teams can be permanent/ dedicated or temporary. Some hospitals have dedicated code response teams where they train together and master their skills as a team. Many hospitals have temporary code response teams where the team comes

together to resolve the issue (cardiac or respiratory arrest; city wide disaster responses). These temporary teams often cannot train together. An element of both categories of teams is that all the necessary skills be present to achieve a positive outcome.

Leadership refers to the need for one distinct leader for the emergency response team. The leader directs the team throughout the emergent event toward the common goal. For cardiac arrest teams, the goal is successful resuscitation; in disaster management, it is the safe evacuation of all in the disaster's path; in a fire, it may be the safe removal of patients and extinguishing the fire. The goal will vary depending on the exact situation. In CRM, the leader is considered an oversight role, not an active participant; the leader decides, prioritizes, and delegates to the team members the tasks to be completed to achieve the desired outcome (Fanning et al., 2013). The leader coordinates team members' activities by ensuring that the team has the resources needed, communicates clearly, and acknowledges that directions are understood and changes in goal attainment are shared in real-time (Gangaram et al., 2017). Leaders are encouraged to also empower all team members to speak up with any pertinent information they have that can assist in patient care and decision making.

The leader can be determined by skill set or institutional hierarchy. In medical situations such as a cardiac arrest, the leader is usually a physician or licensed independent provider (LIP), such as a nurse practitioner authorized to implement ACLS care. In some institutions, the leader may be the most experienced provider present but could also be a provider-in-training with an experienced provider or supervisor providing close supervision and support. The most critical point of leadership is that there must be one clearly identified person in charge. The leader needs to state this when assuming the role so all those responding are aware. Team training courses teach leadership skills emphasizing how to clearly articulate that they are filling the leadership role. For example, the leader declares in a loud voice, "I am Dr. Jones, and I will be leading this code blue." This statement clarifies for all involved who is in charge.

For any team with a leader, there must be followers. What defines the role of followers in an emergency? Followers also have distinct responsibilities based on their roles. The leader will direct all team responders in the follower role, and the roles will vary depending on the type of response. In a cardiac arrest, responders perform different standardized roles to administer ACLS protocols: performing cardiopulmonary resuscitation (CPR); assessment of pulses; timing of tasks; medication administration; performing medical procedures; and documentation/scribing of the event. For a fire, the roles may include extinguishing the fire, removing patients, activating the emergency response (911, code red, etc.), or shutting off the main oxygen. During a weather emergency, the responsibilities include ensuring adequate staffing, securing replacement staff, utility, and facility management, and troubleshooting issues that may arise. All followers should be adequately trained and competent to fulfill their roles; for example, skilled in using a fire extinguisher or appropriately licensed and knowledgeable for the role. For example, pharmacists are the knowledge experts on medications; from administration to ensuring that the medications are used appropriately during a cardiac arrest.

Role clarity, which is when responders are aware of their responsibilities during the emergent situation, is necessary to organize the team and minimize chaos. Roles may be assigned by a leader, self-assigned by the team member, or designated by a specific skill set. The leader must know that all essential roles are filled by a competent team member. These roles are dynamic depending on the emergent situation and the responding staff.

The leader must clearly identify who specifically should be performing a role/task. When a leader states, "can someone please monitor the patient's pulse" there can be confusion on who should be completing the task, leading either one person, four people, or no one (if everyone assumes that someone else filled the role) to monitor the pulse. The leader must specifically identify someone by name or by some descriptor. It is common that temporary formed responding teams may not know each other by name, especially in rarer emergencies such as disasters. For example, if you state, "Can you in the red sweater please write down all the patients that we send to the evacuation unit?" The person in the red sweater must then close the communication loop by acknowledging that they received the message. These small steps will help reduce confusion in chaotic situations and prevent delays in achieving the common goal.

Occasionally the roles are defined by the task being performed. Most cardiac arrest teams include a respiratory therapist and an anesthesiologist, who position themselves at the patient's head during the response. For example, some hospitals have standardized locations for where each responder should stand during a cardiac arrest in relation to the patient. When a standard role map is used in an institution, the leader can assess visually when a role is not filled and reassign someone to that task.

Workload distribution addresses the performance of multiple critical tasks that must be completed simultaneously. The leader is responsible for ensuring that all delegated tasks occur effectively by those most competent for the role. Workload distribution includes appropriate role delegation in an ever-changing emergent situation. Role delegation is not intuitive for many healthcare providers and is one reason why CRM behaviors are taught and practiced (Fanning et al., 2013). Leaders must continuously reassess the situation and confirm that the tasks are performed by the most competent person present at the time. Leaders also must consider the need to adjust roles within the emergency. Reassigning staff when a person's skill set may be better utilized in a different role falls to the leader. If a nurse is needed during a cardiac arrest to administer medications, the leader may ask the medical student who is BLS-certified to perform cardiac compressions and move the nurse to the nursing specific role. If the leader is the only provider competent in a specific task, then the role of the leader must be filled by another competent provider during the time the leader is otherwise occupied. This may occur when the leader is the only one present to perform a procedure such as a needle decompensation of a pneumothorax. The leader should ask another physician to assume the role of leader. For example, "Dr. Jones, can you assume the role of leader, while I perform this procedure." By stating this out loud, the entire team is aware that the leadership of the situation has changed. The leader understands that the concentration needed to perform the procedure precludes him from monitoring the entire team response.

The final concept under teamwork is requesting help in a timely manner. The hesitation in calling for help has been shown to increase adverse outcomes (Leonard et al., 2004; Ozekcin et al., 2015). Barriers to calling for help include personal (I may come across as not being smart), interpersonal (the person needed may have yelled at the leader in the past), cultural (I am in charge, and it is my job; SWAPNet, 2018). Calling for help early allows for the arrival of others who can offer second opinions, extra hands to complete all the tasks, and skilled team members to fill specialty roles.

One example of improved patient outcomes is the initiation of rapid response teams (RRT) to respond to situations immediately once a clinician suspects a subtle or noticeable decline in patient status. Hospitals that utilize RRT responses demonstrate improved patient outcomes by intervening before the patients experience cardiac or respiratory arrests (Jackson, 2017). An important skill is knowing when to call for help and which level of response is needed.

Many institutions have an internal disaster and emergency response plan. In today's changing world, there is a need for emergency responses of healthcare teams, for situations such as natural disasters (earthquakes, hurricanes, tornadoes), mass casualty events (train derailments, plane crashes, mass shootings, terrorist attacks) and infectious disease epidemics (COVID, Ebola). Internal disasters include events such as a power outage, infant abduction, or a combative patient. The Joint Commission requires hospitals receiving Medicare and Medicaid reimbursements to have established disaster planning and health system readiness, for disaster management (Al Harthi et al., 2020; Lagan et al., 2017). Plans can be developed

locally at the institution level or the state, county, and city-wide level. Leadership at all levels will provide direction to individual responders in disasters that involve more than one institution. The City of Boston instituted many levels of disaster responses during the Boston Marathon bombing. Each hospital that had casualties implemented its disaster plan, and the city itself implemented a city- and statewide response to move all injured to appropriate facilities.

Self-Assessment Quiz Question #3

What must be done to ensure effective leadership if the leader is the only person competent to perform a procedure?

a. The charge nurse must verify the credentials of the leader to perform the procedure.
b. All team members are consulted to choose the new leader.
c. The leader must identify a replacement leader and announce the change in leadership to the team.
d. The leader continues in the leadership role while performing the procedure.

Staff education on their role in various scenarios is necessary to assess and respond to the situation appropriately. Often, emergency response teams are activated when current resources may not provide the bandwidth to accomplish the necessary tasks. Local staff nurses must understand when to call for assistance and the appropriate level of help needed. The level of help will vary depending on intrinsic factors, such as the situation itself, location, time of day, levels of experience of caregivers/responders, situational complexity and institutional limitations. For example, a teaching hospital may have more resources available during the day when attending MDs and more support services are present. At night, resources are scarcer, often consisting of less experienced staff, and a call for help should be initiated sooner to allow for resource mobilization. Several persons should be trained in each role to allow for absences during an emergency situation.

Some institutions have layers of responses, and all staff must be educated on the appropriate response at a given time.

When a patient is decompensating, does the situation require a response from a physician, a rapid response level team, or the full response for an impending life-threatening event? This varies depending on the institution's policies and responding teams available. For example, if a patient is having increased work of breathing and the institution's rapid response activation brings a respiratory therapist and critical care nurse, this may be the appropriate team. However, if an imminent airway collapse occurs, the need for an anesthesiologist would require the activation of the cardiac arrest team, which includes the anesthesiologist, respiratory therapist, and critical care nurses. In the event of a disaster, the call for assistance may extend to external resources given the extent of the crisis. Knowledge of the institution's policies on when to utilize internal versus external resources is important.

Evidence-based practice! Since the implementation of rapid response teams, a level of team activations called at the first sign of patient decompensation, there has been a demonstrated decrease in cardiac arrests (Jackson, 2017). Implementation of a special team to respond to patients presenting with signs of sepsis has been shown to reduce mortality rates from sepsis (Simon et al., 2021).

Healthcare Professional Consideration: Responders to an emergent event need to either verbally state their role in the response or solicit from the leader what their role should be.

Self-Assessment Quiz Question #4

Emergency response teams are often called when current resources may not provide the bandwidth to accomplish the tasks needed. Therefore, local healthcare professionals must understand when to call for assistance and:

a. The location of the nearest telephone.
b. The level of help needed.
c. The increased cost to the patient.
d. When the family typically visits.

Communication

Communication is vital in any situation where multiple responders converge to remedy a situation. Human error is a common contributing factor in communication failures during emergent situations. When an error leads to an adverse event, a root cause analysis may be performed. A root cause analysis is the process used by an institution to find the cause of an adverse event and identify potential solutions. Root cause analyses of adverse events related to emergent situations often find either a lack of or ineffective communication as the cause. Emergent situations, by nature, are often chaotic. Often, multiple conversations occur simultaneously as responders attempt to either obtain or share pertinent information. Research on the effective attributes for team leaders ranks communication as the most important aspect in the successful management of an event (Mo et al., 2018). A leader's ability to communicate needs/directions concisely with closed-loop techniques increases success (El-Shafy et al., 2018). Closed-loop communication is the technique when the person making the request clearly states all elements of the request to a specific person who confirms that the request is received and, after completing the task, states it back to the leader or person who initially gave the request. A leader shouting orders into the room without identifying the recipient can lead to unattended tasks or over-allocation of resources to one task, leaving another important role unattended. For medication requests, the best practice is to request the medication, including all pertinent elements – medication, dose, concentration, and route. The person preparing and administering the medication should restate the medication, dose, concentration, and route to prevent errors. It is also important for medication administration to verify that the medication is still needed before administration as most emergent responses are dynamic, and the patient's condition may have changed.

One example of effective closed-loop communication is the following exchange between the Licensed Independent Provider (LIP) and the nurse treating a patient who is experiencing an anaphylaxis type event:

LIP: Nurse, please prepare a dose of epinephrine 0.3mg of the 1mg in 1 mL, for IM administration.

Nurse: Preparing epinephrine 1 mg./ mL 0.3 mg for IM administration.

Nurse: Epinephrine 0.3 mg is ready to be administered IM. Do you want me to administer now?

LIP: What is the concentration?

Nurse: 1 mg in 1 mL.

Physician: Yes. Please administer now.

Nurse: Epinephrine 0.3 mg of 1 mg/1 mL has been administered IM at 3:10 p.m.

Documenter records time of administration: Epinephrine (1mg/1 mL) a dose of 0.3 mg IM administered at 3:10 p.m.

In the example above, all the elements of a safe medication administration were addressed during the exchange, preventing an error of the wrong dose, concentration, or route. Epinephrine is one medication that is prepared based on concentration and administered differently depending on the situation – anaphylaxis versus cardiac arrest and supplies on hand.

Closed-loop communication should also be used when asking for tasks to be accomplished. For example, when needing to assign a new role:

Leader: I need someone to contact the cardiac cath lab. Joe, can you contact them?

Joe (*medical student*): Yes.

Joe (*after calling cardiac cath lab*): I called the cardiac cath lab and they stated they want us to call back when patient is stable to travel.

Leader (*acknowledging receipt of message*): Thank you, Joe.

Another form of communication used in CRM is known as "state of the response." The state of the response involves the relay of information between the leader and team members on the activities and status of the response. These communications occur at frequent intervals and provide the team with the specifics on what has occurred, allowing the team members who arrive at different times to be updated on what has happened and the current status. The state of the response communication can also be used to solicit input from any team member on tasks completed or ideas on future interventions.

The following is an example of this state of the response, or state of the union, communication by the leader during a cardiac arrest:

MD Leader: "We are at 4 minutes. Patient Doe was found unresponsive and pulseless. CPR was initiated at that time; initial rhythm was identified as PEA (pulseless electrical activity). One dose of epinephrine administered at 2 minutes. We are now going to reassess the cardiac rhythm and pulse; CPR will continue if rhythm unchanged. We will explore the H's & T's to identify the cause of the PEA. Does anyone have anything to add?"

RN: I sent the morning chemistry and the lab just called. The potassium is critically low at 2.2.

MD Leader: Thank you, let's consider hypokalemia as part of the issue and initiate some treatment. Pharmacist, can you prepare for an infusion of potassium? Also, we need to check magnesium level and should anticipate replenishing that as well."

During a cardiac arrest caused by PEA, the best way to treat the PEA is to identify the cause. The causes of PEA arrest are often referred to as the H's & T's.

H's	T's
• Hypovolemia.	• Tension pneumothorax.
• Hypoxia.	• Tamponade, cardiac.
• Hydrogen ion (acidosis).	• Toxins.
• Hypoglycemia.	• Thrombosis-pulmonary.
• Hypo/Hyperkalemia.	• Thrombosis-coronary.
• Hypothermia.	• Trauma.

In this case, the nurse added that lab abnormalities potentially caused the situation. This technique allows for controlled conversations to occur among the team in a succinct way so that important information is not lost in the chaos of an emergent situation. Also, the summarization of events, and the naming of the situations like PEA for a rhythm or active shooter for an environmental response, gives all responders a shared mental model of the situation. All cardiac arrest team members usually have ACLS knowledge and know that the PEA algorithm is different from the ventricular fibrillation algorithm.

Those in an environmental response know that an active shooter response differs from a fire response. In each situation, the leader may eventually become a person from outside the institution, such as the fire chief or the police responders. Attention to their instructions can be lifesaving.

Experienced leaders may state something such as, "I am going to summarize the events so far; please keep performing your assigned tasks while I speak." This prevents the disruption of crucial tasks but gains all members' attention. This open sharing of information allows all members to actively be involved despite any preconceived hierarchy.

Some institutions have a process called "stop the line" or CUS (concerned, uncomfortable, safety issue) in their emergent response procedures to give all members of the team a chance to pause actions if they feel something unsafe may be occurring (Cammarano et al., 2016; Hunt, et al., 2007). An example of this may be ordering a medication for a situation that is not appropriate (an allergy, incorrect dose, or misidentification of the cardiac rhythm) to prevent an adverse outcome. "Stop the line"/CUS should trigger a conversation where the leader explains the rationale for a specific action or clarifies the action. Stopping the line is a critical method of communication for nurses, who often have knowledge and experience in emergent situations, but may feel restricted in speaking out in a hierarchical team setting with those they perceive to have higher authority. An example may be in a teaching institution where the relatively inexperienced MD leader orders a dose of medication that is incorrect, and the experienced pharmacist responding to the situation states that the correct dose of that medication in this situation is different.

Universal time-outs in the operating room and procedural settings were developed to equalize all team members around patient safety (Van et al., 2017). By stopping to check for the accuracy of the surgical site, correct procedure, and patient identification, serious errors may be prevented. Universal time-out procedures are an important safety process that allows for conversations that impact patient safety during critical situations when a patient may not be able to speak for themselves. This process allows all involved to speak up and raise concerns and is supported by the Joint Commission in the National Patient Safety Goals as a safety component helpful in reducing wrong patient and wrong side procedures (Gonzalez et al., 2018).

Self-Assessment Quiz Question #5

What form of communication allows any responder to an emergent situation to pause action for clarification?

a. Shared mental model.
b. Equal hierarchy.
c. Stop the line.
d. Closed-loop communication.

During a time of chaos, as in emergency responses, all responders must be aware of what they are communicating. During emergencies, a type of common communication that can occur is termed "collateral communication." Collateral communication occurs when important conversations happen among multiple team members and may or may not be necessary for the situation's outcome. An example of an important conversation may be one between the RT and anesthesiologist on the difficulty of placing the endotracheal tube.

Anesthesiologist: I have the tube in place, but I did not have clear visualization of the vocal cords, are you meeting resistance in bagging?

RT: I am meeting some resistance. I am going to check breath sounds. (RT listens to the chest and abdomen).

Anesthesiologist: Are they equal?

RT: There are diminished sounds on the left. You may be in the main stem.

Anesthesiologist: I am going to pull this ET out and retry. Prepare AMBU ventilate.

This conversation may impact the situation and should be shared with the leader:

Anesthesiologist: We had difficulty with the first attempt at intubation. We are going to try again after re-oxygenation.

Leader: Thank you for the update. Can you maintain the airway?

Anesthesiologist: Yes, bag mask ventilation is effective.

Leader: Let me know when you secure the airway.

Another example is the conversation between the nurse and the pharmacist about the calculations for a drug dosage.

RN: The leader wants us to prepare a dopamine infusion at 5mcg/kg/min.

Pharmacist: The standard concentration of this infusion is in the code cart and is 400mg in 250 mL. Will you be administering via the infusion pump?

RN: Yes, I will be using the smart infusion pump medication programming.

This conversation does not need to be shared with the leader but is necessary for the responder's role. The participants must assess collateral conversations as to their necessity and whether they need to be brought to the entire team and leader's attention.

Patient safety is the goal in emergent situations, and effective communication skills directly impact patient outcomes. Closed-loop communication combined with verbal read back of medication and procedural orders from the leader ensures that the entire team is aware of the progression of care in an often-chaotic situation. Followers are integral members of the response team, and their communication throughout the situation can add to successful outcomes and reduction of adverse events.

Evidence-based practice! Universal time-outs are an example of safe communication practices that ensure all systems are in place to prevent adverse outcomes. These protocols allow for equalization of all team members in providing for patient safety (Van et al., 2017).

Healthcare Professional Consideration: Healthcare providers must ensure that all verbal orders for interventions and medications are communicated in a closed-loop format, using a verbal read-back format to the ordering provider to verify the correct order.

Self-Assessment Quiz Question #6

The participants must assess collateral conversations regarding their necessity and:
a. Whether or not they delayed treatment.
b. If they need to be documented.
c. If the patient's family should be included.
d. Whether they should be brought to the leader's attention.

Resource allocation and environmental awareness

Knowledge of the environment is crucial for effectively managing an emergency. All team members who respond or can be involved in an emergency must know where equipment, medications, or supplies are located and how to use them. Many institutions provide the orientation to environments at the start of employment; however, periodic refresher training is essential. All staff should learn where the crash/code cart is for cardiac arrest response. Staff should be aware of the location of fire extinguishers and oxygen shut-off valves in case of a fire, as this is necessary for effective responses and part of their role. Healthcare providers in hospital and non-hospital settings should know the evacuation route, fire safety plan, and medical emergency equipment (AED, for example). All staff should also be aware of the internal and external disaster plans and their roles in the response. Knowing how to access response teams is another component of resource allocation. Knowledge includes understanding how the response team activation changes at different times (weekends, holidays, and off-shift times).

CRM behaviors include anticipation and planning for all potential outcomes of an emergent situation. An example of the variable nature of CRM is how the response to a cardiac arrest within a hospital has different steps than a similar situation in an outpatient or other setting. Outpatient cardiac arrests or medical emergencies may include the stabilization for external transport. Staff must know the steps to follow in these low-volume, high-acuity situations. For example, staff in an outpatient setting should know the procedure for contacting the ambulance service – is the policy to call them directly or activate the community 911 service? Training for this type of situational response should include earlier activation to enhance better patient outcomes in the hospital setting.

Resource allocation includes the appropriate use of trained and untrained personnel and the use of all available equipment. An example of using untrained staff may be asking the clinic's non-medically trained receptionist to go to the main entrance and show the EMS responders to the correct room. Inadequate use of available resources is a significant cause of adverse events in healthcare in CRM research (Abualenain, 2018). Team members' knowledge of how to access the resources and understanding potential barriers or reasons for personnel or equipment delays can make a difference in patient outcomes.

Self-Assessment Quiz Question #7

Knowledge of the protocols for responding to a fire is an example of:
a. Collateral communication.
b. Shared mental model.
c. Closed loop communication.
d. Resource allocation.

Dynamic decision-making in a crisis

Dynamic decision-making occurs when decisions are made related to the information presented and responses to actions performed and environmental factors. These complex decisions must occur in real-time and are influenced by the experience level of the decider (Edwards, 1962). The elements of dynamic decision-making include situational awareness, implementation of all available resources, use of cognitive aids, and avoiding fixation errors. Responding to an emergency is stressful, and the stress and urgency can impact the ability to function effectively during the situation. When the responder uses all available resources during a crisis, it improves their ability to make effective decisions during an ever-changing event (Fanning et al., 2013). This section will explore the concepts of dynamic decision-making as used in team settings.

A team, as defined by Salas (1992), is "two or more people who interact dynamically, interdependently and adaptively toward a common and valued goal/object/mission, who each have been assigned specific roles or functions to perform, and who have a limited lifespan of membership" (p. 4). Teams that respond to codes, rapid response, medical emergencies, and disasters all fit this description. The teams must function effectively to meet the shared goal. Each individual who is part of a team in healthcare brings their specialty-specific knowledge and training to the situation to achieve the desired outcome. The leader of the team uses knowledge of the individual members' skills to achieve a positive patient outcome.

Situational Awareness

An individual's situational awareness is the perception of critical information and data from the environment based on both past experiences and expectations. Each team member must be able to perform their specific tasks. The information utilized during the situational awareness process comes from the person's working memory, leading them to decide on the actions best suited to the event at hand (Salas et al., 2017). When applying situational awareness to a team, the process becomes more complex as both communication and information sharing affect all members present. As the central point person, the leader integrates all the data collected from the members and then communicates to the team their decision-making process to achieve the shared goal. The process is dynamic as there is a constant reassessment of the situation and adjustment of actions based on the data perceived. An example of this would be sharing of information related to a patient's current status during a pulse check during a cardiac arrest.

RN: Patient is still without pulse and lab just called up a potassium of 2.1.

MD: The current rhythm is still PEA.

Leader: Thank you, please continue CPR. We have given 2 rounds of Epi. Prepare for the third dose, and given the potassium, let's prepare to administer some potassium, Pharmacy do you have some suggestions?

The leader in this example gathered information, summarized, and dynamically decided an action based on the information shared. This leader also demonstrated the use of expert knowledge in formulating the plan.

Self-Assessment Quiz Question #8

The implementation of available resources, situational awareness, and use of cognitive aids are concepts utilized in what process?

a. Stop the line.
b. Dynamic decision-making.
c. State of the union.
d. Collateral communication.

Situational awareness in healthcare is enhanced when team members notice the subtle cues presented and reassess these cues to prioritize actions specific to the situation (Fanning et al., 2013). An example is when a team is responding to a medical emergency of a person found unresponsive in a lobby located in the building where the diabetic and nutrition clinic is located, and the team leader uses data to evaluate the situation. This dialogue represents the clinical team's use of situational awareness:

Security guard: I did not see anyone nearby when I walked into the lobby and called the alert. It does not appear that this man was assaulted.

RN: When I arrived, I found this person on the ground, unresponsive to touch and voice, low respirations and heart rate of 50. There is no one who knows this person.

MD: Do we know if this person is wearing any medical condition alerts? Perhaps they are a diabetic since we are in the same building as the clinic. Nurse can you support respirations and security can you call for transport to ED?

RN: No alert bracelet is on the patient.

Security: There is a prescription bottle in this pocket for oxycodone.

MD: Okay, let's reconsider what may be happening. Nurse, can you get a blood sugar, monitor respirations, and consider the possibility of an overdose of narcotics? Let's get him to the ED so we can give Narcan.

The MD leader needed to adapt to new information presented and adjust actions to the situation. In this example, the lack of a medical alert bracelet and discovering a prescription bottle steers the physician from further assessment for critical alterations in blood sugar levels to potential opioid overdose. Medical dynamic decision-making uses patient observations of patient presentation and status and incorporating new data into making the appropriate decisions. Continued adaptation is necessary as priorities and interventions will constantly change throughout the situation.

Members of the Royal College of Physicians and Surgeons in Canada (2017) have produced a comprehensive document on CRM in which they have divided the concept of situation awareness into three levels, including their corresponding definitions and potential risks (see Table 1). Level One is attention to diagnostic cues and prioritizing those cues most relevant to the situation. A practiced clinician will successfully hone in on essential cues based on experience and retain the relevant ones while disregarding less important or irrelevant ones. In this process, one must avoid fixation and overlooking other relevant cues that will aid in decision-making and potential alternative diagnoses. Level Two is synthesizing all cues, critically thinking about, and integrating, all presenting information to understand the situation completely. Novice clinicians will be less capable of pulling cues and information together to gain a comprehensive picture of the patient situation. These skills emerge and evolve with experience. Level Three of situational awareness, which builds upon the previous two, is a prediction of outcomes. This process entails pulling together relevant cues, patient history, and clinician experience to predict what happens next. Again, more experienced clinicians will draw on their prior experiences and knowledge to minimize errors in prognosis and continue to react to new information and cues as they arise.

Table 1. The Three Levels of Situation Awareness

Level	Pros	Cons
One: Recognition of Cues	• Attention is focused more quickly on important cues. • Irrelevant cues are discarded to facilitate more efficient decision-making.	• Attentional blindness or fixation errors can cause premature cognitive closure because of reliance on assumptions and/or prior knowledge.
Two: Synthesis of Cues	• Prior experience and knowledge is used to more quickly and efficiently synthesize information.	• Tendency to favor common and easily retrievable patterns may result in misdiagnosis.
Three: Prediction	• Future events can be anticipated and planned for (i.e., being proactive rather than reactive). • Additional resources can be prepared earlier in the treatment sequence.	• Errors in predication can result in under- or over-cautious responses.

Note. Adapted from Brindley, P.G., & Cardinal, P. (2017). *Optimizing crisis resource management to improve patient safety and team performance: A handbook for all acute care health professionals*. Royal College of Physicians and Surgeons of Canada.

Resources

Responders to a crisis must rely on multiple facets of information, including memory, past experiences, and established standards of care, to provide the necessary interventions during the emergency. Each team member needs to be able to obtain and process the information to prioritize care. Information sources used in an emergency include medical records (hard copies and electronic for past medical history, laboratory data, current hospitalization data) and internal and external internet resources (policies and procedures, protocols, medication guidelines, and standards of care). The leader may assign a responder to research data from these resources; a skilled leader may often ask a less technically skilled staff member to perform this task. Medical students at a code may be asked to review the patient's record for lab results or pertinent history. The leader should know the non-technically skilled person's knowledge level and ensure that the person assigned this task understands the context. When assigning the task of looking for pertinent lab values, the leader may need to provide guidance- "please look for all abnormal electrolyte values and report back". Leaders of other members may need to provide more direction to the less experienced staff. The leader in the example above stipulated that they wanted a review of recent electrolytes for the potential diagnosis of cardiac arrhythmia.

Cognitive aids

Using cognitive aids is a common practice in emergent situations. Cognitive aids are tools developed to assist in decision-making during a crisis, and their purpose is to provide pertinent information necessary to formulate a plan of action related to the context of the situation. Cognitive aids ensure consistent delivery of evidence-based care based on research and practice, and teams that use them have more appropriate, efficient decision-making (Goldhaber-Fiebert et al., 2016). Cognitive aids used in emergencies have been established for life-saving protocols, including BLS, ALCS, and PALS (pediatric advanced life support), malignant hyperthermia protocols, surgical safety checklists for the ORs, and OB hemorrhage and emergent C-section pathways (Alidina et al, 2018).

Cognitive aids must be evidence-based and approved by the institution as best clinical practice or standard of care. Some cognitive aids are well-known and accepted; for example, all the American Heart Association (AHA) protocols for life support and advanced life support. They are updated based on evidence-based research every five years, with the last update occurring in 2015 (Hazinski et al., 2015; Merchant et al., 2020). Most institutions accept these algorithms for responding to cardiac arrests.

The individual institution can develop other cognitive aids. An example is a map of where responders are expected to stand when responding to a cardiac arrest. The "Where Do I Stand" figure was developed by a large academic medical center and shows the key roles of responders and their functional position centered on the patient. The figures provide a visual representation of responders and can assist other team members to notice if any members are absent, allowing someone to assume the role. The anesthesiologist and respiratory therapist deal with the airway and always stand at the head of the bed. The pharmacist and medication nurse stand at the code cart to prepare the medications. If the event is documented within the electronic medical record, the nurse or scribe who records the event will be at the computer.

Where do I stand diagram for code blue responders at Jones Medical Center. CPR represents three staff who alternate every 2 minutes. Code Whisperer supports code leader. Defibrillator is located on code cart, but is placed so code leader can view monitor screen at all times. If family present, they are supported by social worker, Clergy or nurse manager.

Notice on this figure (Corey, 2016) that there is also a role called the "code whisperer." This institution has a person assigned to support the leader. The institution is an academic facility, and often less senior and inexperienced staff may act as the leader in an emergency. The code whisperer may be a more senior or experienced staff member with a cognitive aid such as the AHA ACLS card, providing cues and protocols to the leader of the event.

Evidence-based practice! ACLS, BLS, and PALS are cognitive aids developed and updated every 5 years by the American Heart Association to assist a responder in life-threatening events such as cardiac arrest, choking, and pediatric emergencies (Merchant et al., 2020).

Healthcare Professional Consideration: Health Care providers, in their role in a response, collect data through assessment of the patient. It is imperative that pertinent data is shared with the leaders of the response so that timely decisions can be made incorporating all the data points.

Self-Assessment Quiz Question #9

"Where Do I Stand" is an example of a:
a. Cognitive aid.
b. Response algorithm.
c. Mnemonic device.
d. National response tool.

Fixation errors

Situational awareness, necessary for managing a crisis, requires the team to be cognizant of what is going on in the immediate environment. Fixation errors occur when a team member stalls on only one aspect or detail and may miss other pertinent data, and there is a failure to change the course of action without consideration of any new information (Fioratou et al., 2010). Fixation can be related to tasks or diagnosis (SWAPNet, 2018). There are three main types of fixation errors: *This and only this;* **Everything but this; and Everything is OK** (Ortega, 2018).

This and only this is the inability to see any other possible solutions to a situation except the one the person is doing. An example is when a leader may believe that the patient's symptom of desaturation is related to an airway issue (misplaced endotracheal tube) when the issue may be circulatory collapse. The interventions for these causes are very different. Time spent focused on the airway and reinserting a perfectly functioning airway while not focusing on the low perfusion and shock state could negatively affect the patient's outcome. Communication to the leader on new information is critical in preventing this type of fixation error (Ortega, 2018). This type of error can be avoided by the leader stating what they see as the cause or diagnosis during the state of the response updates and then allowing other respownders to provide input.

The **Everything but this** fixation error is when the responder pursues irrelevant data and does not choose the best course of action for the issue (Miller et al., 2014). An example is when, after inserting an endotracheal tube, the anesthesiologist meets resistance when ventilating the patient and explores the possibility of tube misplacement, rather than that of a foreign body, pneumothorax, or chest wall rigidity. The time spent reinserting the tube caused the patient to be hypoxic longer than necessary and delayed searching for the actual cause of the desaturation. This error is often seen when a provider has less experience in the presented situation. Communication among team members and asking the team for input allows the entire group to play a part in the decision-making on a course of action for this type of error.

The final type of fixation error is **Everything is OK**. This is when an abnormal finding is attributed to an artifact or the failure to recognize signs of deterioration (Fanning et al., 2013). For example, the vital sign finding of low oxygen saturation is attributed to a detached probe when the patient may be in

respiratory arrest or recycling the BP because no blood pressure was registered. Utilizing assessment data from multiple sources can prevent this error. For example, in this situation, a clinician should be assessing the respiratory rate and effort as well as using the cardiac/respiratory monitoring systems. All three of the fixation errors can cause delays in treatment and increased mortality and morbidity. Using team members for alternate solutions is one strategy in preventing or identifying fixation errors early. Another strategy is to conduct team training that includes examples of these errors in a simulated event and to have the team members practice the communication techniques of closed-loop, state of the response, and stop the line.

Evidence-based practice! Fixation errors are something that crisis responders want to avoid. A fixation error is failure to change course of action without considering any new information (Fioratou et al., 2010). There are three main types of fixation errors: The and only this; Everything but this, and Everything is OK (Ortega, 2019).

Self-Assessment Quiz Question #10

The fixation error of not being able to see any other possible solution to a situation is known as:
1. This and only this.
2. Everything but this.
3. Everything is OK.
4. Where Do I Stand?

SPECIALTY TEAM MEMBER ROLES

Nursing

There are multiple roles for nursing in a crisis. The role will depend on the situation, whether it is medical in nature or a response to an environmental issue. The roles in a medical response will be related to a nurse's professional scope of practice as designated by the Board of Registration in the state of practice. Nurses who practice at advanced levels, such as nurse practitioners, may function at the higher level as a licensed independent practitioner. Typical roles for the staff nurse in a hospital-based cardiac arrest response include the bedside nurse, medication nurse, scribe, and circulator. Nurses in outpatient facilities, school nurses, prison nurses, or nurses in extended-care facilities may be expected to carry out extended CPR and disaster management roles according to established protocols. However, limited resources in these environments do not allow nurses to function beyond their legal scope of practice.

The patient's nurse should always stay in the room with the patient. This nurse knows the patient's history, most recent baseline state before any change in status, and may also have a relationship with the patient and family and can offer the additional relevant information as a result. For example, in response to a suspected active acute stroke, the bedside nurse will likely know the last well time, what medications the patient is on, and when they last had something to eat or drink. This can also apply to the outpatient setting, where the staff member or family member who is most familiar with the person having an emergency remains at their side to detail the events leading up to the situation.

Medication administration is one major nursing role during a crisis. Medication administration is within the scope of practice for nurses under LIP orders. Nurses in this role must practice closed-loop communication and verbally read back to verify the order given and understand the typical medications they are administering. Nurses in outpatient settings will need to know common situations that may occur in their setting and what the institution has on hand to assist the patient. For example, in an outpatient day surgery setting, the nurses would be trained for anesthesia-related emergencies or post-operative recovery situations. They would be familiar with narcotic reversal medications and medicines used for airway situations under the direction of the anesthesiologist. All nurses who work in inpatient or outpatient areas where medications are administered should also be aware of the treatment for severe allergic reactions, common medications used for them, dosing, and administration methods.

As administrators of medication, nurses should be aware of the resources available for them in this role. Pharmacists are also resources for medication storage, preparation, dosing, and administration. Medication guidelines may be stored with the emergency equipment/go-bag or available links for online resources. Some institutions have internal medication guidelines for their code teams on the crash/code cart. Others rely on commercial resources like the Broselow tape, which lists by color and weight the medication doses and equipment sizes for pediatric patients (DeBoer et al., 2005) or the AHA's ACLS, PALS, NRP (Neonatal Resuscitation Program) algorithm cards.

The scribe documents all the care and data during an emergent situation, including the time of treatments, medications, actions, and other important information, such as vital signs and patient assessments. There is often a scribe during situations such as fire and environmental disasters where patients are evacuated. To accurately account for the safety of all patients, there must be a record of all patients leaving the impacted unit and arriving safely to the planned evacuation unit. The scribe in this situation will also document the departure and arrival of all personnel and visitors.

In hospital settings, the nursing leadership will fulfill the role of bed manager. For medical emergencies, they will ensure that the patient is in the unit to provide the correct level of care. For environmental emergencies, they may oversee the relocation of affected patients with respect to the patient's acuity and staff resources. Decisions for the transfer of patients that are necessary for internal or external disasters are made by nursing management. Immediate rescue of patients may be made by the nurse first responding.

Pharmacists and respiratory therapists

Another resource that may be available in the hospital setting for code responses is a pharmacist. When a pharmacist is a code team responder, there has been a reduction in medication errors during resuscitation (Bolt et al., 2015; Ferguson et al., 2019). Pharmacists should be comfortable using the emergent drug systems on the code/crash cart and have a familiarity with the preparation of emergency medications.

When a pharmacist is part of the stroke response team, their knowledge of the preparation and administration of tPa is useful to the quick response of treatment for the patient. Respiratory Therapists have a specialized role of assisting in maintaining a patent airway partnering with the anesthesiologist. They provide bag-mask ventilation, assist with endotracheal intubation and support.

Pharmacists and Respiratory therapists will need to know the standards and regulations of both the institution and state where practicing related to their specific role in responding to an emergency.

Case study #1

Sarah is a nurse working in a subacute care facility. She has been working there for slightly over one year. Today she has a typical patient assignment and has also assumed the charge nurse role of her 25-bed unit. She is working with two other nurses: Jane, an LPN studying for her RN license and Ken, a per diem RN employee; and three nursing assistants: Dotty, a long-term employee in the nursing assistant role; Jeanne, a new nursing assistant who started less than a month ago; and Helen, a nursing student who works per diem as a nursing assistant. It is the 11 p.m. to 7 a.m. shift on a weekend night. The patients are

all stable, and the shift has been uneventful so far. At around 3 a.m., there is a burning odor coming from the kitchen area on the unit. Helen yells out that the coffee maker is on fire and that the flames are all over the table in the middle of the room. She runs into the hall and leaves the kitchen door open.

As the charge nurse, Sarah knows that she has a lead role in this emergency and has responsibilities related to fires. She cannot remember the specifics of her responsibilities but recollects that there is a manual on the unit at the nurse's station that has the disaster plans. As she runs to the desk, the R.A.C.E mnemonic immediately comes to mind. The following dialogue starts among the team:

Sarah calls out to Helen: Is the fire small enough to use a fire extinguisher on?

Helen: No, it is all over the room.

Sarah: Helen, please shut the door.

Sarah: Can someone call 911? Let's all shut the patient doors.

Jane and Ken start running down the hall shutting doors. Dotty and Jeanne also start closing all the other doors. Sarah runs for the extinguisher. It is another minute before Sarah realizes that the call to activate 911 did not occur. At the same moment, Ken realizes that no one activated the fire alarm and pulls the alarm. Smoke is starting to fill the hallway near the kitchen.

Jane: Do you think we need to move the residents in the two rooms near the kitchen?

Sarah: I think we might need to. Where do we move them to?

Jeanne: In orientation, they told me that there is an evacuation route for each unit, and it should be located at the nursing station.

Dotty hears this and runs to get the evacuation plan.

The night supervisor arrives after hearing the fire alarm and, realizing that there is a fire, asks what the situation is. Sarah immediately tells the night supervisor that they smelled smoke and Helen noticed the fire in the kitchen. The fire was too big to extinguish, so they closed the doors to all the rooms and pulled the fire alarm. She explains that they were just deciding if they need to move the residents in the rooms near the kitchen and where to move them.

Question:
What actions in the above scenario would be classified as components of CRM?

Discussion:
The scenario in the case study included the following components of CRM:

- **Leadership**: Sarah realized that she was the charge nurse and had a role as leader in situations such as a fire on the unit per the institution protocol.
- **Role assignment**: Sarah was aware as the charge nurse/ leader that she needed to make sure that certain roles were filled to complete the necessary tasks. She assigned Helen to close the door to the kitchen, and asked that other tasks be attended too, such as calling 911 and shutting patient doors.
- **Communication**:
  - ***Closed loop***: Sarah initiated closed loop communication with Helen, asking her specifically if the fire was too large for the extinguisher, and, based on her response, assigning her the additional task of closing the kitchen door.
  - ***State of the union***: Sarah demonstrated a state of the union communication when she filled the nursing supervisor in on what actions had occurred up to that point in a succinct manner.
- **Resource allocation**:
  - ***Cognitive aids***: Sarah remembered that there were resources available for her to use during this type of emergency. She remembered that there was a manual for fires, the R.A.C.E. mnemonic, and Jeanne mentioned there was an evacuation plan for the unit.
  - ***Human resources***: Sarah delegated tasks and assessments to all the members of her team that were present during the emergency.
- **Situational awareness**: Sarah was aware that there was a situation and she needed to be a leader, assigning tasks and anticipatory planning for further escalation (need for evacuation of certain residents). She used data given to her from the team members — the inability to contain the fire and the potential risk to some of the patients located close to the fire – to further her decision-making.

Question:
What could have been done differently in the above scenario to improve the response to the emergency?

Discussion:
Areas for improvement based on the different components of CRM:

- **Leadership**: Sarah realized she was the leader, but she did not explicitly state this to her coworkers, who had varying levels of experience and may not have been aware that the charge nurse assumed leadership during an on-unit crisis.
- **Role assignment**: Sarah assigned Helen a specific role, and herself the role of getting the fire extinguisher. She should have delegated this to a team member. She did not explicitly state who should call 911 or shut all the patient doors, and her staff responded by all moving to close doors and no one called 911. She also did not assign anyone to pull the fire alarm, which may have alerted internal responders sooner. Without naming a specific person to carry out an important task, the task may not be completed at all or in a timely manner.
- **Communication**:
  - ***Closed-loop***: Sarah should have used closed-loop technique to ensure her role assignment was conveyed. By making eye contact or asking the person if they understood her ask, the loop would be closed. Any person completing a task must close the loop by stating that the task is completed. Sarah also should have verified, verbally, that someone called 911 if she did not get confirmation from the person assigned.
  - ***State of the union***: If Sarah had done a brief state of the union with her staff earlier, she likely would have realized more quickly there was an evacuation plan for the unit. She should have asked at the end of the state of the union, "Does anyone have anything to add?" Jeanne would have then mentioned the evacuation plan.
- **Resource allocation**:
  - ***Cognitive aids***: The institution where this fire occurred had a mnemonic tool (cognitive aid) to follow in case of a fire.
  - ***R.A.C.E.***: The R stands for Remove or Rescue. There was no one in the room of the fire to remove or rescue. However, nearby patients and those with respiratory compromise may need evacuation. A is for activation. Sarah did ask for activation – calling 911 – but did not assign someone which resulted in a delay, and she did not assign anyone to pull the fire alarm. C is for contain. Sarah did have Helen contain the fire to the kitchen by closing the door. E is for extinguish/evacuation. The decision that the fire was too large to extinguish was explored and made early. Sarah was in the process of deciding on evacuation when the supervisor arrived, discussing the need to move some at-risk residents with Jeanne and Dotty and remembering and obtaining the evacuation plan (cognitive aid).
  - ***Equipment***: In this scenario, specific equipment that team members would need to know how to use include timely use of the fire extinguisher, knowledge of the different types and when to deploy and use the correct one. The fire was considered too large for a fire extinguisher, but Sarah ran for the extinguisher later in

her response. Also, how to activate help for a fire, by locating and pulling the fire alarm.
    - ***Human resources***: Sarah did not immediately call for the internal human resource available to her – the nursing supervisor who has expertise to help her make decisions.
- ***Situational awareness***: As the leader, Sarah needed to be aware of a lot of information. She needed to free herself from task completion which distracted her from noticing changes in the situation and adapting as needed to ensure safety on the unit. An actual fire in a health care institution is a low volume high acuity event. All staff should participate in drills and review their role in such an event.

Case study #2

Theresa is a nurse on a medical surgical unit in a community hospital. She has been a nurse for over three years and only recently started working at this hospital. She has been trained in BLS and ACLS. She is working with three other nurses and two nursing assistants. On this weekend day shift, the hospitalist just arrived on the unit to see a patient that Theresa's coworker, Liz, is worried about.

Liz's patient is an elderly woman with pneumonia and heart disease. She has had increased work of breathing and her oxygen saturation has dropped to 90% on 2 liters by nasal cannula. Before the physician gets to the room, Liz calls out that her patient is unresponsive.

Theresa tells the unit coordinator to call a code blue and grabs the crash cart on her way to the room. She tells John, the nursing assistant, to remain on the floor and direct the response team to the patient's room when they arrive, and then to answer any call lights from other patients.

When she gets to the room, Liz is performing cardiac compressions and telling the physician that the patient desaturated as low as 68% and was gasping right before she became unresponsive and pulseless. The physician has his ACLS card open in his hand to refer to.

He verbally states that he will be in charge, and then asks Theresa to prepare epinephrine and the defibrillator. Theresa tells the other nurse, Jo, to put the backboard under the patient and then place the defibrillator pads on the patient.

Some of the responding code team members enter the room (ICU MD, pharmacist, and medical students). The physician leader begins directing code team members. He points to the medical ICU MD and says, "Can you assess the pulse and monitor the heart rhythm as soon as the defibrillation pads are attached?" The ICU MD nods assent. He then points to the first medical student and says, "Can you relieve the RN and continue compressions, changing at least every 2 minutes?" The medical student states he will. The physician then addresses Liz. "Liz, can you document please?" Lastly, he speaks to the second medical student. "Can you relieve the other med student as needed in administering compressions?"

The respiratory therapist (RT) and anesthesiologist arrive in the room.

***MD leader**: "Can you, Respiratory and Anesthesia, secure the airway and manage ventilation?"*

RT confirms task assignment heard with a nod at the leader.

Anesthesiologist: "What is the patient history and situation?"

***MD leader**: "The patient is 80 years old with worsening respiratory distress and became unresponsive and pulseless. Compressions were started. We are approaching 2 minutes. We will assess rhythm and defibrillate if necessary and administer epinephrine. Does anyone have anything to add?"*

No one adds anything. Jo places pads on the patient and turns on the defibrillator.

***MD leader**: "Two minutes. Let's pause compressions and switch compressors."*

***MD leader** (speaking to the ICU MD monitoring the patient's pulse): "Is there is a pulse?"*

***ICU MD**: "There is still no pulse."*

***MD leader** (looking at the defibrillator screen): "The rhythm indicates VF. Please prepare to defibrillate. Resume compressions."*

Jo turns the defibrillator to manual mode and asks the MD leader: "How much do you want me to set the defibrillator for?"

***MD leader**: "200 joules. Pharmacy and Theresa can you prepare 1 mg of epinephrine (1 mg/10mL) for IV push?" I also want to prepare a dose of Amiodarone.*

***Jo**: "Defibrillator is ready to deliver. Do you want me to proceed?"*

***MD leader**: "Yes, clear the patient and deliver the shock."*

***Jo** (delivers shock): "Clear please, shock was delivered."*

Liz documents the time of shock.

***MD leader** (to med student): "Please continue compressions."*

The nursing supervisor arrives and states that she will work on obtaining an ICU bed. The anesthesiologist and respiratory therapist are having a whispered discussion at the head of the bed. The anesthesiologist is having trouble seeing the vocal cords and placing the endotracheal tube. He is getting ready to make a third attempt. The RT ventilates the patient between attempts. The MD leader notices that there is a conversation between the two and asks the RT if there is a problem. The anesthesiologist then states that he is having difficulty securing an airway.

The MD leader asks RT to continue bag mask ventilations after clarifying that bag mask ventilations are effective. The leader then asks the ICU MD if he would be able to attempt to intubate the patient if needed, should resuscitation continue. The ICU MD responds that he can attempt if needed.

The pharmacist and Theresa are also having a conversation at the code cart on the dose of epinephrine. They refer to the guidelines of ACLS medications located on the crash cart for dosing. The pharmacist then prepares the epinephrine bristojet for administration. The pharmacist hands the prepared epinephrine to Theresa stating that it is 1mg in 10 ml for IV push. Theresa then states that she has 1 mg of 1mg/10mL epinephrine ready to administer. MD states to administer the epinephrine dose. Theresa administers, and states "epinephrine 1 mg administered." Liz documents the time administered. One and half more minutes pass. The MD leader asks the compressor to pause and assesses the cardiac rhythm. "There is return of spontaneous circulation evidenced by a pulse," states the MD on pulse. Rhythm is stated to be bradycardia at a rate of 50. The MD leader then says, "Let's stabilize and see if we can get this patient into the ICU."

Question

What examples of communication were demonstrated in this case study?

Discussion

Communication techniques demonstrated:

- **Closed-loop communication**: This was effectively demonstrated throughout the case study. The MD leader, Pharmacist and Theresa demonstrated this during the entire process of epinephrine preparation and administration. It was also demonstrated in the defibrillation sequence when the MD leader was in communication with Jo.
- **State of the union**: The MD leader used this technique to summarize the situation after members of the response team arrived and the anesthesiologist inquired about what was occurring. In addition, the MD leader included an ask from the team for additional input. Later in the case study, the MD leader again summarized a brief statement of current situation and what the plans were going forward.

- **Collateral communication**: There was an example of collateral communication between the RT and the anesthesiologist. Their conversation about the inability to secure the airway was important to the overall care of the patient. This needed to be shared with the MD leader. The MD leader demonstrated situational awareness in that he was aware that the anesthesiologist had not confirmed a secure airway and there was a discussion occurring at the head of the patient's bed. Theresa and the pharmacist also had a conversation, but the MD leader did not need to be involved as they were utilizing cognitive aids to solve their dilemma of dosing of the Epinephrine. If the medication had been needed, they would need to ask in closed loop format the dose required from the MD and then dose prepared before administration for verification by the leader.

Question
What other team roles were demonstrated in this case study?

Discussion
Other Team roles demonstrated in the case study:
- **Anesthesiologist**: Secured the airway through endotracheal tube placement in collaboration with the Respiratory Therapist.
- **Respiratory Therapist**: maintained the airway providing ventilation.
- **Bedside nurse**: Liz, the nurse caring for the patient, filled this role and appropriately remained in the room, and performed cardiac compressions.
- **Medication nurse**: Theresa filled this role and prepared and administered the epinephrine.
- **Pharmacist**: Assisted in preparation of medication and as a resource for doses of medication.
- **Circulating nurse**: Jo filled this role. She placed the patient on the backboard and prepared the patient for defibrillation. She also administered the electrical shock.
- **Scribe**: This role was filled also by Liz. She documented the situation by recording times of treatments, and medications that were administered throughout the code.
- **Bed manager**: The nursing supervisor facilitated obtaining a bed for the patient in a higher level of care to which the patient would be transferred following the resuscitation.

Question
What are some other examples of CRM other than communication demonstrated in the case study?

Discussion
Other examples of CRM within the case study:
- **Identification of a leader**: The MD leader assumed the role and stated out loud that he was assuming this role; he also communicated this with all staff responding to the emergency response call.
- **Role assignment**: Some team members began assuming tasks while others were directed to tasks. Liz started with compressions but was relieved of this role when more staff responded to the situation. The MD acknowledged that as an RN, Liz's talents may be better utilized elsewhere on the team. The MD leader assigned other less skilled members (medical students) to assist with the compressions. The RT and anesthesiologist fulfilled the task of maintaining the patient's airway as appropriate to their clinical skill set. The MD leader potentially reassigned airway management to the ICU MD as needed when he was aware of complications. Theresa also assigned roles by asking Jo to place a backboard under the patient and place defibrillator pads on the patient. Theresa also assigned the unit coordinator to guide the responding team members and asked the nursing assistant to call a code and monitor patient call lights. The pharmacist assumed a role at the code cart in preparation of medications.
- **Cognitive aids**: The MD leader was using an ACLS evidence-based algorithm card as a cognitive aid to guide his management of the situation and all interventions. The pharmacist and Theresa used an emergency medication guideline for dose verification.
- **Situational awareness**: The MD leader did not perform any tasks but maintained close observation of all activities taking place including the patient's status throughout. He used clear communication and noticed when the airway team was having an issue. He anticipated that there may be a need for another form of action, by asking the ICU MD if he was able to secure the airway if needed. The MD leader or the anesthesiologist could have become fixated on the failed intubation attempt but did not. The MD leader remained focused on the next timely steps by asking Liz if she was ready to administer epinephrine and the next 2-minute pulse check.

Conclusion

Crisis resource management is a concept that all healthcare providers should understand and know when and how to employ its elements during an emergency. This concept has been adapted and refined from other industries to provide a framework for effective and efficient management of crisis situations. Healthcare providers are often responders in medical emergencies and environmental disasters, and knowledge of CRM behaviors is vital for safe practice and efficient responses. Healthcare providers can serve as responders to an event as team members and team leaders. The ability to effectively communicate data, instructions, and delegation of tasks is a priority in ensuring minimal adverse outcomes and patient safety. The healthcare provider should understand the CRM components such as delegation, resource utilization, effective communication techniques, and the use of cognitive aids. They should be aware of the protocols, policies, and procedures for emergency responses in any care setting in which they work. Training and practice drills on how to respond to an emergency using the CRM framework helps prepare all care team members to respond to emergencies and maximize patient safety and outcomes.

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Self-Assessment Answers and Rationales

1. The correct answer is C.
Rationale: Most aviation disasters were related to human error in communication, situation awareness, delegation, and managing workload.

2. The correct answer is A.
Rationale: Role clarity is necessary to organize the team and minimize chaos.

3. The correct answer is C.
Rationale: The leader's only responsibility should be leading the situation; when the leader's attention is divided, crucial details can be missed.

4. The correct answer is B.
Rationale: Many institutions have multiple levels of assistance available and calling for the most appropriate level of help at the right time leads to the best patient outcomes.

5. The correct answer is C.
Rationale: Stop the line allows all responders to have opportunities to alert the team to issues and pause actions for clarification.

6. The correct answer is D.
Rationale: Responders involved in discussions during an emergency need to assess the importance of their conversation. They should only share information that is relevant for the leader to be aware of and that can impact the situation and eventual outcome.

7. The correct answer is D.
Rationale: Resource allocation is the knowledge of resources available in an emergent event and the internal protocols, such as internal responses to a fire and how to use the equipment.

8. The correct answer is B.
Rationale: Dynamic decision-making is a process where an individual makes informed decisions based on an awareness of the situation, implementing the resources available and supported in knowledge by cognitive aids.

9. The correct answer is A.
Rationale: The "Where do I Stand" is an institutional internal cognitive aid that assists cardiac event responders in knowing where they should stand so that the leader is aware of their role and discipline.

10. The correct answer is A.
Rationale: The thought that the issue causing the situation can only be attributed to one specific cause and no other cause is explored, potentially causing delay in interventions.

Nursing Assessment, Management and Treatment of Autoimmune Diseases

6 Contact Hours

Release Date: March 3, 2022

Expiration Date: March 2, 2025

Faculty

Author: Adrianne E. Avillion, DEd, RN, is an accomplished nursing professional development specialist and published healthcare education author. She is the owner of Strategic Nursing Professional Development, a business devoted to helping nurses maintain competency and enhance their professional growth and development. Dr. Avillion earned her doctoral degree in adult education and her MS from Penn State University, along with a BSN from Bloomsburg University. She has served in various nursing roles over her career in both leadership roles and as a bedside clinical nurse. She has published extensively and is a frequent presenter at conferences and conventions devoted to the specialty of continuing education and nursing professional development.

Adrianne E. Avillion has disclosed that she has no significant financial or other conflicts of interest pertaining to this course.

Reviewer: Mary C. Ross, PhD, RN, is an experienced nursing educator with substantial clinical experience in multiple areas of nursing including medical/surgical nursing and community health. She is a retired Air Force flight nurse and has extensive experience as an administrator and graduate faculty member, teaching advanced practice nurses.

Mary C. Ross has disclosed that she has no significant financial or other conflicts of interest pertaining to this course.

Course objective

Almost 4% of the world's population is affected by one of more than 80 different autoimmune diseases. In the United States (US), as many as 50 million Americans are living with an autoimmune disease, at a cost of $86 billion a year (National Stem Cell Foundation [NSCF], 2021).

This education program provides information on autoimmune diseases with the purpose of adding to the nurse's ability to recognize, assess, and facilitate treatment of such diseases.

Learning objectives

Upon completion of this course, the learner should be able to:

- Discuss the incidence and prevalence of common autoimmune diseases.
- Describe the pathophysiology of common autoimmune diseases.
- Initiate appropriate assessment of patients affected by common autoimmune diseases.
- Explain diagnosis and treatment options for common autoimmune diseases.
- Identify nursing interventions important to the care of patients living with common autoimmune diseases.

How to receive credit

- Read the entire course online or in print which requires a 6-hour commitment of time.
- Complete the self-assessment quiz questions either integrated throughout or all at the end of the course. These questions are NOT GRADED. The questions are included to help affirm what you have learned from the course. The correct answer is shown after the question is answered. If the incorrect answer is selected, a Rationale for the correct answer is provided.
- Depending on your state requirements you will then be asked to complete either:
  - An affirmation that you have completed the educational activity.
  - A mandatory test (a passing score of 70 percent is required). Exam questions link content to the course learning objectives as a method to enhance individualized learning and material retention.
- If requested, provide required personal and payment information.
- Complete the MANDATORY Course Evaluation.
- Print your Certificate of Completion

CE Broker reporting

Colibri Healthcare, LLC provider # 50-4007, reports course completion results within 1 business day to CE Broker. If you are licensed in Arkansas, District of Columbia, Florida, Georgia, Kentucky, Michigan, Mississippi, North Dakota, New Mexico, South Carolina, or West Virginia, your successful completion results will be automatically reported for you.

Accreditations and approvals

Colibri Healthcare, LLC is accredited as a provider of nursing continuing professional development by the American Nurses Credentialing Center's Commission on Accreditation.

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Activity director

Shirley Aycock, DNP, RN, Executive Director of Quality and Accreditation

Disclosures

Resolution of conflict of interest
In accordance with the ANCC Standards for Commercial Support for continuing education, Colibri Healthcare, LLC implemented mechanisms prior to the planning and implementation of the continuing education activity, to identify and resolve conflicts of interest for all individuals in a position to control content of the course activity.

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Course verification

All individuals involved have disclosed that they have no significant financial or other conflicts of interest pertaining to this course. Likewise, and in compliance with California Assembly Bill No. 241, every reasonable effort has been made to ensure that the content in this course is balanced and unbiased.

INTRODUCTION

Autoimmune diseases are typically chronic conditions that often present with non-specific symptoms. Therefore, it may be a good deal of time before patients are diagnosed and properly treated. Living with a chronic condition can be burdensome as providers and patients work together to find the optimal treatment and promote the ideal quality of life. As autoimmune conditions can present differently and patients may react in various ways to medication options, treatment plans vary from patient to patient. This education program provides information on autoimmune diseases with the purpose of adding to the nurse's ability to recognize, assess, and facilitate treatment of such diseases.

INCIDENCE AND PREVALENCE

An estimated four percent of the world's population is affected by one of more than 80 different autoimmune diseases. In the United States, autoimmune diseases are the third most common cause of chronic illness. The National Institutes for Health (NIH) reports that autoimmune diseases affect between five and eight percent of the population. The prevalence of autoimmune diseases is increasing. However, the reason for this increase is not yet known (NSCF, 2021).

About 50 million Americans are living with an autoimmune disease at a cost of $86 billion a year. Autoimmune diseases affect women three times as often as men. In fact, the Office of Research on Women's Health at the NIH has named autoimmunity a major women's health issue. These types of diseases are the fourth largest cause of disability in women in the US and they are the eighth leading cause of death for women between the ages of 15 and 64 (NSCF, 2021).

Self-Assessment Question 1

When discussing autoimmune diseases with a female patient, the nurse should explain that:

a. Autoimmune disease affects males and females equally.
b. In the US, autoimmune diseases are the third most common cause of chronic illness.
c. About 25 million Americans are living with an autoimmune disease.
d. Autoimmune diseases are the third largest cause of disability in males.

COMMON AUTOIMMUNE DISEASES

An autoimmune disease develops when the body's immune system mistakes its own healthy tissues as foreign substances and attacks these tissues. Most autoimmune diseases cause inflammation that can affect many parts of the body (National Cancer Institute, n.d.). Autoimmune diseases tend to run in families and affect various races and ethnicities differently (National Cancer Institute, n.d.; NSCF, 2021).

Autoimmunity appears to be increasing in the US according to scientists at the National Institutes of Health (2020) and their collaborators. The most common biomarker of autoimmunity was found to be increasing generally in the US, especially in males, non-Hispanic Whites, adults 50 years of age and older, and adolescents.

The reasons for these increases have not been definitely identified but they suggest a possible increase in future autoimmune diseases.

Some of the most common autoimmune diseases include the following (Messenger, 2021; NSCF, 2021):

- Alopecia Areata.
- Celiac Disease.
- Crohn's Disease.
- Diabetes Type 1.
- Multiple Sclerosis (MS).
- Rheumatoid Arthritis (RA).
- Lupus.
- Scleroderma.
- Psoriasis.
- Ulcerative colitis.
- Vitiligo.

Alopecia areata

Alopecia areata is a chronic disorder that affects anagen hair follicles and causes non-scarring hair loss. The disorder occurs throughout the world. Its estimated prevalence is about one in 1,000 people, with a lifetime risk of approximately two percent. The disorder occurs at similar rates in males and females and affects both children and adults. The mean age for diagnosis of alopecia areata is 32 years in males and 36 years in females (Messenger, 2021).

Pathophysiology

Alopecia areata is an autoimmune disease. Cells of the immune system surround and "attack" hair follicles, which causes the attached hair to fall out. The greater the number of hair follicles attacked by the immune system, the greater the loss of hair. Although hair loss occurs, hair follicles are rarely destroyed (American Academy of Dermatology Association (AAD), 2021a).

Anyone can develop alopecia areata. There are, however, some people who are at greater risk for its development (AAD, 2021a):

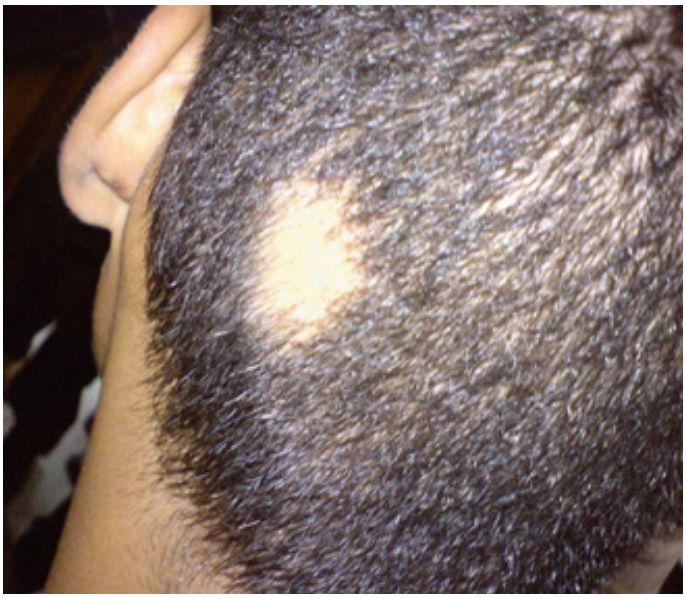
- An estimated 10% to 20% of people with alopecia areata have a family member with the disorder. The actual percentage may be much higher since many people try to hide hair loss.
- People who have asthma, hay fever, atopic dermatitis, thyroid disease, vitiligo, or Down syndrome are at higher risk for developing the disease.
- People with cancer who are being treated with various chemotherapeutic drugs are at risk for hair loss. Hair generally regrows after treatment is completed.

Assessment

Alopecia areata most typically causes discrete, smooth patches of hair loss on the scalp (see Figure 1). Hair loss may also occur in other areas of the body, such as eyebrows, eyelashes, beard, and extremities. Severe disease may lead to the loss of all scalp hair (alopecia totalis) or of all body hair (alopecia universalis; AAD, 2021a).

In addition to the physical findings, a complete health history needs to be obtained. Emphasis is on current state of health, medications being taken, and any risk factors that are in evidence. A mental health assessment is also an important part of any assessment process (AAD, 2021a).

Figure 1. Alopecia areata



Note. Andrzej. (2011). Alopecia areata.JPG https://commons.wikimedia.org/wiki/File:Allopecia_areata.JPG

Diagnosis and treatment

Diagnosis is based on patterns of hair loss, history, and physical findings. It is important to rule out other autoimmune disorders (AAD, 2021b).

Treatment in Persons Less than 10 Years of Age. Treatment depends on age, the amount of hair loss, and the location of the hair loss. In children 10 years of age and younger, treatment may be initiated to help hair regrowth. Pharmacological interventions include the following (AAD, 2021b):

- **Corticosteroids**: Prescription-strength corticosteroids may be applied to sites of hair loss. Corticosteroids may be applied once or twice a day. For children, corticosteroids alone may be effective in promoting hair growth.
- **Minoxidil**: Minoxidil (Rogaine) can help to maintain regrowth after corticosteroids are discontinued.

Treatment in Persons over 10 Years of Age. If there are only a few patches of alopecia areata, one or more of the following treatments may be initiated (AAD, 2021b):

- **Injection of corticosteroids**: Corticosteroids are injected into bald areas every 4 to 8 weeks.
- **Application of minoxidil (Rogaine)**: The medication is applied to bald spots once or twice a day as prescribed. It is useful when bald spots are over the scalp, beard area, and eyebrows.
- **Application of anthralin**: This medication is applied to bald spots, allowing it stay on the skin for as long as prescribed, and then it is washed off. Skin irritation is expected. Using anthralin in conjunction with minoxidil is prescribed for most effective results.

If eyelashes are affected, false eyelashes or wearing glasses helps to make hair loss less apparent. The use of bimatoprost or similar medications has been approved, in addition to glaucoma treatment, to help eyelashes grow longer (AAD, 2021b).

For eyebrow loss, "stick-on" eyebrows or semi-permanent tattoos may be used. A dermatologist may also inject intralesional corticosteroids in conjunction with the application of minoxidil (AAD, 2021b).

If hair loss is rapid and extensive, the following interventions may be used (AAD, 2021b):

- **Topical immunotherapy**: This intervention is designed to alter the immune system so that it stops attacking hair follicles. Treatment is typically implemented on a weekly basis.
- **Methotrexate**: This medication may be prescribed when other treatments fail to be effective.

Nursing consideration: Methotrexate is also used to treat leukemia and various malignancies including cancers of the breast, skin, head, neck, lung, or uterus. It is also used to treat severe psoriasis and rheumatoid arthritis in adults. Methotrexate can cause serious, even fatal, side effects (Entringer, 2020). Such side effects include bone marrow, liver, lung, and kidney toxicities, soft-tissue necrosis, osteonecrosis, severe bone marrow suppression, aplastic anemia, gastrointestinal toxicity, hemorrhagic enteritis, and intestinal perforation (Comerford & Durkin, 2021).

- **Corticosteroids**: Taking corticosteroids for about 6 weeks may help hair growth in the presence of widespread alopecia areata.
- **Janus kinase (JAK) inhibitors**: These types of medications may treat extensive hair loss. Examples include tofacitinib, ruxolitinib, and baricitinib.
- **Wigs, hairpieces, or scalp prosthesis**: Use of these items may cover up hair loss.

Nursing Interventions

Nurses are typically involved in patient/family education. They take a lead role in education regarding accurate medication administration, adherence to treatment regimen, and psychosocial support. In the case of patients who are dealing with alopecia areata, body image changes may have

psychological consequences, therefore, mental health is an aspect of care that nurses must assess.

Although the symptoms of alopecia areata typically do not cause physical pain, psychological pain may become a serious problem (National Alopecia Areata Foundation, n.d.).

Evidence-based practice! An analysis of U S hospitalizations found that alopecia areata patients are at risk for anxiety disorders, attention-deficit hyperactivity disorder, dementia, mood disorders, personality disorders, and suicide or intentionally self-inflicted injury. It was unclear if psychological stress might cause or exacerbate alopecia areata, or whether alopecia areata can lead to or worsen mental health disorders (Singam et al., 2018).

A diagnosis of alopecia areata in children can be just as, or even more, upsetting for parents. Parents of these children have reported that they feel a sense of "guilt" as though they had somehow contributed to the development of the disease or cannot stop its progression (National Alopecia Areata Foundation, n.d.).

Parents (and other caregivers) are urged to avoid being overly protective or permissive with their children. They should identify a support network to help them manage stress. Parents are also encouraged to speak directly to their children about their alopecia areata and urge the children to talk about their feelings about living with alopecia areata (National Alopecia Areata Foundation, n.d.).

Children with alopecia areata are at risk for emotional distress, anxiety, depression, and sadness. Children may not be able to describe their feelings, so it is important to teach parents and other family members/caregivers how to recognize depression and anxiety. Symptoms of depression in children include the following (National Alopecia Areata Foundation, n.d.):

- Sadness and/or irritability.
- Not wanting to participate in "fun" activities that were enjoyed in the past.
- Changes in eating patterns.
- Changes in sleep patterns.
- Changes in energy patterns.
- Having a hard time paying attention.
- Feelings of worthlessness, uselessness, and/or guilt.
- Exhibiting self-destructive behavior.

Symptoms of anxiety in children include the following (National Alopecia Areata Foundation, n.d.):

- Excessive fearfulness or worry.
- Irrational anger.
- Trouble sleeping.
- Physical symptoms including fatigue, headaches, and stomach aches.

Children are also at risk for bullying. Examples of bullying behaviors that affect children with alopecia areata include the following (National Alopecia Areata Foundation, n.d.):

- Pulling head coverings from the child's head.
- Verbalizing insults about the child's appearance.
- Telling others about the child's alopecia and making deliberate attempts to humiliate and embarrass the child.

Evidence-based practice! Results from a study of 80,000 students showed that 25% of participants reported having been bullied. Results also showed a significant disconnect between teachers' perceptions and what their students say is happening in their schools (Stringer, 2016).

To combat bullying, the National Alopecia Areata Foundation offers the following suggestions for parents and other caregivers as they work to help their children who are being bullied (National Alopecia Areata Foundation, n.d.):

- Help children to understand and identify bullying behaviors.
- Encourage open communication, check in with the children frequently, and listen/observe closely to what children are saying and doing.
- Encourage children to participate in enjoyable activities to foster confidence.
- Model treating other with kindness and respect.
- Speak to school officials and leaders of extra-curricular activities about bullying and how to stop it.
- Provide information about how to deal with bullying such as leaving the bullying situation if possible, telling the bully (calmly) to stop the bullying, controlling emotions (avoiding showing fear or anger, which may increase the bullying), and do not try to bully the person(s) who is doing the bullying (this only perpetuates the cycle of bullying).

When working with patients who are dealing with alopecia areata nurses have a responsibility to work with patients and families as they attempt to navigate the mental health issues that often accompany the disease. They should be prepared to discuss these issues and intervene effectively.

Case Study: Mr. Nathan Lacy

Nathan has recently been diagnosed with alopecia areata. He has a few patches of alopecia over his scalp and is distressed over his hair loss. There is no hair loss of eyebrows or other facial hair. At 28 years of age, Nathan says, "I never thought I'd be going bald at my age!" The nurse practitioner, who is Nathan's primary healthcare provider, assures him that there are treatment options for alopecia areata.

Question:
What treatment options are available to Nathan?

Discussion:
There are several treatment options for Nathan. Treatment varies according to age and the amount of hair loss. Nathan is over 10 years of age and has only a few patches of alopecia. Corticosteroids may be injected directly into the bald areas every 4 to 8 weeks. Topical medications that are available are minoxidil (Rogaine) and/or anthralin. Minoxidil is applied to the bald spots once or twice a day.

Anthralin is applied to bald spots and left on the skin for a prescribed amount of time, after which it is washed off. Patients should anticipate skin irritation when using anthralin. Treatment is most effective when these drugs are used together.

Nathan also needs to receive emotional support. He has already told his nurse practitioner that he is distressed about his hair loss. Research shows that people who have alopecia areata are at risk for a variety of mental health issues including anxiety disorders, mood disorders, and personality disorders. A mental health assessment is very important as is ongoing observation and professional mental health consultation as needed.

Celiac disease

Celiac disease, also referred to as celiac sprue or gluten-sensitivity enteropathy, is an immune reaction to eating gluten, which is a protein found in wheat, barley, and rye (Mayo Clinic, 2020a). An estimated one in 100 people throughout the world are affected by celiac disease. Two and one-half million Americans are undiagnosed and at risk for long-term health-related complications (Celiac Disease Foundation, 2018; Celiac Disease Foundation, 2021).

A recent meta-analysis and review of studies from throughout the world showed that the world-wide prevalence of celiac disease is an estimated 1.4% based on blood tests, and 0.7% based on the results of biopsies. The prevalence was higher in females than males and was significantly higher in children compared to adults (Celiac Disease Foundation, 2018).

Evidence-based practice! Research shows that celiac disease typically becomes evident between the ages of 6 and 18 months after gluten-containing foods are introduced into the diet (Meadows-Oliver, 2019). Therefore, parents should be taught to carefully observe their children for symptoms of the disease during this period of time.

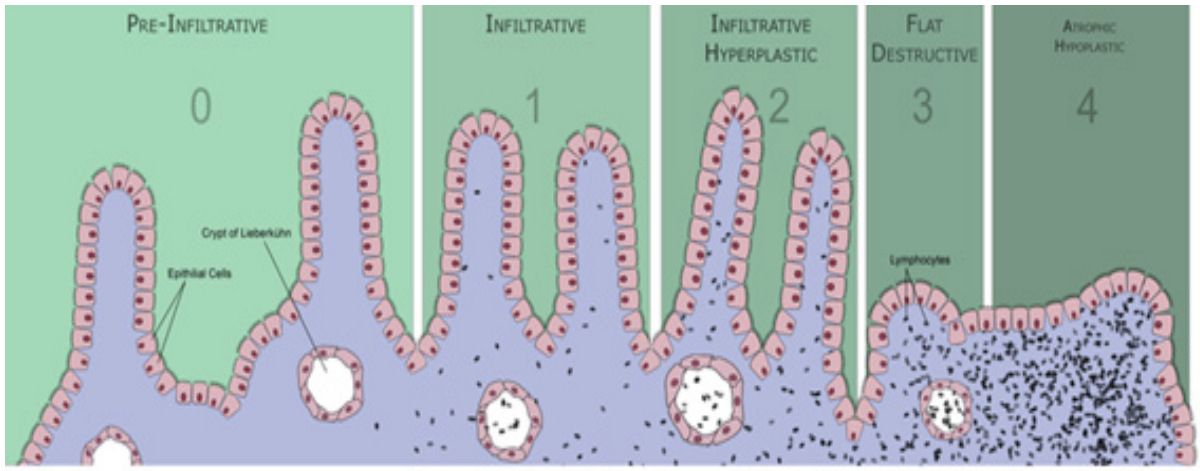
Pathophysiology
When people with celiac disease ingest gluten, the immune system responds and attacks the cells of the small intestine. Eventually the villi of the small intestine are damaged. Villi are the projections that line the small intestine and facilitate the absorption of protein (Celiac Disease Foundation, n.d.).

Nursing consideration: Celiac disease cannot be prevented, but adherence to a strict gluten-free diet may stop and reverse small intestine damage (My Health Alberta, 2021).

Figure 2 illustrates the various stages of celiac disease. These stages can be explained as follows (Celiac Disease Foundation, n.d.; Goebel, 2019):

- **Stage 1**: Pre-infiltrate. There is an increased percentage of intraepithelial lymphocytes (>30%).
- **Stage 2**: Infiltrative hyperplastic. This stage is characterized by the presence of inflammatory cells and crypt cell (which act as immunoglobulin receptors) proliferation while preserving the architecture of the villa.
- **Stage 3**: Flat destructive. Stage 3 is characterized by villous atrophy progressing from mild to total atrophy.
- **Stage 4**: Atrophic hypoplastic. Stage 4 is characterized by total mucosal hypoplasia.

Figure 2. Upper Jejunal Mucosal Immunopathology



Note. From Wikipedia Commons, 2020.

Nursing consideration: Dermatitis herpetiformis (DH) is an itchy, bumpy rash commonly found in people with celiac disease. DH causes blisters that resemble herpes, but they are associated with celiac disease. The antibody produced by the intestines in the presence of celiac disease, called IgA, can enter the bloodstream and accumulate in blood vessels under the skin. This causes the DH rash (Nazario, 2020).

Risk Factors. There several risk factors associated with celiac disease. These include the following (Mayo Clinic, 2020a):

- Having a family member with celiac disease or dermatitis herpetiformis.
- Having type 1 diabetes.
- Having Down syndrome or Turner syndrome.
- Having autoimmune thyroid disease.
- Having microscopic colitis.
- Having Addison's disease.

Complications. Celiac disease can lead to several complications, especially if it is untreated. These complications include the following (Mayo Clinic, 2020a):

- **Malnutrition**: Malnutrition occurs if the small intestine is unable to absorb adequate amounts of necessary nutrients. In children, untreated malnutrition can slow growth and shorten stature.
- **Weakening of bones**: Failure to absorb calcium and vitamin D may lead to osteomalacia (softening of the bone) in children. It may cause loss of bone density, referred to as osteopenia or osteoporosis.
- **Infertility and miscarriage**: Inability to absorb calcium and vitamin D may cause fertility issues and pregnancy complications.
- **Lactose intolerance**: The small intestine damage may cause abdominal pain and diarrhea after consuming dairy products that contain lactose.
- **Malignancy**: If persons affected by celiac disease fail to adhere to a gluten-free diet, they are at higher risk for the development of cancers such as intestinal lymphoma and small intestine malignancy.
- **Nervous system issues**: Celiac disease is associated with issues such as seizures or peripheral neuropathy.

Types of Celiac Disease that Fail to Respond to Treatment. There are two forms of celiac disease that do not respond to traditional treatment.

Nonresponsive Celiac Disease. Some patients do not respond to what they believe is a gluten-free diet. This problem is typically because patients continue to consume food and drink that contain gluten. A dietary consult is needed to help these types of patients completely eliminate gluten form their diets. People with nonresponsive celiac disease might have bacterial overgrowth in the small intestine, pancreatic insufficiency, irritable bowel syndrome (IBS), microscopic colitis, or trouble digesting sugars such as lactose, sucrose, and/or fructose (Mayo Clinic, 2020a).

Refractory Celiac Disease. In some rare cases, patients fail to respond to treatment even when adhering to a strict gluten-free diet. This failure is referred to as refractory disease. Those persons who still have signs and symptoms for 6 months to 1 year after following a gluten-free diet require further evaluation (Mayo Clinic, 2020a). The exact cause of this form of the disease is not yet known. It is believed that the body's immune system is involved, particularly T lymphocytes and intraepithelial lymphocytes (IEL), cytokines, and antigens (National Organization for Rare Disorders, 2021).

Assessment
A complete physical and mental health assessment is conducted. Symptoms related to the disease are an integral part of the patient assessment. However, signs and symptoms of celiac disease can vary significantly, and signs and symptoms may differ in children and adults (Mayo Clinic, 2020a).

Upon assessment, nurses should monitor for the presence of the following symptoms in adults (Mayo Clinic, 2020a):
- Abdominal pain.
- Bloating and gas.
- Constipation.
- Diarrhea.
- Fatigue.
- Nausea and vomiting.
- Weight loss.

According to the Mayo Clinic (2020a), more than 50% of adults with celiac disease have signs and symptoms that are unrelated to the digestive system. These types of signs and symptoms include the following:
- Anemia.
- Dermatitis herpetiformis.
- Fatigue.
- Headaches.
- Hyposplenism.
- Joint pain.
- Mouth ulcers.
- Symptoms related to the nervous system such as numbness and tingling of the extremities, impaired cognition, and problems with balance.
- Osteoporosis.

Children with celiac disease are more likely than adults to experience digestive problems such as the following (Mayo Clinic, 2020a):
- Abdominal distention.
- Chronic diarrhea.
- Flatulence.
- Nausea and vomiting.
- Pale, foul-smelling stools.

Nursing consideration: In children, celiac disease leads to an inability to absorb adequate amounts of nutrients. This may lead to failure to thrive in infants, weight loss, anemia, delayed puberty, short stature, and tooth enamel damage (Mayo Clinic, 2020a). Nurses must be aware of the potential for these types of complications when working with children who have celiac disease.

Long-Term Health Effects
People with celiac disease have a 2X greater risk of developing coronary artery disease (CAD) and a 4X greater risk of developing small bowel malignancies. Untreated celiac disease can lead to other autoimmune disorders such as Type 1 diabetes and multiple sclerosis (MS) as well as dermatitis herpetiformis, anemia, osteoporosis, infertility, miscarriage, and neurologic conditions such as epilepsy and migraines (Celiac Disease Foundation, 2021).

Diagnosis and Treatment
Diagnosis. In addition to the presence of relevant signs and symptoms, results from some diagnostic tests help to confirm the diagnosis. These include the following (Mayo Clinic, 2020a; Meadows-Oliver, 2019):
- Histologic changes observed on small-bowel biopsy specimens, which confirms diagnosis.
- Poor glucose absorption as evidenced by a glucose tolerance test.
- Decreases in albumin, calcium, sodium, potassium, cholesterol, and phospholipids.
- Possible decreases in hemoglobin and hematocrit levels, white blood cell (WBC) counts, and platelet counts.
- Immunologic assay screen is positive for celiac disease.
- Serology testing looks for the presence of specific antibodies that indicate an immune reaction to gluten.
- Genetic testing for human leukocyte antigens (HLA-DQ2 and HLA_DQ8) can be used to rule out celiac disease.
- High fat content in stool specimens.

Nursing consideration: It is important that patients be tested for celiac disease BEFORE trying a gluten-free diet. If gluten is eliminated from the diet before testing, the results may appear falsely normal (Mayo Clinic, 2020a).

If any of the preceding tests indicate the presence of celiac disease, it is most likely that the healthcare provider will order one of the following tests (Mayo Clinic, 2020a):
- **Endoscopy**: Conducted to enable a view of the small intestine and take a biopsy for analysis.
- **Capsule endoscopy**: The patient swallows a capsule that contains a minute wireless camera that takes pictures of the small intestine. As the capsule moves through the digestive tract thousands of pictures are taken. The pictures are transmitted to a recorder.

Treatment. The foundation of treatment is a strict, lifelong adherence to a gluten-free diet (Mayo Clinic, 2020a). Patients and families must be educated about what foods, besides wheat, contain gluten. These include the following (Mayo Clinic, 2020a; Meadows-Oliver, 2019):
- Barley.
- Bulgur.
- Durum.
- Farina.
- Graham flour.
- Malt.
- Rye.
- Semolina.
- Spelt (a form of wheat).
- Triticale.

Nursing consideration: A referral to a nutritionist is important. The nutritionist can help patients and families make informed choices and plan a suitable diet (Meadows-Oliver, 2019). A gluten-free diet helps to heal the villous atrophy and promotes symptom resolution. Following a gluten-free diet helps to prevent complications in the future, including malignancy development (Celiac Disease Foundation, 2021).

The recommended diet is a high-protein, low-fat, high calorie diet that includes corn and rice products, soy and potato flour, and fresh fruits. Additionally, infants may have breast milk or soy-based formula (Celiac Disease Foundation, 2021).

If the patient is anemic or severe nutritional deficiencies are present, healthcare providers might recommend that supplements be taken, including the following (Mayo Clinic, 2020a):
- Copper.
- Folate.
- Iron.
- Vitamin B-12.
- Vitamin D.
- Vitamin K.
- Zinc.

Nursing consideration: Supplements and vitamins are typically taken in pill form. However, if the digestive tract is not able to absorb prescribed supplements, they may need to be administered via injection (Mayo Clinic, 2020a).

If the small intestine has sustained severe damage, steroids may be prescribed to control inflammation. Steroids can help to reduce severe signs and symptoms. If the patient has refractory celiac disease the small intestine will not heal. Patients with refractory celiac disease should be evaluated in a specialized center. This disease can be very serious. To date, there is no proven effective treatment (Mayo, 2020a).

There are a significant number of foods that are allowed on a gluten-free diet. These include the following (Mayo Clinic, 2020a):
- Eggs.
- Fresh meats, fish, and poultry that have not been breaded, batter-coated, or marinated.

- Fruits.
- Lentils.
- Most dairy products, unless some of the products exacerbate symptoms.
- Nuts.
- Potatoes.
- Vegetables.
- Wine, distilled liquors, ciders, and spirits.

The grains and starches allowed on a gluten-free diet include the following (Mayo Clinic, 2020a):

- Amaranth.
- Buckwheat.
- Corn.
- Cornmeal.
- Gluten-free flours (rice, soy, corn, potato, bean).
- Pure corn tortillas.
- Quinoa.
- Rice.
- Tapioca.
- Wild rice.

Self-Assessment Question 2

Which of the following actions is acceptable for a person with celiac disease?

a. Incorporate farina into the diet.
b. Eliminate corn from the diet.
c. Reduce the amount of zinc ingested in the diet.
d. Include buckwheat in the diet

Nursing Interventions

Emotional support is critical for patients and their loved ones. Nurses, via education and empathy, must help patients and families to deal with a chronic disease that requires life-style changes for life. Ensuring a consult with a nutritionist is also critical. The complexities of diet for patients with celiac disease necessitate professional consultation and ongoing monitoring (Meadows-Oliver, 2019).

Patients and families should be educated to avoid packaged foods unless they are clearly labeled as gluten-free or have no gluten-containing ingredients such as emulsifiers. Reading labels is an essential skill when purchasing food. In addition to cereals, pastas, and baked goods, other packaged foods that can contain gluten include the following (Mayo Clinic, 2020a):

- Beers, lagers, ales, and malt vinegars.
- Candies.
- Gravies.
- Imitation meats and seafood.
- Processed luncheon meats.
- Rice mixes.
- Salad dressings and sauces, including soy sauce.
- Seasoned snack foods (e.g., potato chips).
- Seitan (a food made from gluten).
- Self-basting poultry.
- Soups.

Nursing consideration: Although pure oats are not harmful for the majority of patients with celiac disease, oats may be contaminated by wheat during growing and processing. Patients and families should consult with their healthcare providers regarding eating small amounts of pure oat products (Mayo Clinic, 2020a).

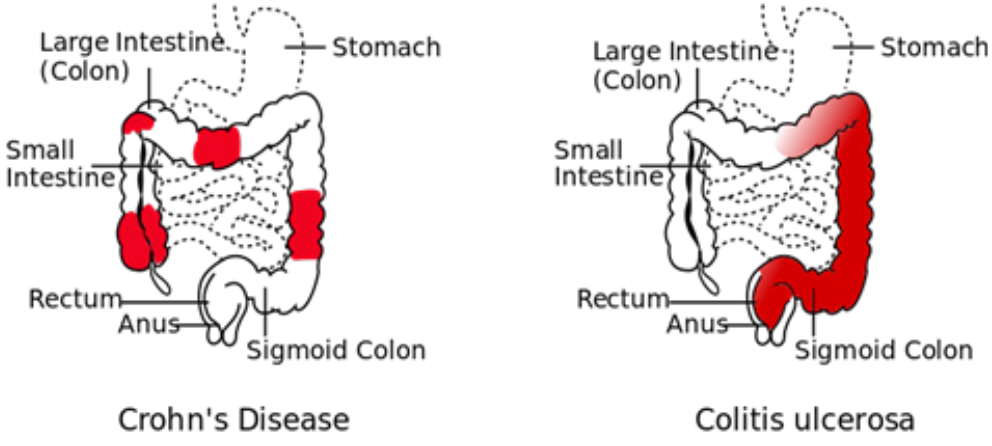
Patients and families may benefit from participating in a support group. Support resources include the following:

- National Celiac Association: 1-888-4-CELIAC https://nationalceliac.org/celiac-disease-support-groups/
- Gluten Intolerance Group: 1-253-833-6655 https://gluten.org/
- Hospitals, social services organizations, and healthcare providers can make recommendations regarding local support groups.

Crohn's disease

Crohn's disease is a chronic, idiopathic inflammatory bowel disease and is categorized under the spectrum of chronic idiopathic inflammatory bowel disease (IBD; Feuerstein & Cheifetz, 2017). The other most common type IBD is colitis ulcerose, which will be discussed later in this education program (Mayo Clinic, 2021d). The differences between Crohn's disease and colitis ulcerosa are shown in Figure 3.

Figure 3. Crohn's Disease vs Colitis Ulcerosa



Note. The red areas indicate the portions of the colon that are typically inflamed.
(Wikipedia Commons, 2021)v

Crohn's disease typically affects the distal ileum and colon but may occur in any part of the gastrointestinal (GI) tract. Effects of Crohn's disease can extend through all layers of the intestinal wall and may also involve regional lymph nodes and the mesentery (Gersch et al., 2017; Merck Manual, 2020a).

Evidence-based practice! Research shows that Crohn's disease peaks at two specific age ranges: between 15 and 30 and again at 60 to 70 years of age. Women are more often affected than men during the age range of 60-70 (Gersch et al., 2017). These age ranges should be considered when evaluating patients. The disease is most often diagnosed in adolescents and adults between the ages of 20 and 30 (Crohn's & Colitis Foundation, 2021b).

Pathophysiology and Assessment

Crohn's disease starts with crypt (glands of the intestinal lining) inflammation and abscesses, which evolve into tiny focal aphthoid ulcers (mucosal lesions). These lesions may advance into deep longitudinal and transverse ulcers accompanied by mucosal edema, which creates the characteristic cobblestoned appearance of the bowel (Merck Manual, 2020a).

Bowel thickening causes stenosis of the bowel, which can occur in any part of the intestine and cause varying degrees of intestinal obstruction (Rebar et al., 2019).

Abscesses are common. Fistulas frequently penetrate adjoining structures and may even extend into the skin of the anterior abdomen or flanks (Merck Manual, 2020a).

Evidence-based practice! Research shows that perianal fistulas and abscesses occur in 25% to 33% of cases of Crohn's disease. These complications can be the most problematic aspects of the disease (Merck Manual, 2020a).

- As the inflammation of Crohn's disease progresses, evident pathophysiology includes the following (Rebar et al., 2019):
- As lymph nodes enlarge the lymph flow in the submucosa is impeded.
- Lymph flow obstruction leads to edema, ulceration of the mucosa, fissures, abscesses, and, possibly, granulomas.
- Peyer's patches form. These patches are oval, elevated, closely packed lymph follicles.
- Fibrosis develops, causing further thickening of the walls of the bowel, stenosis, and/or narrowing of the lumen.
- Inflamed loops of the bowel adhere to not only other diseased portions of the bowel, but to healthy portions as well.
- The diseased parts of the bowel continue to thicken and narrow.

Complications. Anal fistula is the most common complication. Fistulas may develop to the bladder, vagina, or even in the area of an old scar. Additional complications include the following (Rebar et al., 2019):

- Intestinal obstruction.
- Nutrient deficiencies.
- Fluid and electrolyte imbalances.
- Peritonitis.

There is also a long-term risk of colorectal cancer (Merck Manual, 2020a). Patients and families should be taught to monitor for signs and symptoms of colorectal cancer and adhere to screening guidelines.

Risk factors. Crohn's disease appears to be initiated by alterations in intestinal microbes or alterations in the mucosa of the intestine. Gastrointestinal (GI) infections, nonsteroidal anti-inflammatory drugs, and antibiotics have been implicated in the development of inflammatory bowel disease (IBD). However, none of these types of associations have been substantiated with large epidemiological studies (Feuerstein & Cheifetz, 2017).

Cigarette smoking, the best-studied environmental risk factor, doubles the risk of developing Crohn's disease. It is important to note that the risk is increased in both current and former smokers (Feuerstein & Cheifetz, 2017).

Nursing consideration: Family history may be linked to an increased risk for the development of Crohn's disease. However, only 10% to 25% of patients with IBD have a first-degree relative with the disease. More than 200 genes have been associated with IBD development, making genetic specificity difficult (Feuerstein & Cheigetz, 2017).

Diagnosis and Treatment.

Diagnosis. Various conditions can mimic Crohn's disease. Examples of conditions that present with similar signs and symptoms include appendicitis, Behcet disease, and ulcerative colitis (Feuerstein & Cheifetz, 2017).

The diagnosis of Crohn's disease is made based on signs and symptoms and some diagnostic tests. It is important to know which part of the gastrointestinal tract is affected by the disease. Signs and symptoms may vary depending on what type of Crohn's disease a patient has (Crohn's & Colitis Foundation, 2021a)

Types of Crohn's disease based on affected part of the gastrointestinal tract are as follows (Crohn's & Colitis Foundation, 2021a):

- **Ileocolitis**: Ileocolitis is the most common type of Crohn's disease. It affects the terminal ileum and the colon. Symptoms associated with ileocolitis include cramps, diarrhea, and pain in the lower right abdominal quadrant.
- **Ileitis**: Ileitis affects only the ileum. Symptoms are the same as ileocolitis. If the disease is severe, complications may develop including fistulas or inflammatory abscesses in the right lower abdominal quadrant.
- **Gastroduodenal Crohn's Disease**: Gastroduodenal Crohn's disease affects the stomach and the duodenum. Symptoms may include nausea, vomiting, loss of appetite, and weight loss.
- **Jejunoileitis**: Characterized by patchy areas of inflammation of the jejunum, jejunoileitis may cause mild to intense abdominal pain and cramps after meals, diarrhea, and fistulas that may form in severe cases or after lengthy periods of inflammation.
- **Crohn's (Granulomatous) Colitis**: Crohn's colitis affects only the colon. Its symptoms may include diarrhea, rectal bleeding, and disease around the anus (e.g., abscess, fistulas, and ulcers). Skin lesions and joint pain are more common in this type of Crohn's disease than others.

Both types of IBD (Crohn's disease and ulcerative colitis) have similar symptoms but are not the same disease and affect different areas of the gastrointestinal tract. Differences include the following (Crohn's & Colitis Foundation, 2021a):

- **Crohn's Disease**: May affect any part of the gastrointestinal tract from mouth to anus. Can affect the entire thickness of the bowel wall.
- **Ulcerative Colitis**: Only the colon and rectum are affected. The disease affects the inner-most lining of the colon.

Nurses must be aware of these differences, which are important as part of the diagnostic and treatment process.

Self-Assessment Question 3

Which type of Crohn's disease affects the terminal ileum and the colon?

a. Ileitis.
b. Ileocolitis.
c. Jejunoileitis.
d. Gastrointestinal.

Various diagnostic test results support a diagnosis of Crohn's disease. These include the following (Rebar et al., 2019):

- **Fecal occult test**: Minute amounts of blood in the stool.
- **X-rays of the small intestine**: Irregular mucosa, ulceration, and stiffening.
- **Barium enema**: The string sign, which occurs when segments of stricture are separated by normal bowel. Fissures, ulceration, and narrowing of the bowel may be observed.
- **Sigmoidoscopy and colonoscopy**: Patchy areas of inflammation are observed. (This sign helps to rule out ulcerative colitis). The surface of the mucosa has a cobblestone appearance. Ulcers may be seen if the colon is affected.

Nursing consideration: Colonoscopy has been found to be more accurate than barium enema in assessing the degree of inflammation present (Rebar et al., 2017). Since repeated testing can be quite stressful, patients need to understand that a combination of these test are typically used since no one test is definitive.

Treatment. Lab tests should be conducted every 1 to 2 years to detect vitamin D and B12 deficiencies. Additional lab tests are conducted to screen for anemia, hypoalbuminemia, additional vitamin deficiencies, and electrolyte abnormalities. Any nutritional deficiencies may be treated with supplements and, possibly, dietary alterations (Merck Manual, 2020a).

Nursing consideration: In general, treatment requires drug therapy, lifestyle changes, and, possibly, surgery. When acute attacks occur, it is imperative that fluid and electrolyte balance is maintained. If patients are debilitated, parenteral nutrition is prescribed to ensure adequate caloric and nutrition intake while allowing the bowel to rest (Merck Manual, 2020a; Rebar et al., 2019).

General Treatment Interventions. For relief of cramps and diarrhea, oral loperamide, 2 to 4 mg or antispasmodic drugs can be taken up to four times a day, preferably before meals. These drugs are typically safe for patients. However, if the patient is suffering from severe, acute Crohn colitis (that may progress to toxic colitis and bowel obstruction), antidiarrheal and antispasmodic drugs are not used (Comerford & Durkin, 2021; Merck Manual, 2020).

Hydrophillic mucilloids such as methylcellulose are sometimes given to help prevent anal irritation by increasing the firmness of the stool. Patients should avoid dietary roughage in cases of structuring or active colonic inflammation (Merck Manual, 2020a).

Mild to Moderate Disease. Patients with mild to moderate disease are ambulatory, tolerate oral intake, and are without signs of toxicity, tenderness, masses, or obstruction. In mild to moderate disease cases, first-line treatment is 5-ASA (mesalamine). However, benefits from 5-ASA drugs appear to be limited. Several experts do not recommend using them in small-bowel Crohn disease (Comerford & Durkin, 2021; Merck Manual, 2020a). Antidiarrheals are used to control diarrhea, but not in patients who have significant bowel obstruction (Rebar et al., 2019).

Some experts prescribe antibiotics as first-line treatment, while others reserve antibiotics for patients not responding to 4 weeks of 5-ASA (Merck Manual, 2020a). The use of antibiotics is not definitive. Results from a 2019 study suggest that benefits provided by antibiotics in active Crohn's disease are probably very modest. The effects of antibiotics on preventing Crohn's disease relapse are uncertain. No definitive conclusions were drawn, and more research is needed to identify the risks and benefits of antibiotic therapy in Crohn's disease (Cochrane, 2019).

Moderate to Severe Disease. Patients are considered to have moderate to severe disease if they are without fistulas or abscesses but are in significant pain and have tenderness, fever, and/or vomiting, or patients who have been non-responsive to mild disease treatment interventions (Merck Manual, 2020a).

Administration of corticosteroids, either oral or parenteral, frequently provides swift relief of symptoms. Corticosteroids such as prednisone or prednisolone reduce diarrhea, pain, and bleeding by decreasing inflammation. If patients do not respond to corticosteroids, they must not be maintained on these types of drugs (Comerford & Durkin, 2021; Merck Manual, 2020a). Aminosalicylates such as sulfasalazine (Azulfidine) are also used to decrease inflammation (Rebar et al., 2019).

Immunosuppressants such as azathioprine (Azasan) and mercaptopurine (Purinethol) are prescribed to suppress the body's response to antigens (Rebar et al., 2019). These types of drugs have a positive impact for most patients. If immunosuppressant therapy does not work in patients who are not candidates for surgery, biologic agents such as vedolizumab may be used (Merck Manual, 2020a). If patients fail to respond to conventional treatment, an antitumor necrosis factor agent (infliximab) may be given (Rebar et al., 2019).

Bowel obstruction is managed with nasogastric suction and intravenous (IV) fluids. Obstruction in uncomplicated Crohn disease should resolve within a few days, However, failure to respond suggests a complication or other etiologies and immediate surgery is required (Merck Manual, 2020a).

Fulminant Disease, Abscesses, Fistulas. Fistulas are typically treated with metronidazole and ciprofloxacin. If patients fail to respond within 3 to 4 weeks they may receive an immunomodulator (e.g., azathioprine). Fistulas often relapse (Merck Manual, 2020a).

Patients who present with toxicity, high fever, persistent vomiting, or a tender or palpable mass must be hospitalized for administration of IV fluids and antibiotics. Abscesses must be drained either percutaneously or surgically (Merck Manual, 2020a).

Nursing consideration: Surgery is necessary in cases of bowel perforation, massive hemorrhage, fistulas unresponsive to medication, or acute intestinal obstruction. A colectomy with ileostomy may be performed in patients who have extensive disease of the colon and rectum (Rebar et al., 2019).

Lifestyle Changes. Lifestyle changes are an integral part of the treatment plan. Patients must try to reduce the stressors in their lives as well as reducing physical activity to allow the bowel to rest (Rebar et al., 2019).

Dietary changes are implemented to decrease bowel activity while still providing adequate nutrition. Suggestions for meal planning and intake include recommending the following actions for patients to implement (Crohn's & Colitis Foundation, 2021c):

- Eat four to six small meals daily rather than three large meals.
- Stay hydrated with water, broth, tomato juice, or a reduction solution.
- Drink beverages slowly. Avoid using a straw, which can cause the ingestion of air that leads to flatulence.
- Prepare meals in advance. Keep foods that are well tolerated on hand.
- Use simple methods to cook such as boiling, grilling, steaming, and poaching.
- Use a food journal to keep track of what is eaten and what foods cause or exacerbate symptoms.

The Crohn's and Colitis Foundation (2021c) suggests that patients avoid the following foods when experiencing a flare-up of the disease:

- Insoluble fiber foods that are difficult to digest including raw green vegetables, fruits with skin and seeds, whole nuts, and whole grains.
- Lactose, the sugar found in dairy products such as milk and cream.
- Non-absorbable sugars that are found in sorbitol, mannitol, sugar-free gum, candy, and ice cream.
- Foods that are high in sugar such as baked goods, candy, and juices.
- High-fat foods including butter, coconut, margarine, cream, and foods that are fatty, fried, or greasy.
- Alcohol and caffeinated beverages including beer, wine, liquor, coffee, and soda.

Nursing Interventions

Nurses have a great deal of responsibility to provide effective patient/family education. Education topics of particular importance include the following (Rebar et al., 2019):

- Medication.
- Stress reduction.
- Diet and nutrients.
- Emotional support and counseling.
- Lifestyle changes and how to implement them.

During hospitalization nurses should carefully monitor patients' intake and output and weight and monitor for signs of dehydration. It is important for patients to be monitored for fever and pain on urination, which may suggest the development of a bladder fistula. Abdominal pain, fever, and a hard distended abdomen are signals of an intestinal obstruction (Rebar et al., 2019).

If patients have an ileostomy, they must be able to demonstrate proper ostomy care and should have a consultation with an ostomy therapist. Patients should also be referred to support groups and counseling as needed (Rebar et al., 2019).

Type 1 diabetes

James Patten is a 25-year-old who has recently accepted his first position as a clinical engineer. He has worked hard to earn this job and is eager to excel. He has developed annoying symptoms over the past 4 weeks. These include severe thirst, extreme hunger, frequent urination, and unintentional weight loss. James' healthcare provider told him he has type 1 diabetes. His first response is, "That can't be right. Only kids get this kind of diabetes! You have made a mistake." James's response is not unusual. However, experts now know that type 1 diabetes can also develop in adults.

Type 1 diabetes (T1D) is an autoimmune disease that develops when the pancreas stops producing insulin. People can be diagnosed with T1D at any age, but it is the most common childhood endocrine disorder (Meadows-Oliver, 2019).

An estimated 1.6 million Americans are living with T1D, including about 200,000 youth (people less than 20 years of age) and 1.4 million adults (people 20 years of age and older; JDRF, n.d.).

Statistics that indicate the probable future development of T1D and its significance include the following (JDRF, n.d.):

- About 64,000 people in the US are diagnosed with T1D each year.
- It is expected that five million people in the US will have T1D by 2050, including almost 6,000,000 youth.
- In the US, there are $16 billion in T1D-associated healthcare costs and lost income annually.
- Less than 33% of people with T1D in the US are consistently achieving target blood-glucose control levels.

Pathophysiology

In T1D, the beta cells of the pancreas are destroyed or suppressed. The disease is divided into two types: idiopathic and immune-mediated. Idiopathic T1D causes a permanent insulin deficiency with no evidence of autoimmunity. In immune-mediated T1D there is an autoimmune attack on beta cells. This type of attack causes an inflammatory response known as insulitis (Rebar et al., 2019).

Evidence-based practice! Research shows that by the time signs and symptoms are evident, 80% of beta cells have been destroyed (Rebar et al., 2019).

Although signs and symptoms occur rather abruptly, it can take months or even years for enough beta cells to be destroyed before these signs and symptoms appear. Signs and symptoms, once evident, can be severe (Centers for Disease Control and Prevention (CDC)), (2021c).

Nursing consideration: Symptoms of T1D are similar to those of other health conditions. Nurses must encourage patients to immediately seek medical help if signs and symptoms develop. Untreated T1D can lead to severe, even fatal, health conditions (CDC, 2021c).

The development of T1D typically occurs in three stages (Lucier & Weinstock, 2021):

- **Stage 1**: Stage 1 is characterized by a lack of symptoms and a normal fasting glucose, normal glucose tolerance, and the presence of greater than, or equal to, two pancreatic autoantibodies.
- **Stage 2**: Stage 2 diagnostic criteria include the presence of greater than or equal to 2 pancreatic autoantibodies and dysglycemia (glucose of 100 to 125 mg/dl), impaired glucose tolerance (2-hour PG of 140 to 199 mg/dL), or a hemoglobin A1C between 5.7% to 6.4%. Patients remain asymptomatic.
- **Stage 3**: In Stage 3 the patient has hyperglycemia with clinical symptoms and two or more pancreatic autoantibodies.

Etiology. The exact cause of T1D is unknown. However, several risk factors and possible trigger factors have been identified, including the following:

- **Genetics**: Having a family history of T1D puts people at greater risk of developing the disease. However, the majority of diagnoses are found in people who have no family members with the disease (JDRF, n.d.).
- **Viral Infections**: Viral infections may be triggers for T1D development (JDRF, n.d.).
- **Geography**: The further away from the equator a person lives, the greater the incidence of T1D (Mayo Clinic, 2021c).
- **Age**: Although T1D can occur at any age, it seems to peak at two specific age ranges. The first peak appears in children between the ages of 4 and 7 years old. The second peak is in children between the ages of 10 and 14 years old (Mayo Clinic, 2021c).

Nursing consideration: Unlike type 2 diabetes, no dietary changes can be made to prevent the onset of T1D. Likewise, lifestyle factors such as exercise and weight do not contribute to T1D development (JDRF, n.d.). Some insulin regimens can be very expensive, so this should be discussed with patients to help them avoid skipping doses.

Complications. Maintaining a normal blood glucose level can significantly reduce the occurrence of complications. Such complications may be disabling or even fatal. Without insulin to facilitate the entry of glucose into the cells, blood glucose levels increase and complications may be likely (Mayo Clinic, 2021c).

Complications linked to T1D include the following (Mayo Clinic, 2021c):

- **Cardiac and vascular diseases**: T1D radically increases the risk of cardiovascular diseases such as coronary artery disease (CAD), angina, heart attack, stroke, atherosclerosis, and hypertension.
- **Neuropathy**: Excessive blood glucose levels may injure the capillaries that nourish the nerves. Symptoms of neuropathy include tingling, numbness, and burning or pain that typically starts at the tips of the toes or fingers and spreads gradually. If blood glucose levels are not controlled, all sensation may be lost in the affected limbs. If the nerves of the gastrointestinal tract are damaged, patients may suffer from nausea, vomiting, diarrhea, or constipation. In men, erectile dysfunction may occur.
- **Diabetic retinopathy**: If the blood vessels of the retina are damaged, the patient may go blind. Other conditions linked to diabetic retinopathy include cataracts and glaucoma.
- **Damage to the feet**: Nerve damage or reduced blood flow to the lower extremities increases the risk of complications to the feet. Without treatment, even minor cuts and blisters can become quite serious, leading to infections that may eventually require the amputation of toes, feet, or leg(s).
- **Skin and mouth issues**: Patients may be more vulnerable to skin and mouth infections including those caused by bacteria and fungi. Disease of the gums and dry mouth are also likely.
- **Pregnancy issues**: If the T1D is poorly controlled in pregnant females, the risk of miscarriage, stillbirth, and birth defects increases. The risk of diabetic ketoacidosis, retinopathy, pregnancy induced hypertension, and preeclampsia may also increase.

Diabetic ketoacidosis (DKA) is a serious, acute metabolic complication characterized by hyperglycemia, hyperketonemia, and metabolic acidosis. DKA is most common in patients with T1D and occurs when insulin levels are inadequate to meet the body's basic metabolic requirements. Hyperglycemia causes osmotic diuresis with severe fluid and electrolyte loss (Merck Manual, 2020b).

Signs and symptoms of DKA include nausea, vomiting, and (especially in children) abdominal pain. If untreated, significant decompensation can occur. Patients may display hypotension and tachycardia because of dehydration and acidosis. To compensate for acidemia, respirations increase in rate and depth (Kussmaul respirations). The patient's breath may have a fruity odor because of exhaled acetone (Merck Manual, 2020b).

Treatment consists of rapid intravascular volume repletion with 0.9% saline given IV, correction of hyperglycemia and acidosis, and prevention of hypokalemia. Treatment should take place in critical care settings because of the need for hourly clinical and laboratory assessments with necessary adjustments indicated by assessment results (Merck Manual, 2020b).

Assessment and Diagnosis

Patients are assessed for common symptoms of T1D. These include the following (Mayo Clinic, 2021c; Rebar et al., 2019):

- Increased thirst.
- Extreme hunger.
- Frequent urination.
- Unintended weight loss
- Fatigue.
- Weakness.
- Blurred vision.
- Irritability.
- Mood changes.
- In children, bed-wetting in those who did not previously wet the bed at night.

A thorough history and physical are conducted to help rule out other conditions. In addition to history, physical, and a review of signs and symptoms, several diagnostic tests are performed. These include the following (Mayo Clinic, 2021c; Rebar et al., 2019):

- **Glycated hemoglobin (A1C) test**: The A1C is a blood test that reports average blood glucose levels for the past 2 to 3 months. The test measures the percentage of blood glucose that is attached to the body's hemoglobin. The higher the glucose levels, the higher the percentage of hemoglobin with attached glucose. An A1C level of 6.5% or higher on two separate tests is an indicator of T1D.
- **Random blood glucose test**: This test requires that a blood sample be obtained at a random time and confirmed by repeat testing. A random blood glucose level of 200 mg/dL or higher suggests T1D, particularly if the patient has signs and symptoms of T1D.
- **Fasting blood glucose test:** The fasting blood glucose test requires that a blood sample be obtained following an overnight fast. A fasting blood glucose level of less than 100 mg/dL is normal. A level from 100-125 mg/dL is classified as prediabetes. A level of 126 mg/dL or higher on two separate tests is diagnostic for T1D.
- **Antibody test:** If a diagnosis of diabetes is made, the healthcare provider may order blood tests to check for antibodies that are common in T1D. Presence of antibodies helps to differentiate between T1D and type 2 diabetes when the diagnosis is uncertain.

Nursing consideration: Certain conditions such as pregnancy or having a hemoglobin variant may interfere with the accuracy of the A1C test. In these types of cases, the healthcare providers will rely on additional blood tests to determine an accurate diagnosis.

Self-Assessment Question 4

A young pregnant female is being evaluated for T1D. Which of the following statements are accurate in this situation?

a. Two separate fasting blood glucose tests with a result of 126 mg/dL are diagnostic for diabetes.
b. The A1C test is the best diagnostic test to determine T1D in pregnant females.
c. Random blood glucose tests are contraindicated for pregnant females.
d. The glycated hemoglobin test indicates the average blood sugar for the past 2 to 4 weeks.

Treatment

T1D is managed with a variety of insulins. Patients, families, and the healthcare team must work together to find the best treatment regimen. Types of insulin may include the following (JDRF, n.d.):

- **Rapid acting**: Starts working in about 15 minutes after injection. It peaks in about 1 hour and continues for about 2 to 4 hours after injection. Examples include aspart (Novolog), glulisine (Apidra), and lispro (Humalog).
- **Regular or short acting**: Starts working 30 minutes after injection, peaks from 2 to 3 hours after injection, and continues to work for about 3 to 6 hours. An example is Humulin R.
- **Intermediate acting**: Starts working 2 to 4 hours after injection. It peaks about to 12 hours later and lasts 12 to 18 hours. An example is Novolin N.
- **Long acting**: Long acting is often combined with rapid or short acting insulin. It starts to work several hours after injection and tends to lower glucose levels up to 24 hours. An example is Lantus.
- **Ultra-long lasting**: Starts to work in 6 hours, but it does not peak and lasts an estimated 36 hours. An example is Tresiba.

Insulin is administered in a variety of ways. Historically, insulin was administered via injection using a syringe. Today, other options are available including the following (CDC, 2021a; JDRF, n.d.):

- **Insulin pen**: Some pens use cartridges that are inserted into the pen while others are pre-filled and discarded after all insulin is used. The dose of insulin is dialed on the pen and the insulin is injected through a needle.
- **Insulin pump**: About the size of a small cell phone, insulin pumps provide a basal dose of short or rapid-acting insulin per hour. When blood sugar is high, the patient calculates the dose and the insulin in the pump delivers the bolus.
- **Artificial pancreas**: The artificial pancreas is a hybrid closed-loop system that requires minimal patient intervention. It is a combination of the technology of a pump with that of a continuous glucose monitor.
- **Inhaled insulin**: Inhaled insulin is taken by using an oral inhaler to deliver ultra-rapid-acting insulin at the start of meals. Inhaled insulin is used in conjunction with an injectable long-acting insulin.
- Additional treatment interventions include having personalized meal plans designed to meet nutritional needs, control blood glucose levels, and help patients maintain ideal body weight. With the guidance of healthcare providers, patients should participate in regular exercise. Patients should be cautioned that physical activity lowers blood glucose levels. Thus, blood glucose levels should be monitored frequently. Patients may need to adjust their meal plans or insulin to compensate for increased physical activity (Mayo Clinic, 2021c; Rebar et al., 2019).

Nursing Interventions

Nursing interventions focus on education and emotional support. Patients and families need education pertaining to meal planning, exercise, and insulin administration. Emotional support is also critical to the success of any treatment regimen (Rebar et al., 2019).

Patients and families also need information about potential complications, how to recognize them, and what to do if they occur. It is recommended that families pay special attention to the issue of complications. Teachers should be informed that a child is diabetic and they must be aware of emergency procedures. In some cases, patients experiencing complications (such as DKA) may not be able to articulate the need for help or describe their symptoms at the time. It is, therefore, absolutely essential that family members and other caretakers be able to intervene correctly in the event that complications occur (Rebar et al., 2019). DKA is a medical emergency and must be treated immediately.

Systemic lupus erythematosus

Systemic lupus erythematosus (commonly referred to as lupus) is a chronic, inflammatory, autoimmune disorder that affects the connective tissues (Rebar et al., 2019). The determination of incidence and prevalence of lupus is a challenge. There are several issues that make it difficult to collect accurate data. These include the following (Lupus Foundation of America, 2020; National Resource Center on Lupus, 2021):

- Difficulty in deciding what constitutes a case of lupus. There are multiple types of lupus and they have overlapping signs and symptoms.
- There is no specific test for the diagnosis of lupus. An estimated 40% of people with lupus report that their healthcare providers initially said that they had some disorder other than lupus.
- Twenty-three percent of patients were told that their problems were psychological, not physical.
- No two cases of lupus are the same, which makes it difficult to recognize and diagnosis the disease.

Nursing consideration: The Lupus Foundation of America estimates that 1.5 million Americans are living with a form of lupus (National Resource Center on Lupus, 2021). Nurses must support ongoing lupus research and be alert to the signs and symptoms that suggest the disease.

Lupus can affect anyone. It is diagnosed in women, men, children, and even newborns. It is much more common in women than in men. About 90% of diagnosed cases of lupus are women of reproductive age. Women are often diagnosed between the ages of 15 and 44. Lupus is also more prominent in certain ethnicities including African American, Hispanic, Asian, and Native American women compared to Caucasian women (Cleveland Clinic, 2021).

Pathophysiology

The exact etiology of lupus is unknown. However, experts believe that the primary cause is autoimmunity, along with environmental, hormonal, genetic, and (possibly) viral factors. In autoimmune diseases, the body produces antibodies against its own cells. A significant factor in the pathophysiology of lupus is the production of antibodies that attack various tissues of the body. These include red blood cells (RBCs), neutrophils, platelets, lymphocytes, or almost any organ or tissue (Rebar et al., 2019).

Risk Factors. The majority of people with lupus have a genetic predisposition for the disease (Rebar et al., 2019). Additional risk factors include the following (Cleveland Clinic, 2021; Mayo Clinic, 2021a):

- **Sex**: Lupus is more common in females.
- **Age**: Although lupus is diagnosed in all age groups, it is most often diagnosed between the ages of 15 and 45.
- **Race**: Lupus is more common in African Americans, Hispanics, and Asian Americans.
- **Environmental factors:** Although not specifically identified, environmental factors such as the amount of sunlight a person is exposed to, medications taken, stress, and viral infections are being investigated as contributing to the development of lupus.
- **Smoking**: A history of smoking may also increase risk of lupus.

Types of Lupus. Although systemic lupus erythematosus is the most common type of lupus, there are several additional types. These include the following (Cleveland Clinic, 2021):

- **Cutaneous lupus erythematosus**: This type of lupus affects the skin. It is characterized by various skin issues such as photosensitivity and rashes. Hair loss may also occur.
- **Drug-induced lupus**: Certain medications may cause lupus. Rather than being a chronic disease, drug-induced lupus is typically temporary. Usually, this type of lupus resolves after the medication is discontinued. However, in rare instances, symptoms continue even after the medications are stopped.
- **Neonatal lupus**: Neonatal lupus is quite rare. When it does occur, it is found in infants at birth. Infants born with neonatal lupus have antibodies that were passed to them from their mothers, who either had lupus at the time of pregnancy or developed the disease later in life.

Organs Affected by Lupus/Complications. Lupus can affect many different areas of the body, which can lead to complications of various degrees of severity. These include the following (Cleveland Clinic, 2021; Mayo Clinic, 2021a):

- **Blood and blood vessels**: Lupus may cause serious reductions in the number of red blood cells (RBCs), white blood cells (WBCs), and/or platelets. Blood vessel inflammation may also occur.
  These alterations in blood counts may lead to fatigue, anemia, serious infections, and/or easy bruising. Patients are also prone to deep vein thrombosis, pulmonary embolus, and stroke. Blood clot development may be linked to the production of antibodies. Note that patients may not have symptoms that suggest blood and blood vessel abnormalities.
- **Brain and central nervous system (CNS)**: Brain involvement is characterized by headaches, dizziness, behavior changes, vision problems, strokes, and seizures. Memory problems may become evident and patients may have trouble expressing themselves.
- **Heart**: Lupus may cause inflammation of the heart muscle, pericardium, and arteries.
- **Joints**: Arthritis is a common finding in patients who have lupus. Joint pain (with or without swelling) and stiffness are noted, especially in the morning after awakening. Arthritis may last for days or weeks or become permanent.
- **Kidneys**: Kidney complications are found in half of patients with lupus. In fact, kidney damage and kidney failure are one of the leading causes of death in patients with lupus. Kidney disease does not typically cause symptoms until the disease is in the advanced stages.
- **Lungs**: Lung involvement may cause pleural inflammation, pneumonia, and bleeding into the lungs.
- **Skin**: Skin problems are common in patients with lupus. These include a characteristic red rash over the cheeks and the bridge of the nose, plaques, skin rashes exacerbated by sunlight, hair loss, and mouth sores.

Other types of complications associated with lupus include the following (Mayo Clinic, 2021a):

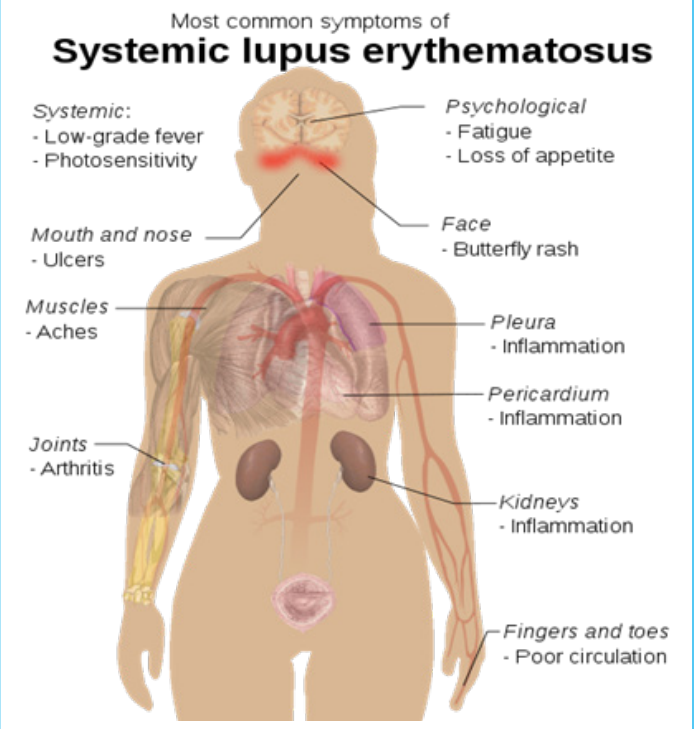
- **Infection**: Patients with lupus are more susceptible to infections because the disease and its treatments weaken the immune system.
- **Malignancies**: Having lupus leads to a small risk of increased vulnerability to malignancies.
- **Death of bone tissue**: When the bone's blood supply is reduced, tiny breaks in the bone may occur, leading to the collapse of the bones.
- **Complications of pregnancy**: Lupus increases the risk of miscarriage, pregnancy-induced hypertension, and preterm birth. Healthcare providers often recommend that women should delay pregnancy until the disease has been under control for at least 6 months.

Assessment and Diagnosis

Making a diagnosis of lupus is challenging because signs and symptoms vary considerably among patients and may change overtime. These signs and symptoms are also common to many other diseases (Mayo Clinic, 2021a).

Healthcare providers will conduct a thorough history and physical and carefully review patients' signs and symptoms. Detailed descriptions of signs and symptoms are found in the section on pathophysiology. As a summary, Figure 4 displays the most common signs and symptoms of lupus.

Figure 4. Most Common Symptoms of Lupus Erythematosus



Note. From Haggstrom, M., 2009

Laboratory Tests. Although no single test can diagnose lupus, several tests are used to help determine diagnosis. Tests include the following (Mayo Clinic, 2021a; Rebar et al., 2019):

- **Complete blood count (CBC)**: Results may show anemia and/or a reduced white blood count (WBC), both of which may occur in lupus.
- **Serum electrophoresis**: Serum electrophoresis may show hypergammaglobulinema.
- **Chest X-rays**: Chest X-rays may reveal pleurisy or lupus pneumonitis.
- **Kidney and liver assessment**: Blood tests may be ordered to help assess kidney and liver functioning.
- **Urinalysis**: Urinalysis may show elevated protein levels or the presence of RBCs in the urine.
- **Antinuclear antibody (ANA) Test**: A positive test for the presence of antibodies suggests a stimulated immune system. Most people with lupus have a positive ANA test. However, most people with a positive ANA test do not have lupus. A positive ANA test calls for more-specific antibody testing.
- **Echocardiogram**: Echocardiograms may show cardiac abnormalities.

Treatment

Lupus is a chronic condition that needs ongoing management. The overall goals of treatment are to promote remission of symptoms and limit the damage that the disease does to patients' organs (Cleveland Clinic, 2021).

Nursing consideration: Lupus is an unpredictable disease that can change with time. This means that treatment interventions may need to be changed to meet the current state of the disease (Cleveland Clinic, 2021

Medications are the foundation of treatment for lupus. Medications most often prescribed to treat lupus include the following (Cleveland Clinic, 2021; Mayo Clinic, 2021a; Rebar et al., 2019):

- **Corticosteroids**: Corticosteroids such as prednisone are prescribed to reduce the inflammatory process. Steroid creams can be applied directly to rashes. Steroid pills in low doses may be effective for patients with mild to moderate forms of the disease. High doses of steroids such as methylprednisolone (Medrol) are frequently used to control serious disease involving the kidneys and brain and other internal organs. Unfortunately, high doses of steroids often produce side effects. Side effects include weight gain, bruising easily, hypertension, diabetes, and bone diseases such as osteoporosis.

Nursing consideration: Initial prednisone doses of 60 mg or more are typical. Noticeable improvement of the patient's condition is usually apparent within 48 hours. After symptoms are controlled, the dosage is tapered gradually and then discontinued (Rebar et al., 2019).

- **Hydroxychloroquine (Plaquenil)**: Hydroxychloroquine is an antimalarial drug that has been prescribed to help keep lupus-related skin and joint disease under control. It has also been found to be effective in the treatment of fatigue and mouth sores.
- **Azathioprine (Imuran)**: An immunosuppressant, azathioprine (originally used to prevent transplanted organ rejection) is generally used to treat the more serious aspects of the disease.
- **Methotrexate (Rheumatrex)**: Methotrexate is an antineoplastic drug used to suppress the immune system. It has been found to be helpful in the treatment of lupus-related skin disease, arthritis, and other forms of the disease that are not life-threatening. This medication is used for patients who have not responded to drugs such as hydroxychloroquine or low doses of prednisone.
- **Cyclophosphamide (Cytoxan) and mycophenolate mofetil (CellCept)**: These are antineoplastic drugs that significantly reduce immune system activity. They are used to treat more severe forms of lupus, particularly if there is kidney involvement.
- **Belimumab (Benlysta)**: Belimumab is a monoclonal antibody used to reduce the activity of lymphocytes, which produce autoantibodies. Autoantibodies cause tissue damage and their suppression is the reason they are prescribed to treat lupus. Belimumab is used to treat lupus that does not involve the kidneys and has not responded to other interventions.
- **Rituximab (Rituxan)**: Rituximab is a monoclonal antibody that reduces lymphatic activity. It is occasionally used to treat lupus that has not responded to other types of treatments.

Some complementary treatments for lupus include the following (Cleveland Clinic, 2021):

- **Dehydroepiandrosterone (DHEA)**: Supplements that contain this hormone, in conjunction with conventional treatment, may help reduce the occurrence of flares of lupus. DHEA may cause acne in women.
- **Fish oil**: Fish oil supplements that contain omega-3 fatty acids may have some beneficial effects. Research is underway to identify specific effects and how these effects occur. Side effects of fish oil supplements include nausea, belching, and a "fishy" taste.
- **Acupuncture**: Acupuncture may help to ease the muscle pain that is associated with lupus.

Nursing Interventions

Patients may have a difficult time adjusting to a disease that is a life-long problem. Nurses should assess the effectiveness of patients' support systems, which are critical to the health and wellness of a patient with lupus (Mayo Clinic, 2021a; Rebar et al., 2019)

Feelings of helplessness, anger, fear, and frustration are common in patients who have lupus. They are at risk of mental health problems such as depression, anxiety, and low self-esteem. Patients' mental health should be monitored and referrals made to mental health professionals as needed (Mayo Clinic, 2021a).

Nurses are usually the members of the healthcare team who provide medication education to patients and families. Patients and families must demonstrate knowledge of what medications have been prescribed, route, dose, side effects, and what to do if side effects occur (Rebar et al., 2019).

Patients and families should learn all they can about their disease and how to monitor their signs and symptoms. Regular appointments with their healthcare providers are essential for ongoing monitoring and treatment adjustments (Rebar et al., 2019).

Self-Assessment Question 5

An antimalarial drug used to keep lupus-related skin and joint disease under control is:

a. Methotrexate.
b. Azathioprine.
c. Hydroxychloroquine.
d. Belimumab.

Multiple sclerosis (MS)

Multiple sclerosis (MS) is an immune-mediated disease in which an abnormal immune system response is directed against the central nervous system (CNS; National Multiple Sclerosis Society [MS], 2020a). MS is characterized by a progressive demyelination of the white matter of the brain and spinal cord, which can lead to widespread neurological dysfunction (Rebar et al., 2019).

An estimated 2.8 million people throughout the world live with MS. Prevalence of the disease has increased in every region of the world since 2013.The mean age at diagnosis is 32 years of age. Females are twice as likely to live with MS compared to males (Walton et al., 2020).

In the US, results from a recent study funded by the National MS Society confirmed that nearly one million people are living with the disease. This is double the estimate from an earlier study (National MS Society, 2020b).

The majority of people with MS have a relapsing-remitting disease course. These patients experience periods of new symptoms or exacerbations of previous symptoms that take place over days or weeks. Patients usually improve partially or completely after each relapsing period. Relapses are typically followed by periods of disease remission. Remissions can last for months or even years. Other persons may be diagnosed with primary-progressive MS, which is characterized by a steady progression of signs and symptoms without relapse (Mayo Clinic, 2020b).

Evidence-based practice! At least half of patients with relapsing-remitting MS eventually experience a steady progression of symptoms without periods of remission. This is referred to as secondary-progressive MS (Mayo Clinic, 2020b).

Pathophysiology

In MS the immune system destroys myelin (the fatty substance that coats and protects nerve fibers in the spinal cord and brain). Myelin is critical to the transport of electrical impulses to the brain for interpretation. The myelin sheath is a lipoprotein complex that is formed by glial cells. It protects the nerve axon (the neuron's long nerve fiber) similarly to the insulation on electrical wires. (Rebar et al., 2019).

Myelin can be damaged by hypoxemia, toxic chemicals, vascular insufficiency, or autoimmune responses such as those with MS. A summary of the pathological process that occurs when myelin is damaged is as follows (National MS Society, 2020a; Rebar et al., 2019):

- When myelin is damaged the myelin sheath becomes inflamed.
- Inflammation causes the membrane layers of the myelin sheath to break into smaller components.
- The smaller components become circumscribed plaques, which are filled with lymphocytes, microglial elements, and macroglia. This is referred to as demyelination.
- The damaged myelin sheath is unable to appropriately transport messages to the brain. Messages within the CNS are either altered or stopped completely.
- Damage to areas of the CNS produce various neurological symptoms that vary in type and severity.
- Damaged areas develop scar tissue. Areas are multiple, which leads to the name of the disease: multiple sclerosis.

Assessment and Diagnosis

To date, there are no signs, symptoms, physical findings, or laboratory tests that can make a definitive diagnosis of MS. Diagnosis is made based on the findings of a careful physical and mental examination/history, a neurologic exam, lab studies, and imaging studies (National MS Society, 2021).

Before MS can be diagnosed, other causes must be excluded since there are many causes of neurological signs and symptoms. For some people, the diagnostic process may be fairly rapid. For others, it may take quite a bit longer. Waiting for a diagnosis is stressful and frightening. It is crucial that a diagnosis be made as accurately and as quickly as possible so that patients can begin to adjust to the reality of having the disease and treatment can begin as early as possible (National MS Society, 2021).

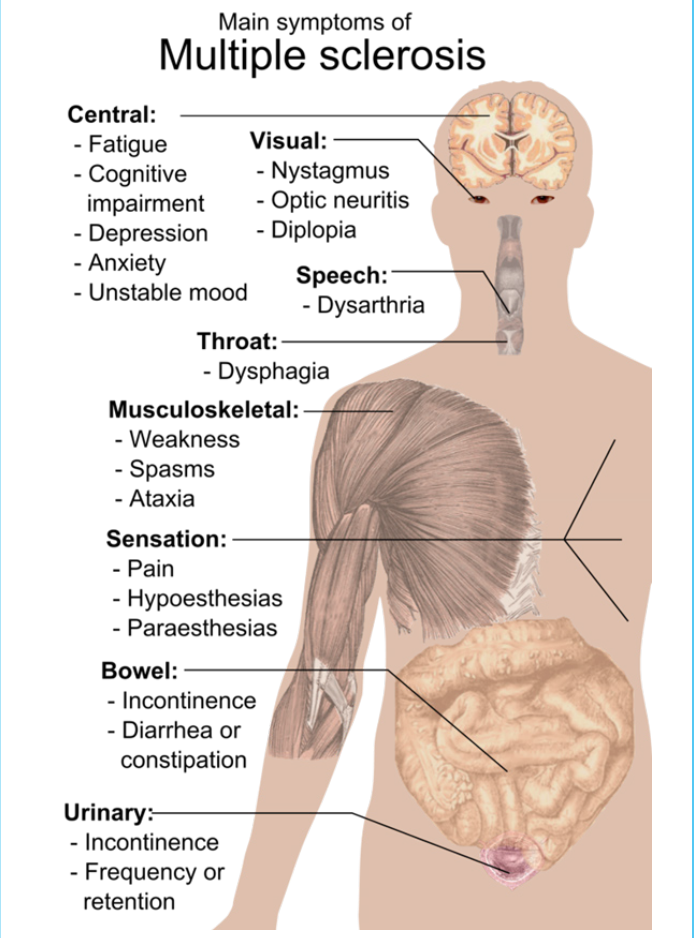
Signs and Symptoms. Assessment of signs and symptoms can be challenging because they are both unpredictable and hard for the patients to describe. Signs and symptoms may be transient or may last for hours or weeks. Typically, there are two general categories of initial symptoms: vision problems (because of optic neuritis) and sensory impairment such as paresthesia (Rebar et al., 2019).

Patients experience a variety of signs and symptoms including the following (Rebar et al., 2019):

- Vision issues such as blurred vision, scotoma, ophthalmoplegia.
- Emotional lability.
- Dysphagia.
- Poorly articulated speech.
- Muscle weakness.
- Muscle spasticity.
- Hyperreflexia.
- Urinary problems.
- Intention tremors.
- Ataxia.
- Bowel problems.
- Cognitive dysfunction.
- Fatigue.
- Varying degrees of paralysis.

Figure 5 provides an overview of the main symptoms of MS.

Figure 5. Main Symptoms of Multiple Sclerosis



Note. From Häggström, 2014

Blood and Imaging Tests. The following tests, while not definitive, can help to make the diagnosis of MS (Mayo Clinic, 2020b; Rebar et al., 2019):

- **MRI**: MRI is the most sensitive method to identify areas of MS lesions on the brain and spinal cord. It is also used to evaluate the progression of the disease.
- **Lumbar puncture**: A sample of cerebrospinal fluid can show elevated immunoglobulin G levels, but normal protein levels. This is significant only when serum gamma O levels are normal, and it reflects immune system hyperactivity because of chronic demyelination. The WBC count may be slightly elevated. Results of a lumbar puncture can help to rule out infections and other disorders with signs and symptoms similar to MS.
- **Evoked potential tests**: These tests record electrical activity produced by the CNS. CNS damage may cause slowing of electrical conduction.
- **Blood tests**: Blood tests help to rule out other disorders with signs and symptoms similar to those of MS. Blood tests may also be used to check for specific biomarkers associated with MS.

Diagnostic Criteria: The Revised McDonald Criteria, published in 2017 by the International Panel on the Diagnosis of Multiple Sclerosis, includes guidelines for using findings from MRIs and lumbar puncture. These can help to speed up the diagnostic process (National MS Society, 2021).

According to these criteria, in order to make a diagnosis of MS there must be (National MS Society, 2021):

- Evidence of damage in at least two separate areas of the CNS.
- Evidence that the damage occurred at different points in time.
- Elimination of all other possible diagnoses.

Risk Factors. There are a number of risk factors associated with MS that may be used in the diagnostic process. These include the following (Mayo Clinic, 2020b):

- **Age**: Although MS can occur at any age, its onset typically occurs around the ages of 20-40 years of age.
- **Certain autoimmune diseases**: A higher risk of MS is associated with people who have other autoimmune disorders such as thyroid disease, type 1 diabetes, or inflammatory bowel disease.
- **Certain infections**: Viral infections have been linked to MS development. An example is infection with the Epstein-Barr virus, which causes infectious mononucleosis.
- **Climate**: MS is more common in countries with temperate climates, including the northern US, Canada, New Zealand, Europe, and southeastern Australia.
- **Race**: Whites, especially those of Northern European ancestry, have the greatest risk of developing MS. People of Asian, African American, or Native American descent have the lowest risk.
- **Family history**: Risk increases if one's parents or siblings were diagnosed with MS.
- **Sex**: Research shows that women are more than two to three times as likely as men to have relapsing-remitting MS.
- **Smoking**: Research shows that smokers are more likely than non-smokers to have a second event that confirms a diagnosis of relapsing-remitting MS.
- **Vitamin D**: Low levels of vitamin D and low exposure to sunlight increases the risk of MS.

Complications. Complications associated with MS include the following (Mayo Clinic, 2020b):

- Muscle stiffness and spasticity.
- Paralysis.
- Bowel and bladder problems.
- Sexual dysfunction.
- Mental changes such as forgetfulness and/or mood swings.
- Depression.
- Epilepsy.

Treatment

Treatment goals are to shorten exacerbations, relieve neurologic deficits (if possible), and facilitate the maintenance of maximum health and wellness (Rebar et al., 2019). To date, MS treatment falls into three categories: abortive therapies, preventive therapies, and symptomatic therapies (Johns Hopkins Medicine, n.d.).

Abortive Therapies. An MS exacerbation is defined as "new or returning neurological symptoms that have evolved over at least 24-48 hours and have not been provoked by a metabolic cause, such as a fever" (Johns Hopkins Medicine, n.d.).

For acute exacerbations of symptoms, steroids may be prescribed to shorten both the duration and the intensity of the attack. The typical regimen involves intravenous administration of methylprednisolone once a day for 3 to 5days. Intravenous therapy may be followed with oral steroids such as oral prednisone. These oral steroid pills are given in tapering doses for an additional 1 to 2 weeks (Johns Hopkins Medicine, n.d.; Mayo Clinic, 2020b).

Plasma exchange (plasmapheresis) may also be used during acute attacks following steroid therapy. During plasmapheresis, blood plasma is removed from the body and separated from the blood cells. The blood cells are mixed with albumin and returned to the body. Plasmapheresis is most often used if patients' symptoms are new, severe, and have not responded to steroids (Johns Hopkins Medicine, n.d.; Mayo Clinic, 2020b).

Preventive Therapies. The Food and Drug Administration (FDA) has approved, to date, a number of preventive therapies to reduce the frequency and severity of exacerbations or to treat worsening MS (Johns Hopkins Medicine, n.d.).

The FDA-approved preventive therapies include the following (Johns Hopkins Medicine, n.d.; Rebar et al., 2019):

- **Interferon beta-1-a**: This beta interferon is given once a week by intramuscular (IM) injection or beta interferon administered via injection under the skin three times a week.

- **Interferon beta-1b**: This therapy may be administered via injection every other day. Frequency depends on specific therapy and patient needs.

Nursing consideration: Interferon betas have various side effects. In addition to redness and discomfort at the injection site, side effects include fever, chills, achiness, fatigue, depression, and changes in liver function. While patients are receiving interferon, they need to be monitored for changes in liver function on a regular basis. All interferons work by interfering with the immune system's ability to cause inflammatory processes (Johns Hopkins Medicine, n.d.).

- **Glatiramer acetate**: This drug is a synthetic protein that is similar to a component of myelin. Given subcutaneously, glatiramer acetate is believed to work by modifying the immune system so that it produces more anti-inflammation immune cells. Side effects include redness, swelling, and itching at the injection site. A small number of patients may experience a "post injection reaction," which is a brief period of flushing, racing of the heart, feeling faint, and shortness of breath.
- **Natalizumab**: Natalizumab is a monoclonal antibody administered intravenously once every 4 weeks. This drug is believed to work by preventing lymphocytes from entering the CNS. Natalizumab may produce a rare, but serious, possibly fatal, infection of the brain called progressive multifocal leukoencephalopathy (PML).
- **Mitoxantrone**: Mitoxantrone is a chemotherapeutic drug that is used for patients experiencing worsening forms of relapsing MS and secondary progressive MS. It is given intravenously every 3 months. The potential for toxicity is high, so patients may receive a limited number of doses throughout their lifespan. The drug is believed to work by suppressing the immune system to reduce the number of immune cells that might be causing inflammation. Mitoxantrone is associated with cardiotoxicity.

There are also a number of oral medications administered to reduce relapse rates. These include the following (Comerford & Durkin, 2021; Mayo Clinic, 2020b):

- **Fingolimod (Gilenya)**: This drug is taken once daily. The patient's heart rate and blood pressure are monitored for 6 hours after the first dose because there is the potential for reduction in heart rate. Additional side effects include infections, headaches, hypertension, and blurred vision.
- **Teriflunomide (Aubagio)**: This is an oral medication taken once daily to reduce relapse rates. Teriflunomide can cause liver damage and hair loss, when taken by men or women or birth defects in the infants of pregnant women . Contraception should be used while taking this medication and up to 2 years afterward.
- **Siponimod (Mayzent)**: Siponimod can help to reduce the rate of relapse and slow progression of MS. It is also approved for use in secondary-progressive MS. This drug is harmful to a developing fetus. Contraception is advised while taking this medication and for 10 days after the medication is discontinued. Associated side effects include viral infections, liver dysfunction, and low WBC counts. Changes in heart rate, headaches, and vision problems may also occur.
- **Cladribine (Mavenclad)**: Cladribine is usually prescribed as a second line treatment for patients with relapsing-remitting MS as well as for secondary-progressive MS. It is administered in two treatment courses spread over a 2-week period over a period of 2 years. This drug is contraindicated in patients who have chronic infections, cancer, or who are pregnant or breastfeeding. Both men and women should use contraception while taking this drug and for 6 months after the medication is stopped. Side effects include upper respiratory infections, headaches, tumors, serious infections, and reduced levels of WBCs.

Symptomatic Therapies. Certain medications may be administered to control symptoms. Such medications include drugs for bladder issues, antidepressants, vertigo, and fatigue (Rebar et al., 2019).

Medications are not the only treatment initiative for patients with MS. It is important that an interdisciplinary team approach be used in the treatment of patients. Additional treatment initiatives may include the following:

- Physical therapy.
- Occupational therapy.
- Speech-language therapy.
- Neuropsychology therapy.

Complementary Medicine. Many people with MS use various alternative or complementary therapies to help manage systems. Complementary therapies include the following (Mayo Clinic, 2020b):

- Exercise.
- Meditation.
- Yoga.
- Massage.
- Acupuncture.
- Relaxation techniques.

Research findings suggest that maintaining adequate levels of vitamin D may have a protective effect and may lower the risk of developing MS. Some experts consider vitamin D supplementation as a modifiable risk factor for MS development (Mayo Clinic, 2021e).

Daily intake of vitamin D3 of 2,000-5,000 international units daily is recommended for patients with MS (Mayo Clinic, 2020b). However, it is important to note that very large doses of vitamin D over a long period of time may lead to toxicity. Signs and symptoms of vitamin D toxicity include nausea, vomiting, constipation, reduced appetite, weakness, and weight loss. Toxicity can also cause increased levels of blood calcium, which, in turn, can cause kidney stones (Mayo Clinic, 2021e).

Nursing Interventions

As mentioned throughout this education program, nurses often take the lead in medication administration education. Patients and families both need education regarding medication administration. Nurses should emphasize the importance of adhering to the prescribed regimen and how to recognize and report side effects (Comerford & Durkin, 2021).

Providing emotional support is critical. Patients' mental health should be monitored and appropriate interventions and referrals to mental health professionals made.

Family members/caregivers should also be monitored for mental health issues since they, too, are under emotional stress (Rebar et al., 2017).

- Educate and support patients and family with the following recommendations (Mayo Clinic, 2021b).
- Encourage patients to maintain normal daily activities as able.
- Encourage patients to interact and maintain contact with family and friends, but to avoid those with infections or contagious diseases while taking immunosuppressing medications
- Encourage patients to pursue hobbies that they enjoy and are able to do.
- Facilitate connections with support groups.
- Encourage patients and families to discuss feelings and concerns regarding living with MS.
- Explain that it is important for patients and families to monitor signs and symptoms, what causes them to become worse, and what, if anything, helps to reduce the symptoms.
- Explain that patients and families should write down questions and concerns to ask the healthcare team in order to avoid forgetting important issues.
- Encourage patients to bring a family member or friend with them when they have appointments with healthcare team members.

Self-Assessment Question 6

A patient who has MS also has cardiac disease. Which of the following drugs would probably NOT be appropriate for this patient?

a. Mitoxantrone.
b. Teriflunomide.
c. Natalizumab.
d. Cladribine.

Psoriasis

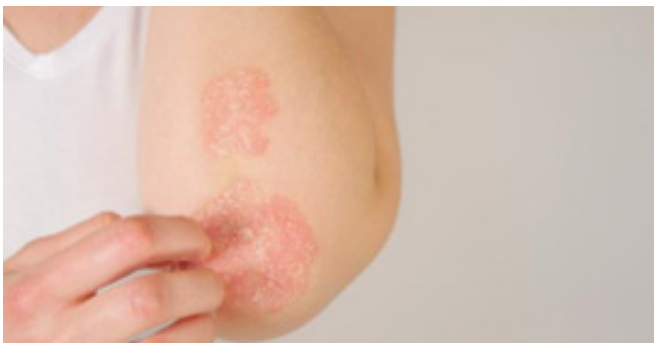
Psoriasis is a chronic autoimmune skin disease characterized by an acceleration of the growth cycle of skin cells. Although psoriasis can be treated, there is no cure. A dermatologist is often the best healthcare provider to diagnosis psoriasis because it has been confused with other skin disease, such as eczema (CDC, 2020b).

Psoriasis is characterized by raised, red, itchy, scaly patches on various parts of the body. Psoriasis patches can range from a few spots of dandruff-like scaling to major plaques that cover large areas. The areas most commonly affected are the lower back, elbows, knees, legs, soles of the feet, scalp, face, and palms (Mayo Clinic, 2020c).

An estimated 125 million people throughout the world (two to three percent of the total population) have psoriasis. In the US, more than three percent of the adult population is affected by psoriasis; this translates to more than 7.5 million adults (National Psoriasis Foundation, 2021).

Figure 6 is a picture of the characteristic patches on the skin of a patient with psoriasis.

Figure 6. Psoriasis Skin Patches



Note. image from Unsplash opensource

Pathophysiology

Psoriasis is a complex disease that appears to be influenced by genetic and immune-mediated facets. The exact trigger or triggers of the disease are unknown, but experts believe that triggers may include an infectious episode, traumatic insult, or stressful life events. Once triggered, a substantial number of leukocytes gather at the dermis and epidermis, which leads to characteristic psoriatic plaques. Many patients, however, have no obvious trigger (Habashy, 2021).

Possible Triggers. Many patients who are vulnerable to the development of psoriasis may be free of signs and symptoms for years until the disease is triggered by various environmental factors (Mayo clinic, 2020c). Common triggers include the following (Mayo Clinic, 2020c):

- Infections such as bacterial or skin infections.
- The weather, particularly a cold, dry environment.
- Injury to the skin such as severe sunburn, lacerations, or bug bites.
- Stress.
- Smoking as well as exposure to second-hand smoke.
- Heavy alcohol consumption.
- Certain medications such as lithium, anti-hypertensive medications, and antimalarial drugs.
- Swift withdrawal of oral or systemic corticosteroids.

Psoriasis can develop in anyone. An estimated 33% of cases begin in the pediatric years. The following factors increase risk of psoriasis (Mayo Clinic, 2020c:.

- **Family history**: Having one parent with psoriasis increases risk. If both parents have psoriasis, the risk increases even higher.
- **Stress**: Since stress can impact the immune system, high levels of stress may increase the risk of disease development.
- **Smoking**: Smoking tobacco products increases risk and may also increase the severity of the disease. Smoking may even play a part in the initial development of the disease.

Complications. Psoriasis increases the risk of developing other diseases including the following (Mayo Clinic, 2020c):

- Eye conditions such as conjunctivitis and blepharitis.
- Obesity.
- Type 2 siabetes.
- Hypertension.
- Cardiovascular disease.
- Other autoimmune diseases such as inflammatory bowel disease.
- Mental health disorders such as depression.

Pathogenesis. The epidermis is infiltrated by large numbers of activated T cells. These T cells seem to be capable of causing keratinocyte proliferation. Psoriatic plaques reveal large amounts of T cells within the psoriasis lesions. An uncontrolled inflammatory process occurs. Important findings in the affected skin include vascular engorgement because of superficial blood vessel dilation and a changed epidermal cell cycle (Habashy, 2021).

Assessment and Diagnosis

Patients are assessed for characteristic signs and symptoms of the disease and possible other causes of these signs and symptoms are investigated. It is important to rule out other skin conditions before making a diagnosis of psoriasis (Habashy, 2021).

Signs and Symptoms. There are several types of psoriasis. During patient assessment, it is important to differentiate among the various psoriasis types. These include the following (Mayo Clinic, 2020c):

- **Plaque psoriasis**: Plaque psoriasis is the most common type of psoriasis. It is characterized by dry, raised, red skin patches that are covered with silver-looking scales. The most common sites affected are elbows, knees, lower back, and scalp.
- **Guttate psoriasis**: Guttate psoriasis typically affects children and young adults. It is often triggered by a bacterial infection (e.g., strep throat) and is characterized by small, scaling lesions shaped like drops that are located on the trunk, arms, or legs.
- **Inverse psoriasis**: Inverse psoriasis usually affects the skin folds of the groin, buttocks, and breasts. It is characterized by smooth, red patches of skin. These patches become worse with friction and sweating. It is suspected that fungal infections trigger inverse psoriasis.
- **Nail psoriasis**: Nail psoriasis is characterized by pitting, abnormal nail growth, and discoloration. Affected nails may loosen and separate from the nail bed (onycholysis). Severe cases of nail psoriasis may cause affected nails to crumble.

- **Psoriatic arthritis**: Psoriatic arthritis is characterized by swollen, painful joints that are the typical signs of arthritis. Symptoms range from mild to severe. Psoriatic arthritis can affect any joint and causes stiffness and progressive joint damage. The joint damage may be permanent.
- **Pustular psoriasis**: Pustular psoriasis is a rare form of the disease. It is characterized by well-defined lesions that are filled with pus. These lesions are widespread patches or occur in smaller areas on the palms of the hands or the soles of the feet.
- **Erythrodermic psoriasis**: This is the least common type of psoriasis. Erythrodermic psoriasis can cover the whole body with a red, peeling rash, which can burn or itch intensely.

Common, general signs and symptoms of psoriasis are (Mayo Clinic, 2020c):
- Red patches of skin that are covered with thick, silvery scales.
- Small scaling spots that are commonly seen in children.
- Skin that is dry and cracked, and may bleed.
- Itching, burning, or soreness.
- Thick, pitted, or ridged nails.
- Joints that are swollen and stiff.

Diagnostic Tests. Laboratory studies and findings for patients with psoriasis may include the following (Habashy, 2021):
- Rheumatoid factor (RF) to differential psoriatic arthritis from rheumatoid arthritis. It is negative in psoriasis.
- Erythrocyte sedimentation rate (RF) is negative .
- Uric acid level may be elevated, especially with pustular and erythrodermic psoriasis.
- Fluid from pustules is sterile with neutrophilic infiltrate.
- Fungal studies may show infection.

Various other tests may be ordered to identify psoriasis. A biopsy of the skin lesion may show basal cell hyperplasia, absence of normal cell maturation, and keratinization. A considerable number of activated T cells are found in the epidermis. Joint x-rays can hasten the diagnosis of psoriatic arthritis. Bone scans are used for the early recognition of joint involvement (Habashy, 2021).

Treatment

Treatment of psoriasis is individualized to each patient. The goals of treatment are to relieve pain, remove scales, reduce swelling, maintain joint functioning, and prevent additional damage to joints (National Psoriasis Foundation, n.d.).

Topicals. Topical medications are typically the first treatment recommended to someone who is newly diagnosed. Topical medications can be purchased over the counter or by prescription (National Psoriasis Foundation, n.d.).

The following is a summary of topical therapy medications (Comerford & Durkin, 2021; Mayo Clinic, 2020c; National Psoriasis Foundation, n.d.):
- **Corticosteroids**: Topical steroids are one of the most common topical treatments for psoriasis. They come in a variety of ranges from very strong to very weak. Corticosteroids are available as ointments, creams, lotions, gels, foams, sprays, and shampoos. Topical corticosteroids are typically applied once daily during exacerbations and on alternate days or weekends to maintain remission. Mild corticosteroid ointments (e.g., hydrocortisone) may be purchased over the counter. However, prescription creams or ointments may be needed. Examples of prescription corticosteroids include triamcinolone (Trianex) and clobetasol (Clobex).

Nursing consideration: Patients should be advised to apply only a small amount of the steroid on affected areas only; not to use a topical steroid for longer than 3 weeks without the approval of healthcare providers; not to abruptly discontinue a topical steroid because it may cause a psoriasis exacerbation; avoid using steroids in or around the eyes unless the medication is specifically for the eyes; know that the more potent the steroid, the more effective it is, but the risk of side effects is greater (National Psoriasis Foundation, n.d.).

- **Vitamin D analogues**: Synthetic forms of vitamin D are prescribed to slow skin cell growth.
- **Calcineurin inhibitors**: Calcineurin inhibitors (e.g., tacrolimus [Protopic]) reduce both inflammation and plaque build-up. These medications are particularly useful in treating delicate areas of thin skin such as around the eyes.
- **Coal tar**: Coal tar is given to reduce scaling, itching, and inflammation. It comes in over-the-counter and prescription formats such as shampoo, cream, and oil. Unfortunately, these products can cause skin irritation, stain clothing and bedding, and have a strong odor. Coal tar is contraindicated for pregnant women and for those who are breastfeeding.
- **Goeckerman therapy**: This is a combination of coal tar treatment and phototherapy (light therapy). This combined treatment is more effective than either of them alone.

Phototherapy. There are various types of phototherapies (light therapy) used in the treatment of psoriasis. The following list provides descriptions of some of the types of phototherapies used in the treatment of psoriasis:
- **Sunlight**: Brief, daily exposures to sunlight (heliotherapy) might improve psoriasis, but precautions should be taken. Before beginning treatment with sunlight, healthcare providers should be consulted about the most effective and the safest way to expose skin to the sun (Mayo Clinic, 2020c).
- **UVB phototherapy**: This treatment involves exposing affected skin to an artificial UVB light source for an established length of time or a regular basis. UVB phototherapy can be administered in the healthcare provider's office, outpatient clinic, or at home with a phototherapy unit (National Psoriasis Foundation, n.d.).
- **Psoralen plus ultraviolet A (PUVA)**: PUVA treatment involves taking a light-sensitizing medication (psoralen) before exposure to UVA light. This light penetrates deeper into the skin than does UVB light. Psoralen increases the skin's response to UVA exposure (Mayo Clinic, 2020c).
- **Excimer laser**: With this type of phototherapy, a strong UVB light specifically targets only the affected skin. Excimer laser therapy requires fewer treatment sessions than traditional phototherapy because a more powerful UVB light is used (Mayo Clinic, 2020c).

Oral or Injected Medications. If the patient has moderate to severe psoriasis that has not responded to other treatments, oral or injected medications may be prescribed. Severe side effects may occur, so these medications are only used for brief periods of time and might be alternated with other forms of treatment (Mayo Clinic, 2020c).

Oral and injected medications include the following (Comerford & Durkin, 2021; Mayo Clinic, 2020c; National Psoriasis Foundation, n.d.):
- **Steroids**: A few small and persistent psoriasis patches may be treated with a steroid injection directly into lesions.
- **Retinoids**: Retinoids are oral medications given to decrease skin cell production. These types of drugs are not recommended for females or for those who are breastfeeding.
- **Methotrexate**: Methotrexate is typically administered as a single oral dose. This drug works by decreasing skin cell production and suppressing inflammation. Both men and women should stop taking methotrexate at least 3 months before trying to conceive.
- **Biologics**: Biologics such as infliximab (Remicade) are used for patients who have moderate to severe psoriasis and have not responded to first-line therapies. They are usually given by injection. It is important that biologics be administered with caution. They may suppress the immune system to the point that increases the risk of serious infections. Patients must be screened for tuberculosis. Biologics are expensive and may or may not be covered by health insurance.

Alternative/Complementary Interventions. Several alternative therapies may be used to ease psoriasis signs and symptoms. None have been proved to be effective by scientific research, but they are generally safe and may reduce symptoms in patients with mild to moderate psoriasis (Mayo Clinic, 2020c).

Examples of alternative therapies include the following (Mayo Clinic, 2020c):

- **Aloes extract cream**: This cream may reduce redness, inflammation, scaling, and itching. Aloe extract cream is typically applied several times a day. Patients should know that it may take a month or more to notice improvement.
- **Fish oil supplements**: Fish oil supplements used in conjunction with UVB therapy may reduce the amount of skin that is affected. Typically, fish oil is applied to the affected skin and covered with a dressing for 6 hours a day for 4 weeks.
- **Essential oils**: Essential oils used for aromatherapy (e.g., lavender) have been associated with stress and anxiety reduction.

Nursing consideration: Patients must be cautioned that before adding alternative therapies to their treatment regimens they must consult with their healthcare providers.

Nursing Interventions

Nursing interventions include, as always, patient/family education regarding medication and other aspects of the treatment regimen. Nurses should assess the patients' support network. It is important that they have the support of family and friends (Rebar et al., 2019).

Patients also need to know that self-care measures are available. With the approval of the healthcare providers, nurses can explain the value of the following lifestyle and home remedies (Mayo Clinic, 2020c):

- **Daily baths**: Daily baths help to remove scales as well as calm inflamed skin. Bath oil, colloidal oatmeal, and Epsom salts can be added to the water, and patients should soak in this water for at least 15 minutes. Lukewarm water and mild soaps that have additional oils and fats are recommended.
- **Moisturizers**: After gently patting nearly dry, a heavy ointment-based moisturizer should be applied when the skin is still moist. If moisturizing has positive results, a moisturizer may be applied one to three times a day.
- **Overnight coverage**: An ointment-based moisturize should be applied to the affected skin and wrapped with plastic wrap before going to bed. Upon awakening, the plastic wrap is removed and scales are washed away.
- **Medicated ointments**: To reduce itching and inflammation, over-the-counter hydrocortisone creams may be applied to the affected skin.
- **Triggers**: Patients should identify personal triggers and make plans to avoid them. Infections, stress, and smoking can exacerbate signs and symptoms.
- **Alcohol**: Alcohol may interfere with the effectiveness of treatment regimens. Alcohol should be avoided.

Self-Assessment Question 7

A nurse is conducting a patient/family education session for a patient recently diagnosed with psoriasis. The topic of discussion is medication. Which of the following statements would be appropriate to tell the patient and family?

a. Vitamin D Analogues are prescribed to decrease itching.
b. Coal tar is contraindicated for pregnant women.
c. Biologics are prescribed for patients with mild psoriasis.
d. Methotrexate is typically administered daily for 6 weeks.

Rheumatoid arthritis (RA)

Rheumatoid arthritis is a chronic, systemic, inflammatory disorder that usually affects the joints, the cervical spine, and surrounding muscles, tendons, ligaments, and blood vessels (Rebar et al., 2019). In some people RA can damage a number of body systems, including the skin, eyes, lungs, heart, and blood vessels (Mayo Clinic, 2021b).

The annual incidence of RA on a global scale is about three cases per 10,000 population. The prevalence rate is about one percent. Prevalence increases with age, peaking between the ages of 35 and 50 years.

RA affects all populations but is thought to be more prevalent in some groups (e.g., Native Americans) and less prevalent in others (e.g., dark-skinned persons from the Caribbean region; Smith, 2021b).

In the US, various types of arthritis are quite prevalent. Osteoarthritis is the most common form of arthritis. Gout, fibromyalgia, and RA are other common rheumatic conditions in the US (CDC, 2021b).

The CDC (2021b) has compiled and published the following arthritis related statistics:

- From 2013-2015, an estimated 58.5 million US adults (22.7%) annually had ever been told by a doctor that they had some form of arthritis.
- Prevalence by age: From 2013 to 2015 in the US:
  - Of people aged 18 to 44 years, 7.1% ever reported doctor-diagnosed arthritis.
  - Of people aged 45 to 64 years, 29.3% ever reported doctor-diagnosed arthritis.
  - Of people aged 65 years or older, 49.6% ever reported doctor-diagnosed arthritis.
- From 2013 to 2015 in the US, 26% of women and 19.1% of men ever reported doctor-diagnosed arthritis.
- Adults aged 18 years or older who are overweight or obese report doctor-diagnosed arthritis more often than adults with a lower body mass index (BMI).
- More than 16% of under/normal weight adults report doctor-diagnosed arthritis.
- Almost 23% of overweight and 31% of obese US adults report doctor-diagnosed arthritis.
- In 2015, 15 million adults reported severe joint pain because of arthritis.
- Arthritis and other rheumatic conditions are a leading cause of work disability among US adults.
- One in 25 working-age adults aged 18 to 64 years face work limitations they attribute to arthritis.
- Arthritis limits the activities of 23.7 million US adults.
- Adults with arthritis were about 2.5 times more likely to have two or more falls and suffer a fall injury in the past 12 months compared with adults without arthritis.
- In 2013, the national costs of arthritis were $304 billion.

Regarding RA statistics in the US, it is estimated that RA affects between 1.28 and 1.36 million Americans. Women are affected more often than men, and its peak onset is highest in people in their sixties (Rebar et al., 2019).

Pathophysiology

Pathogenesis. The pathogenesis of RA is not completely understood, but infections, genetics, and endocrine factors may influence its development (Rebar et al., 2019). An external trigger such as cigarette smoking, infection, or trauma may set off an autoimmune reaction, which leads to synovial hypertrophy and chronic joint inflammation. There is also potential for extra-articular manifestations to develop in individuals who are genetically susceptible (Smith, 2021a). Susceptible people may develop abnormal or altered IgG antibodies. The person's immune system does not recognize these antibodies as "self" and forms an antibody (the rheumatoid factor) against the person's own antibodies.

The rheumatoid factor causes inflammation, which leads to cartilage damage (Rebar et al., 2019).

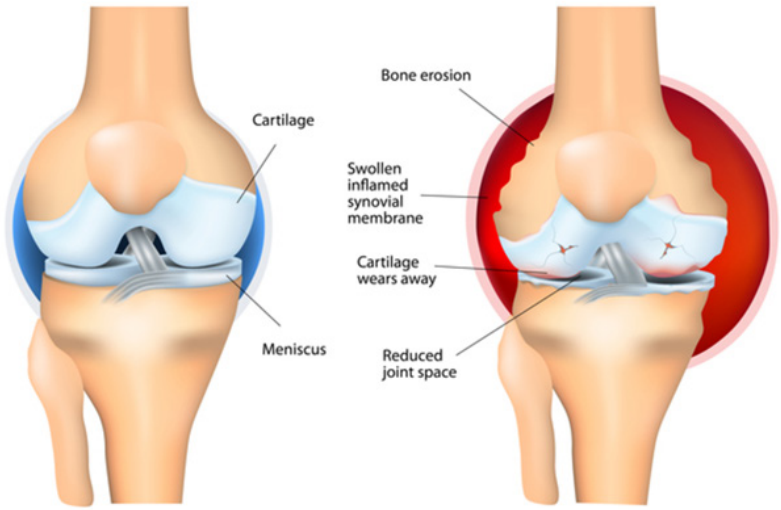
Joint inflammation occurs in four stages (Rebar et al., 2019; Smith, 2021a):

- **Phase 1**: Interaction occurs between genetic and environmental risk factors of RA. Initial inflammation in the joint capsule occurs in conjunction with swelling of the synovial tissue. This causes joint pain, swelling, and stiffness.
- **Phase 2**: RA antibodies are produced. Pannus (thickened layers of granulation tissue) covers and invades cartilage, eventually destroying the joint capsule and bone.

- **Phase 3**: This stage is characterized by arthralgia (joint stiffness), fibrous ankylosis, bone atrophy, and misalignment that causes visible deformities.
- **Phase 4**: This stage is characterized by fibrous tissue calcification, which leads to bony ankylosis (joint fixation). Pain, restricted joint movement, soft-tissue contractures, and joint deformities are evident.

Figure 7 shows the joint damage caused by RA.

Figure 7. Rheumatoid Arthritis



Note. From National Library of Medicine U.S., 2013.

Etiology. The exact cause of RA is not known. However, experts propose that genetic, environmental, hormonal, immunologic, and infectious factors may contribute to its development (Smith, 2021a).

The following descriptions show how contributing factors may contribute to RA development (Smith, 2021a):

- **Genetics**: Genetic factors account for 50% of the risk of developing RA. Various genes are thought to contribute to the development of RA.
- **Infectious agents**: Various infectious pathogens have been suggested to be possible causes of RA. These include the rubella virus and the Epstein-Barr virus (EBV). The proposal that infectious pathogens can be a cause of RA is supported by the following:
  - Reports of flulike illnesses before the start of RA.
  - The ability to produce RA in experimental animals using various bacteria.
  - The presence of bacterial products in patients' joints
- **Hormonal factors**: Sex hormones may play a part in the development of RA. Evidence to support this includes the disproportionate number of females with RA, improvement of signs and symptoms during pregnancy, and their recurrence after giving birth.
- **Lifestyle factors**: The main lifestyle contributory possible cause is the use of tobacco. Risk of developing RA is significantly higher in people who use tobacco.

Nursing consideration: Patients and families should be aware that in former smokers, the risk for RA may not return to the level of non-smokers for up to 20 years after ceasing to smoke (Smith, 2021a).

- **Immunologic factors**: The autoimmune response possibly triggers the formation of immune factors that activate the inflammatory process to a significantly greater degree than is normal.

Risk Factors. A number of risk factors are associated with the development of RA. These include the following (CDC, 2020a; Mayo Clinic, 2021b):

- **Sex**: New cases of RA are usually two to three times higher in women compared to men.
- **Age**: Although RA can begin at any age, occurrence increases with age. Onset of RA is highest among adults in their sixties.
- **Inherited traits**: People born with genes called human leukocyte antigen (HLA) class II genotypes are more likely to develop RA. These genes can also make RA worse. The risk may be highest when people with these genes are exposed to environmental factors such as tobacco use, or when the person is obese.
- **Smoking**: Tobacco use increases risk of developing RA and can also make the disease worse.
- **History of live births**: Women who have never given birth may be at greater risk for developing RA.
- **Exposures early in life**: Research suggests that some early life exposures may increase the risk of developing RA in adulthood. One study found that children whose mothers had smoked had twice the risk of developing RA as adults. Children of lower income parents also seem to be at increased risk of developing RA.
- **Obesity**: Research shows that the more overweight a person is, the greater the risk of developing RA.

Evidence-based practice! Research shows that women who have breastfed their infants have a decreased risk of developing RA (CDC, 2020a).

Self-Assessment Question 8

Which of the following people is most likely to develop RA?

a. A man in his sixties.
b. A woman who has given birth to three children.
c. A woman who smokes one pack of cigarettes per day.
d. A man who is underweight.

Complications. RA increases the risk of developing several complications. These include the following (Mayo Clinic, 2021b):

- **Osteoporosis**: RA and medications used to treat RA can increase the risk of osteoporosis.
- **Rheumatoid nodules**: These firm tissue nodules are usually found around pressure points. However, these nodules can form anywhere in the body, even in the heart and lungs.

- **Dry eyes and mouth**: RA increases the risk of developing Sjogren's syndrome, which is a disorder that decreases the amount of moisture in the eyes and mouth.
- **Infections**: RA and medications used in its treatment can impair the immune system, which leads to increased risk of infections. Patients are urged to get recommended vaccines such as influenza, pneumonia, shingles, and COVID-19.
- **Body composition**: The ratio of fat to lean body mass is often higher in people with RA. This is true even for persons who have a normal body mass index (BMI).
- **Carpal tunnel syndrome**: If RA affects the patient's wrists, the resulting inflammation can compress the nerves that serve the hands and fingers.
- **Cardiac issues**: RA increases the risk of atherosclerosis and arteriosclerosis. RA can also cause inflammation of the pericardium.
- **Lung disease**: People who have RA have an increased risk of inflammation and scarring of lung tissue. This can compromise respiratory status.
- **Lymphoma**: RA increases the risk of lymphoma.

Assessment and Diagnosis

Assessment. The primary characteristic of RA is persistent polyarthritis (synovitis) that affects any joint lined by a synovial membrane. In many patients, RA has an insidious onset (Smith, 2020a). Initially, patients may complain of non-specific symptoms that are seen in multiple disorders. These symptoms include fatigue, malaise, anorexia, low-grade fever, and weight loss. As the inflammatory process progresses, more specific symptoms develop (Rebar et al., 2019).

Nursing consideration: About 10% of patients with RA experience an abrupt onset with acute development of synovitis as well as extra-articular manifestations (Smith, 2021a).

During physical assessment patients are assessed for the following more specific signs and symptoms (Smith, 2020a):
- Stiffness.
- Tenderness.
- Pain with motion.
- Warmth of affected joints.
- Swelling.
- Deformity.
- Limitations of range-of-motion.
- Extra-articular manifestations.
- Rheumatoid nodules.
- Muscle atrophy.
- As joints and tendons are destroyed, deformities such as ulnar deviation, boutonniere deformation (the middle joint of the injured finger will not straighten, while the fingertip bends back), swan-neck deformity (flexion of the base of the finger, extension of the middle joint, and flexion of the outermost joint), hammer toe deformities (toe is bent at the middle joint, resembling a hammer), and, sometimes, joint ankylosis.

Symptoms usually occur bilaterally and symmetrically, typically involving fingers, wrists, elbows, knees, and ankles (Rebar et al., 2019). Many patients have muscle atrophy secondary to joint inflammation (Smith, 2021a).

Diagnostic Tests. No test specifically identifies RA. However, the following tests may be useful in making a diagnosis (Rebar et al., 2019):
- X-rays may show bone demineralization and soft tissue swelling.
- A rheumatoid factor is often positive in patients with RA. A positive test is indicated by a value of less than 60 units/ml.
- Analysis of synovial fluid shows an increase in volume and turbidity but decreased viscosity and complement levels. WBC count is often greater than 10,000/mm3.
- Serum protein electrophoresis may show an elevation in serum globulin levels.
- Erythrocyte sedimentation rate (ESR) is elevated in many patients with RA. The ESR helps in the monitoring of patients' response to therapy.

Treatment

There is no cure for RA. Research indicates that symptom remission is more likely when treatment begins early with disease-modifying antirheumatic drugs (DMARDs; Mayo Clinic, 2021b).

Medications. Medications are prescribed based on the severity of the symptoms and how long the patient has had RA. Medications include the following (Comerford & Durkin, 2021; Mayo Clinic, 2021b; Rebar et al., 2019):
- **Nonsteroidal anti-inflammatory drugs (NSAIDs)**: NSAIDs are administered to relieve pain and reduce inflammation. Over-the-counter options include ibuprofen (e.g., Advil) and naproxen sodium (Aleve). Stronger prescription NSAIDs such as celecoxib (Celebrex) may be given with caution. Side effects of prescription NSAIDs include stomach irritation, cardiac issues, and kidney damage.
- **Steroids**: Corticosteroids, such as prednisone, are taken to reduce inflammation and pain as well as to slow joint damage. Side effects of corticosteroids include osteoporosis, weight gain, and diabetes. Therefore, corticosteroids are typically given to quickly relieve symptoms and are gradually tapered off in an attempt to prevent or reduce side effects.
- **Conventional DMARDs**: DMARDs are taken to slow disease progression and to protect the joints and other body tissues from permanent damage. Examples of conventional DMARDs include methotrexate (Otexup), leflunomide (Arava), and hydroxychloroquine (Plaquenil). Side effects may include hepatic damage and severe respiratory infections.
- **Biologic agents**: Also known as biologic response modifiers, biologic agents are a new class of DMARDs. Examples include abatacept (Orencia), certolizumab (Cimzia), and rituximab (Rituxan).

Nursing consideration: Biologic DMARDs are typically most effective when paired with a conventional DMARD (Mayo Clinic, 2021b).

Targeted synthetic DMARDs: If conventional DMARDs and biologics are not effective, targeted synthetic DMARDs may be prescribed. An example is tofacitnib (Xeljanz).

Therapy. Physical and occupational therapies may be prescribed. In addition to keeping joints flexible, patients may be taught to use assistive devices that do not stress painful joints and make performing activities of daily living (ADLs) easier. For example, cutlery with hand grips make cooking and eating easier. Buttonhooks can help to make dressing easier (Mayo Clinic, 2021b).

Surgery. Various surgical procedures may be performed. These include the following (Mayo Clinic, 2021b; Rebar et al., 2019):
- **Synovectomy**: Synovectomy is the removal of the inflamed lining of joints (synovium). The goal of this surgery can help to reduce pain and improve flexibility of joints.
- **Tendon repair**: Inflammation and damage to the joints may cause tendons around the joints to rupture or loosen. Repair of the tendons may be possible with this type of procedure.
- **Joint fusion**: Joint fusion may be performed to stabilize or realign joints for the relief of pain. This procedure is generally performed when joint replacement is not an appropriate option.
- **Total joint Replacement**: This procedure involves the removal of damaged parts of joints and insertion of a prosthesis. Such prostheses are generally made of metal and plastic.

Nursing Interventions

Support for patients with a chronic, potentially disfiguring disease is critical. Nurses need to encourage patients to seek medical help as soon as possible, not only when symptoms first start, but if and when signs and symptoms change. Families must also be involved in and support healthcare visits (Rebar et al., 2019).

In conjunction with the primary healthcare provider and other members of the healthcare team, the following suggestions for symptom management may be provided by nurses (Mayo Clinic, 2020e):

- **Exercise**: Staying physically active is essential to strengthening muscles and keeping joints flexible. Physical therapists may be consulted for the recommendation of specific exercises. No exercise program should be initiated without the knowledge and consent of the primary healthcare provider.
- **Heat or cold therapy**: Warm baths, showers, and heating pads can help to ease pain and joint stiffness. In the event of periods of symptom exacerbation, cold packs rather than heat are recommended to reduce pain and inflammation.
- **Joint support**: Splints are typically used for joint support. Occupational and physical therapists can recommend the splint that is best suited to individual patient needs.
- **Self-help devices**: Several self-help devices may be used to facilitate movement and reduce joint stress. Examples include hand grips, long-handled shoehorns, and raised toilet seats.
- **Healthy lifestyle**: Patients should be encouraged to get enough rest and sleep, avoid tobacco products, adhere to medication regimens, and eat a healthy diet.

Scleroderma

Scleroderma is an autoimmune connective tissue and rheumatic disease. It is characterized by inflammation in the skin leading to patches of tight, hard skin. Scleroderma develops as the result of overproduction and accumulation of collagen in body tissues (Mayo Clinic, 2019). Scleroderma is not contagious, infectious, cancerous, or malignant (Scleroderma Foundation, 2021). Scleroderma can involve multiple body systems or just one area of the body (National Institute of Arthritis and Musculoskeletal and Skin Diseases, 2020).

When scleroderma affects multiple body systems it is referred to as systemic scleroderma (National Institute of Arthritis and Musculoskeletal and Skin Diseases, 2020)..

The estimated incidence of systemic scleroderma in the US is 20 cases per million population. Its prevalence is estimated at 276 cases per million population. Incidence and prevalence of systemic scleroderma in the US has been increasing in the last 50 years (Jimenez, 2020).

Systemic scleroderma is not particularly common. An estimated 75,000 to 100,000 people in the US have the disease. Most patients are women between the ages of 30 and 50 (American College of Rheumatology, 2019). Localized scleroderma is more common in children. Systemic scleroderma is more common in adults. However, scleroderma can develop in every age group from infants to older adults (Scleroderma Foundation, 2021).

Pathophysiology

There are two major classifications of scleroderma: localized scleroderma and systemic sclerosis (SSc). Each classification has its own characteristics and prognosis (Scleroderma Foundation, 2021).

Localized Scleroderma. The changes associated with localized scleroderma are found in only a few places on the skin or muscles. It rarely spreads elsewhere in the body. Usually, localized scleroderma is rather mild (Scleroderma Foundation, 2021).

There are two forms of localized scleroderma: morphea and linear scleroderma (Scleroderma Foundation, 2021).

Morphea. Morphea is characterized by waxy patches on the skin that vary in size, shape, and color. These patches may grow or shrink and may even disappear spontaneously. Skin underneath patches may thicken. Morphea typically develops between the ages of 20 and 50 but is often found in young children (Scleroderma Foundation, 2021).

Linear Scleroderma. This form of localized scleroderma often starts as a streak of hardened, waxy skin. It typically appears on the arm, leg, or forehead. It may form as a long crease on the head or neck that resembles a wound caused by a sword. Linear scleroderma usually involves the deeper layers of the skin as well as the surface layers of the skin. Linear scleroderma typically develops in childhood, and growth of affected limbs may be affected (Scleroderma Foundation, 2021).

Systemic Scleroderma (Systemic Sclerosis). Systemic scleroderma is characterized by changes in connective tissue that occur in many parts of the body. Systemic sclerosis can involve the skin, esophagus, gastrointestinal tract, lungs, kidneys, heart, and other internal organs. The disease can also affect blood vessels, muscles, and joints (Scleroderma Foundation, 2021). Affected tissues become hard and fibrous, leading to functional impairment. There are two major patterns that systemic scleroderma can take-- diffuse or limited patterns (Scleroderma Foundation, 2021).

- **Diffuse scleroderma**: In diffuse scleroderma thickening of the skin occurs at a rapid rate and involves more areas of the skin than the limited disease. People with diffuse scleroderma are at higher risk of developing sclerosis or fibrous hardening of the internal organs.
- **Limited scleroderma**: Limited scleroderma affects about 50% of persons who have scleroderma. It progresses more slowly and is a more benign illness than diffuse scleroderma. Internal issues may evolve, but they are typically less frequent and less severe compared to diffuse scleroderma. However, patients with limited scleroderma can develop pulmonary hypertension, which causes a narrowing of the blood vessels of the lungs, impaired blood flow to the lungs, and shortness of breath.

Risk Factors. Several factors may influence the risk of developing scleroderma. These include the following (Mayo Clinic, 2019):

- **Genetics**: It is possible that gene variations may be a risk factor for the development of scleroderma. A small number of cases of scleroderma seem to run in families. The disease also appears more often in certain ethnic groups. For example, Choctaw Native Americans are more likely to develop scleroderma that affects the internal organs of the body.
- **Environmental triggers**: Research findings indicate that scleroderma symptoms may be triggered by exposure to some viruses, medications, or drugs. Work exposure to harmful chemicals may also increase the risk of scleroderma development.
- **Immune system issues**: As an autoimmune disease, the body's immune system negatively impacts its own connective tissues. In about 15% to 20% of cases, someone who has scleroderma also has symptoms of another autoimmune disease such as lupus or rheumatoid arthritis.

Complications. Scleroderma complications range from mild to severe. These include the following (Mayo Clinic, 2019):

- **Raynaud's Disease**: A form of Raynaud's disease sometimes occurs with systemic scleroderma. Raynaud's disease in these patients can be so severe that impaired blood flow permanently damages fingertip tissue, leading to pits and/or skin sores. In some patients, fingertip tissue may die and amputation may be necessary.
- **Lungs**: If lung tissue is scarred, respiratory function can be impaired, leading to respiratory distress and possible pulmonary hypertension.
- **Kidneys**: If kidneys are impacted by scleroderma, hypertension may occur as well as increased protein levels in the urine. Kidney damage may also cause renal crisis that involves rapid kidney failure.
- **Cardiac**: If the tissue of the heart is scarred, arrhythmias, congestive heart failure, and pericarditis may occur.
- **Teeth**: If scleroderma causes severe facial skin tightening, the mouth may become smaller and narrower. If this occurs, it may be difficult for patients to brush their teeth or have dental work. Frequently, patients do not produce adequate amounts of saliva, which increases the risk of tooth decay.

- **Gastrointestinal system**: Digestive issues may cause heartburn and dysphagia. Cramps, bloating, constipation, or diarrhea may also occur.
- **Sexual dysfunction**: Men may experience erectile dysfunction. In women, sexual lubrication may decrease and the vaginal opening may narrow.

Assessment and Diagnosis

A complete history and physical is conducted. Assessment of patients for various signs and symptoms are a critical part of the assessment and diagnostic process

Signs and symptoms may include the following (Mayo, 2019):

- **Skin changes**: Almost all patients with scleroderma have a hardening and tightening of patches of skin. Patches present as ovals, straight lines, or wide areas that may cover the trunk and limbs. Skin may also appear shiny because it is so tight. There may be restriction of movement of affected areas.
- **Fingers or toes**: Raynaud's disease is one of the earliest signs of systemic scleroderma. The small blood vessels of the fingers and toes contract when exposed to cold temperatures or when patients experience emotional distress. Fingers and toes may turn blue or become painful or numb.
- **Gastrointestinal system**: Symptoms depend on what part of the gastrointestinal system is affected. For example, an affected esophagus may lead to heartburn or dysphagia. If intestines are affected, cramping, bloating, diarrhea, and/or constipation may occur. There may be problems with absorption of nutrients if intestinal muscles fail to move food through the intestines in an efficient manner.
- **Body systems**: Scleroderma can affect any body organ or tissue. There may be heart, lungs, or kidney problems. If not treated, life-threatening complications may develop.

Diagnostic Tests. Some diagnostic tests may be ordered to aid in diagnosis. These may include the following (American College of Rheumatology, 2019):

- **X-rays and computerized tomography (CT) scans**: These tests are ordered to look for abnormalities in the body.
- **Thermography**: Thermography can detect differences in skin temperature between affected and non-affected tissue.
- **Ultrasound and magnetic resonance imaging (MRI)**: These tests can help in the assessment of soft tissue.

Treatment

Signs and symptoms vary according to the severity of the disease and the areas of the body that are affected.

Medications. Various medications may be administered. These include the following (Gardner, 2020; Mayo Clinic, 2019):

- **Steroidal creams or pills**: Steroid preparations are administered to reduce swelling, pain, and inflammation. Steroids may also loosen tight, stiff skin and slow the progression of new skin changes.
- **Nonsteroidal anti-inflammatory drugs (NSAIDs)**: NSAIDs are given to reduce pain and swelling.
- **Anti-hypertensive medications**: These medications help to dilate blood vessels and increase circulation. They may help in the prevention of lung and kidney issues and treat Raynaud's disease.
- **Acid reducers**: Medications (e.g., protein pump inhibitors) reduce gastric acid to help to relieve heartburn.
- **Immune system suppressants**: Medications given to suppress the immune system (such as those taken after organ transplants) may help with symptom reductions.
- **Analgesics**: Analgesics are taken to reduce pain.
- **Gastrointestinal stimulants**: These drugs increase motility of the gastrointestinal muscle. They work to move the contents of the gastrointestinal tract more rapidly without acting as a purgative.

Therapies. Physical and occupational therapies may be ordered. These therapies are designed to help patients manage pain, improve their strength and mobility, and maintain independence with ADLs (Mayo Clinic, 2019).

Surgery. Surgery is typically considered to be a last resort to use for severe scleroderma complications. Amputation may be necessary if Raynaud's disease has progressed to the point of tissue death. Lung transplants may be indicated for patients with severe respiratory system issues (Mayo Clinic, 2019).

Nursing Interventions

In addition to typical patient/family education initiatives such as medication education, nurses are also viewed as healthcare professionals who provide much-needed emotional support. A chronic disease with potentially serious complications leads to stress and anxiety. Patients and families may benefit from joining support groups and obtaining mental health counseling (American College of Rheumatology, 2019; Rebar et al., 2019).

Nurses should be instrumental in helping patients to lead a healthy lifestyle. Patients are encouraged to (Mayo Clinic, 2019):

- **Stay active**: Exercise helps to maintain flexibility, improve circulation, and relieve stiffness. Patients should be taught to perform self-range-of-motion exercises to help keep skin and joints flexible. Before starting an exercise program, the primary healthcare provider should be consulted.
- **Protect their skin**: Patients should avoid hot baths and showers and avoid using strong soaps, which can dry out the skin and cause further damage. Sunscreen should be used to protect the skin as well.
- **Avoid tobacco products**: Nicotine causes blood vessel contraction, which can worsen Raynaud's disease. Smoking can also cause permanent narrowing of blood vessels and lead to or exacerbate lung issues.
- **Manage heartburn**: Patients should avoid spicy foods and beverages. They should be taught to identify and avoid other foods and beverages that trigger heartburn. Late night meals should be avoided as well. Sleeping with the head of the bed elevated helps to prevent gastric acid from backing up into the esophagus. Antacids or protein pump inhibitors may be suggested to relieve symptoms of heartburn.
- **Protect from cold**: Mittens should be worn anytime hands are exposed to cold, even when reaching into a freezer. If outside in cold weather several layers of warm clothing are recommended, and the face and head should be covered as much as possible.

Self-Assessment Question 9

A form of scleroderma that affects 50% of persons with the disease and is a more benign form of scleroderma is:

a. Morphea.
b. Linear scleroderma.
c. Diffuse scleroderma.
d. Limited scleroderma.

Ulcerative colitis

Ulcerative colitis is a chronic inflammatory bowel disease (IBD). An autoimmune disease, ulcerative colitis causes inflammation and ulcerations of the mucosa in the colon. Ulcerative colitis affects the innermost lining of the colon and rectum (Mayo Clinic, 2021d; National Institute of Diabetes and Digestive and Kidney Diseases [NIDDK], n.d.; Rebar et al., 2019).

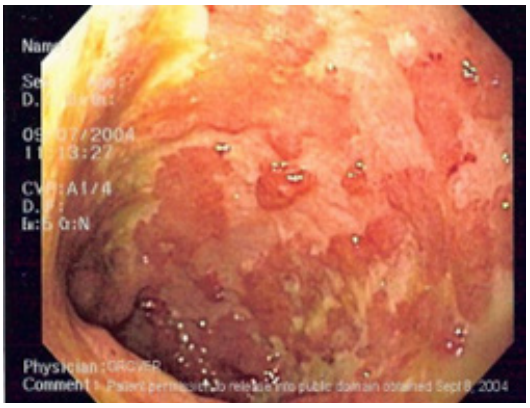
Ulcerative colitis can develop at any age, but peak occurrence is between the ages of 15 and 30 and between 50 and 70. The disease is slightly more prevalent in men compared to women. An estimated 238 per 100,000 adults in the US may have ulcerative colitis (Rebar et al., 2019).

Pathophysiology

The exact cause of ulcerative colitis is not known but is likely linked to an abnormal immune response in the gastrointestinal tract (Rebar et al., 2019). Ulcerative colitis typically begins in the rectum, where it may remain localized (ulcerative proctitis) or extend proximally, progressing to involve the entire colon. Inflammation affects the mucosa and submucosa. There is a distinct border between normal and affected tissue (Merck Manual, 2020c). Figure 8 shows a picture of damage that occurs as the result of the disease.

Nursing consideration: Stress does not cause ulcerative colitis. However, stress can increase the severity of the attack (Rebar et al., 2019). Patients should take steps to reduce stress whenever possible.

Figure 8 Ulcerative Colitis



Note. Wikimedia Commons., 2006.

Early in the course of the disease, the mucous membrane is erythematous and finely granular. There is a loss of normal vascular pattern often accompanied by scattered hemorrhagic areas. Severe disease is characterized by large mucosal ulcers with copious purulent exudate. Fistulas and abscesses do not occur (Merck Manual, 2020c).

A summary of the disease progression is as follows (Rebar et al., 2019):

- The disease typically originates in the rectum. It may progress to involve the entire colon.
- The colon's mucosa develops diffuse ulceration with hemorrhage, congestion, edema, and exudative inflammation.
- Large mucosal ulcers form and drain purulent pus and become necrotic.
- Sloughing of the mucosa occurs, leading to bloody, mucous-filled stools.

Progression of the disease may cause intestinal obstruction, dehydration, and significant fluid and electrolyte imbalances. Malabsorption is common and anemia may develop because of blood loss in the stools (Rebar et al., 2019).

Ulcerative colitis is often classified according to its location. Types of ulcerative colitis include the following (Mayo Clinic, 2021d):

- **Ulcerative proctitis:** Inflammation is confined to the area that is closest to the anus. Rectal bleeding may be the only sign of the disease.
- **Proctosigmoiditis**: Inflammation involves the rectum and sigmoid colon. Bloody diarrhea, abdominal cramps and pain, and constipation are signs and symptoms of proctosigmoiditis.
- **Left-sided colitis**: Inflammation extends from the rectum through the sigmoid and descending colon. Signs and symptoms include bloody diarrhea, abdominal cramping and pain on the left side, and an urgent need to defecate.
- **Pancolitis**: The entire colon is affected, causing bloody diarrhea that may be severe, abdominal cramping and pain, fatigue, and weight loss.

Risk Factors. There are several risk factors associated with the development of ulcerative colitis. These include the following (Mayo Clinic, 2021d):

- **Age**: Ulcerative colitis typically begins before the age of 30. However, it can occur at any stage in life. Some patients may not develop the disease until after the age of 60.
- **Race or ethnicity**: Whites develop the disease most often, although it can occur in any race or ethnicity. The risk is even higher if someone is of Ashkenazi Jewish descent.
- **Family history/Gemetocs**: Risk increases if a parent, sibling, or child has the disease.

Complications. Complications that may occur with ulcerative colitis. These include the following (Mayo Clinic, 2021d):

- Hemorrhage.
- Perforated colon.
- Severe dehydration.
- Osteoporosis.
- Skin, joint, and eye inflammation.
- An increase in the risk for colon cancer.
- Toxic megacolon.
- Increased risk of blood clots.

Assessment and Diagnosis

In order to diagnose ulcerative colitis, a complete history and physical is performed, family history obtained, symptoms reviewed, and some diagnostic tests ordered (NIDDK, n.d.).

Signs and Symptoms. Patients are assessed for the following symptoms, which vary depending on the severity of the disease and its location. Signs and symptoms may include the following (Mayo Clinic, 2021d):

- Diarrhea, often containing blood or pus.
- Abdominal pain and cramping.
- Rectal pain.
- Rectal bleeding.
- Urgency with defecation.
- Unable to defecate despite urgency feelings.
- Weight loss.
- Malaise.
- Fever.
- In children, failure to grow.

Most people with ulcerative colitis have mild to moderate symptoms. Additionally, the course of the disease may vary from person-to-person, and some patients have long periods of remission (Mayo Clinic, 2021d).

Diagnostic Tests. Stool cultures for enteric pathogens should be done to identify a pathogenic cause of the disease. In women who are using oral contraceptives, contraception-induced colitis is possible. This type of ulcerative colitis usually resolves spontaneously after hormone therapy is stopped (Merck Manual, 2020c).

Additional diagnostic tests include the following (Mayo Clinic, 2021d; Merck Manual, 2020c):

- **Flexible sigmoidoscopy**: Flexible sigmoidoscopy is used to visually confirm the diagnosis and allows direct sampling of stool or mucous for culture and microscopic evaluation. If the sigmoid colon is severely inflamed, a flexible sigmoidoscopy may be performed instead of a full colonoscopy.
- **Colonoscopy**: Colonoscopy allows visualization of the entire colon. Tissue samples are obtained for laboratory analysis, which is necessary to make an accurate diagnosis.
- **X-rays**: If patients have severe symptoms an X-ray of the abdominal area can help to rule out serious complications, such as a perforated colon.
- **CT scan**: A CT scan is typically used if complications are suspected. It can also show how much of the colon is inflamed.
- **Computerized tomography (CT) enterography and magnetic resonance imagery (MRI)**: These non-invasive tests may be performed to exclude inflammation of the small intestine.

Treatment

Treatment goals are to control inflammation, replace lost nutrients and blood, and prevent complications. General supportive initiatives include bed rest, IV fluid replacement, and, if needed, blood transfusions (Rebar et al., 2019).

Medications. Several classifications of drugs are used in the treatment of ulcerative colitis. Medications prescribed depend on the severity of the disease and need to be individualized to each patient (Mayo Clinic, 2021d; Rebar et al., 2019). Drugs include the following:

- **Corticosteroids**: Corticosteroids such as prednisone are used to control inflammation when the patient does not

respond to other treatments. They are usually used in patients who have moderate to severe ulcerative colitis. Corticosteroids are not given long-term and must be tapered off, not abruptly discontinued.

- **Aminosalicylates**: These medications (e.g., mesalamine [Asacol]) are taken to reduce inflammation.
- **Anti-diarrheal medications**: These are prescribed for patients who have frequent, troublesome diarrhea and whose ulcerative colitis is otherwise under control.
- **Immune system suppressors**: In addition to reducing inflammation, immune system suppressors suppress the immune response that initiates the inflammation process.
- **Iron supplements**: Iron supplements are given to correct anemia.
- **Biologics**: Biologics target proteins manufactured by the immune system. These drugs (e.g., infliximab [Remicade]) help to heal the intestinal lining and, hopefully, to induce remission.
- **Antispasmodics**: Antispasmodics are given to help reduce cramping.
- **Pain relievers**: For mild pain, acetaminophen (Tylenol) may be taken. However, ibuprofen (e.g., Advil, Motrin) is contraindicated since it can exacerbate symptoms and increase disease severity.

Diet. Patients may find that limiting or eliminating dairy products may help to improve issues such as diarrhea. Patients affected by severe disease may need total parenteral nutrition (TPN) and to take nothing by mouth. Patients with moderate disease may benefit from supplemental drinks. A low-residue diet may be ordered for patients who have mild disease (Rebar et al., 2019).

Surgery. If massive dilation of the colon (toxic megacolon) occurs, surgery may be indicated. The most common surgical procedure is proctocolectomy with colostomy or ileostomy (Rebar et al., 2019).

Nursing Interventions

In addition to facilitating adherence to treatment regimens, nurses need to help patients modify their lifestyles to help reduce symptoms and increase quality of life. Diet modifications may be of significant help. Keeping a food diary is recommended. Patients should keep track of what they eat and how they feel after eating. By doing this, patients may be able to identify what foods exacerbate their symptoms and learn to avoid them (Mayo Clinic, 2021d).

Rather than eating two or three large meals, eating five or six small meals a day may help to reduce symptoms. Patients should also be encouraged to drink plenty of fluids. Water is the beverage of choice. Alcohol and beverages containing caffeine stimulate the intestines, which can exacerbate diarrhea. Carbonated drinks may cause flatulence and increase cramping (Mayo Clinic, 2021d; Rebar et al., 2019).

Stress reduction is important. Stress can worsen symptoms and trigger disease flare-ups. To help control stress patients may find the following interventions helpful (Mayo Clinic, 2019d):

- **Exercise**: Exercise can help to reduce stress, relieve depression, and restore some normalcy to bowel functioning. Patients should consult their healthcare providers before beginning exercise programs.
- **Biofeedback**: Biofeedback helps to reduce muscle tension and reduce heart rate. The goal of biofeedback is to achieve a relaxed state so that stress is reduced.
- **Relaxation and breathing exercises**: Relaxation breathing, yoga, and meditation may help to reduce stress and alleviate symptoms.

Vitiligo

Vitiligo is a painless autoimmune skin disorder that causes the skin to lose its color. It typically begins with a few small white patches that may gradually spread over the body over a period of several months (Cleveland Clinic, 2020). Vitiligo can affect the skin on any part of the body as well as the hair and the inside of the mouth (Mayo Clinic, 2020d).

Vitiligo occurs in about one percent of the world's population. The disease affects all races equally, but it is more visible in people whose skin is darker. Vitiligo affects men and women equally (Cleveland Clinic, 2020). Vitiligo is not life-threatening nor is it contagious. However, the obvious loss of pigment can be stressful and reduce self-esteem. It may even lead to patients being teased or bullied (Mayo Clinic, 2020d).

Vitiligo can develop at any age. It appears most often in people 10 to 30 years of age. The disease seldom appears in the very young or the very old (Cleveland Clinic, 2020).

Nursing consideration: Treatment may restore color to the affected skin in persons with vitiligo. However, it does not prevent continued loss of skin color or a recurrence of the disease (Mayo Clinic, 2020d).

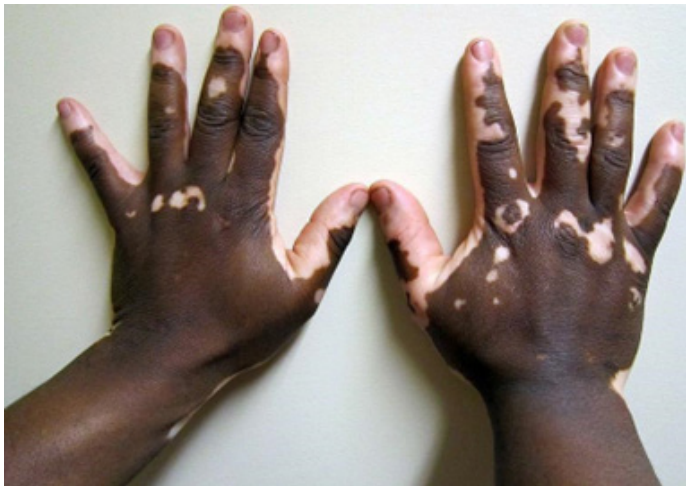
Pathophysiology

Vitiligo occurs when the body's melanocytes are destroyed by the body's immune system. Smooth white areas on the skin are called macules if less than 5 mm, or patches if they are larger than 5mm (Cleveland Clinic, 2020). There are several types of vitiligo that are classified by the extent and location of the pigment loss, as follows (Cleveland Clinic, 2020; Mayo Clinic, 2020d):

- **Universal vitiligo**: This type of vitiligo is characterized by a loss of color over nearly all (more than 80%) skin surfaces.
- **Generalized vitiligo**: This is the most common form of vitiligo. Generalized vitiligo is characterized by discolored patches (loss of pigmented skin) that generally progress symmetrically on corresponding body parts.
- **Segmental vitiligo**: Only one side or part of the body is affected. This type of vitiligo usually occurs at a younger age, progresses for a year or two, then stops.
- **Localized vitiligo**: Localized (focal) vitiligo affects one or only a few areas of the body.
- **Acrofacial vitiligo**: This form of vitiligo is characterized by a loss of pigment on the face and hands, and around body openings such as the eyes and nose.
- **Mucosal vitiligo**: Mucosal vitiligo affects mucous membranes of the mouth and/or the genitals.
- **Trichome vitiligo**: This type of vitiligo is characterized by a white or colorless center, an area of lighter pigmentation, and then an area of normally colored skin.

Predicting the progress of the disease is difficult. The patches may stop forming without treatment. In most people, pigment loss spreads, eventually involving most of the skin (Mayo Clinic, 2020d). Figure 9 shows how a loss of pigmentation looks.

Figure 9. Vitiligo



Note. Heilman, 2015.

Nursing consideration: Patients have varying amounts of skin affected by vitiligo. Some people have few depigmented areas, while others experience widespread loss of skin color (Cleveland Clinic, 2020).

Etiology. The exact cause of vitiligo is unknown. However, experts propose several theories about why it develops, including the following (Cleveland Clinic, 2020):

- **Autoimmunity**: Autoimmunity is the destruction of melanocytes by the body's immune system.
- **Genetics**: About 30% of vitiligo cases run in families.
- **Neurogenics**: A substance toxic to melanocytes may be released at nerve endings in the skin.
- **Self-sestruction**: A defect in the melanocytes causes them to self-destruct.

Complications. Because of the lack of melanocytes, affected skin is more sensitive to the sun's rays than normal skin and will burn easily instead of tan. People with vitiligo may have retinal abnormalities that cause inflammation of the retina or iris, but vision is typically not affected. Patients with vitiligo may be more likely to develop other autoimmune diseases. Finally, changes in appearance caused by vitiligo may cause embarrassment and anxiety. Patients may face bullying or rude questions. Such factors may lead to anxiety, excessive stress, and depression (Cleveland Clinic, 2020).

Assessment and Diagnosis

The disease is often recognized from its physical appearance. A history and physical is performed, and a skin biopsy may be taken to confirm diagnosis or to differentiate vitiligo from other skin conditions (Mayo Clinic, 2020d).

Healthcare providers will also assess presenting signs and symptoms to make a diagnosis. Signs include the following (Mayo Clinic, 2020d):

- Patchy loss of skin color that usually first appears on the hands, face, and areas around body openings and genitalia.
- Premature whitening or graying of hair on the scalp, eyelashes, eyebrows, or beard.
- Loss of color in the mucous membranes of the mouth.

Treatment

There is no cure for vitiligo. The goal of treatment is to create a uniform skin tone by either repigmentation or by eliminating remaining color (depigmentation). The goal can be achieved by the following methods:

- **Camouflage therapy**: This therapy involves using sunscreen with an SPF of 30 or higher. Use of sunscreens minimizes tanning, thus limiting the contrast between normal and affected skin. Makeup can help to camouflage depigmented areas. Hair dyes can be used if the disease affects the hair. Depigmentation therapy with the medication monobenzone can be used to treat extensive disease. The medication is applied to pigmented patches of skin to turn them white to match affected areas of skin (Cleveland Clinic, 2020).
- **Medications**: Corticosteroids can be used in oral or topical forms to promote repigmentation. It may take up to 3 months to show results. Topical vitamin D analogs may also be helpful. Topical immunomodulators may be useful for treating small areas of pigmentation. However, there may be a possible link between these kinds of drugs and lymphoma and skin cancer (Mayo Clinic, 2020d).
- **Light therapy**: Phototherapy with narrow band ultraviolet B may stop or slow progression of the disease. Effectiveness might be enhanced when used with corticosteroids or calcineurin inhibitors. Light therapy is administered two to three times a week. It may take 1 to 3 months before any change is noticed. However, there is a possible risk of skin cancer with the use of calcineurin inhibitors (Mayo Clinic, 2020d).
- **Depigmentation**: For widespread vitiligo that has not been treated successfully with other options, a depigmenting agent is applied to unaffected areas of skin. The skin is gradually lightened so that it blends with discolored areas. This type of therapy is done once or twice a day for 9 months or longer (Cleveland Clinic, 2020).

If medications and light therapy do not work, surgery may be performed. Possible procedures include the following (Mayo Clinic, 2020d):

- **Skin grafting**: Small sections of healthy, pigmented skin are grafted to affected areas. Risks include infection, scarring, a cobblestone appearance, spotty color, and failure of the area to recover.
- **Blister grafting**: Blisters are creating on pigmented skin and then the tops of the blisters are transplanted to affected areas. Risks include scarring, a cobblestone appearance, and failure of the area to recover.
- **Cellular suspension transplant**: Tissue is taken from pigmented skin, cells from the skin are placed into solution, and then are transplanted onto affected areas. Results start to show within 4 weeks.

Self-Assessment Question 10

A nurse is providing education to a patient newly diagnosed with vitiligo. The nurse should tell the patient that:

a. Vitiligo often causes mild to moderate pain.
b. Vitiligo appears most often in people over 65 years of age.
c. The most common form of vitiligo is universal vitiligo.
d. Corticosteroids are used to promote repigmentation.

Nursing Interventions

Nurses need to teach patients and families about lifestyle modifications and home remedies. These include the following (Mayo Clinic, 2020d):

- Skin must be protected from the sun and artificial sources of UV light. A broad-spectrum, water-resistant sunscreen with an SPR of at least 30 is recommended.
- Makeup and self-tanning products can help to reduce differences in skin color. If a self-tanner is used, one should be chosen that contains the Food and Drug Administration (FDA) approved ingredient dihydroxyacetone.
- Patients should not get tattoos. Any skin damage may cause new patches of vitiligo to appear.
- Patients should seek emotional support in the form of family and friend support, vitiligo support groups, and/or professional counseling.

Conclusion

Autoimmune diseases can cause a wide range of effects from mild to serious and, in some cases, life-threatening. Nurses and other members of the healthcare team must work together to provide a coordinated approach to patient care and help patients attain the best possible outcomes. To do this, the healthcare team must keep abreast of the effects of autoimmune diseases, how to recognize them, and treatment advances.

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NURSING ASSESSMENT, MANAGEMENT AND TREATMENT OF AUTOIMMUNE DISEASES

Self-Assessment Answers and Rationales

1. The correct answer is B.
Rationale: An estimated four percent of the world's population is affected by one of more than 80 different autoimmune diseases. In the United States, autoimmune diseases are the third most common cause of chronic illness.

2. The correct answer is D.
Rationale: There are various grains and starches allowed on a gluten-free diet. These include buckwheat.

3. The correct answer is B.
Rationale: Ileocolitis is the most common type of Crohn's disease. It affects the terminal ileum and the colon.

4. The correct answer is A.
Rationale: The A1C is a blood test that reports average blood glucose levels for the past 2 to 3 months. However, certain conditions such as pregnancy or having a hemoglobin variant may interfere with the accuracy of the A1C test.

5. The correct answer is C.
Rationale: Hydroxychloroquine is antimalarial drug that has been prescribed to help keep lupus-related skin and joint disease under control. It has also been found to be effective in the treatment of fatigue and mouth sores.

6. The correct answer is A**.**
Rationale: Mitoxantrone is a chemotherapeutic drug that is used for patients experiencing worsening forms of relapsing MS and secondary progressive MS. It is given intravenously every 3 months. The potential for toxicity is high, so patients may receive a limited number of doses throughout the lifespan. Mitoxantrone is associated with cardiotoxicity.

7. The correct answer is B.
Rationale: Over-the-counter and prescription formats such as shampoo, cream, and oil, unfortunately, can cause skin irritation, stain clothing and bedding, and have a strong odor. Coal tar is contraindicated for pregnant women and for those who are breastfeeding.

8. The correct answer is C.
Rationale: Women are diagnosed with RA more frequently than men. Tobacco use is associated with a significant increase in risk for the development of RA.

9. The correct answer is D.
Rationale: Limited scleroderma affects about 50% of persons who have scleroderma. It progresses more slowly and is a more benign illness than diffuse scleroderma. Internal issues may evolve, but they are typically less frequent and less severe compared to diffuse scleroderma.

10. The correct answer is D.
Rationale: Corticosteroids can be used in oral or topical forms to promote repigmentation. It may take up to 3 months to show results.

Course Code: ANCCTX06AD

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Texas Nursing Professionals
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Recognizing and Responding to Human Trafficking in Texas (Mandatory)

Please refer to page 8 for the Final Exam Questions. Use this area directly below to indicate your answers.
Unanswered questions will be scored incorrect.

Shade circles like this: ●
Not like this: ⊠ ⊘

	A	B	C	D		A	B	C	D
1	○	○	○	○	6	○	○	○	○
2	○	○	○	○	7	○	○	○	○
3	○	○	○	○	8	○	○	○	○
4	○	○	○	○	9	○	○	○	○
5	○	○	○	○	10	○	○	○	○

ALL OTHER COURSES
Use this area directly below.

Important Note: The box below must be checked for verification sheet to be processed.

☐ By checking this box and signing below, I hereby affirm that I have completed this educational activity.

Signature

For Internal Use Only - Please Do Not Mark In This Area

ANCCTX2023B

4757492851

Test Expires: 9/29/2024

1. ANCCTX01RR 2. ANCCTX02CA 3. ANCCTX02TE 4. ANCCTX06PC 5. ANCCTX03CR 6. ANCCTX06AD

NURSING - COURSE EVALUATION (ANCCTX2023B - Required)

To receive continuing education credits for this program, this mandatory evaluation form must be completed.

Licensee Name: _____ **License #**_____

Your honest feedback is vital for the planning, evaluation, and design of future educational programs.

SECTION I: Demographics: Your current license type and education level: ❍LPN/LVN ❍RN - Associate degree ❍RN - Bachelor's degree ❍RN - Master's degree ❍APRN - Master's degree ❍Doctorate / DNP / Other Doctorate ❍Other (specify)_____

How long have your been a nurse: ❍Less than 5 years ❍6 to 10 years ❍11 to 15 years ❍16 to 20 years ❍Over 20 years ❍Not a nurse

SECTION II: Course Evaluation
Please complete the following for each course you have completed. Mark the circle that best matches your evaluation of the question.

1. After completing this course, I am able to meet each of the Learning Outcomes.	7. The course demonstrated the author's knowledge of the subject.
2. The course content was unbiased and balanced.	8. I intend to apply the knowledge from this course to my practice.
3. The course was relevant to my practice.	9. What I have learned from this course will have an impact on my knowledge.
4. I would recommend this course to my peers.	10. What I have learned from this course will have an impact on patient outcome.
5. What I have learned from this course will have an impact on my practice.	11. The overall rating for this course.
6. The course was well-organized and clear.	

	Recognizing and Responding to Human Trafficking in Texas (Mandatory) 1 Contact Hour					Care of Older Adults for Texas Nurses, 2nd Edition (Mandatory) 2 Contact Hours					Texas Ethics and Jurisprudence for Nurses, 2nd Edition (Mandatory) 2 Contact Hours				
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
2	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
3	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
4	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
5	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
6	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
7	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
8	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
9	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
10	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
	Excellent	Good	Average	Below Average	Poor	Excellent	Good	Average	Below Average	Poor	Excellent	Good	Average	Below Average	Poor
11	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
12	How many total hours did it take you to complete this course? Please indicate the number of hours: _____														
13	Please provide any additional feedback on this course: _____														

SECTION III: General

Fill in the circle below numbers **0=Not likely at all, 5=Neutral and 10=Extremely likely**

How likely is it that you would recommend Elite to a friend or colleague?..... 0 1 2 3 4 5 6 7 8 9 10

If your response is less than a 10, what about the course could we change to score a 10? _____

_____

List other topics that you would like to see provided: _____

❑ I agree to allow Colibri Healthcare, LLC to use my comments. If you agree, please provide your name and title as you would like to see them to appear.

_____

NURSING - COURSE EVALUATION (ANCCTX2023B - Required)

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Licensee Name: _____ **License #**_____

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How long have your been a nurse: ❍Less than 5 years ❍6 to 10 years ❍11 to 15 years ❍16 to 20 years ❍Over 20 years ❍Not a nurse

SECTION II: Course Evaluation
Please complete the following for each course you have completed. Mark the circle that best matches your evaluation of the question.

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2. The course content was unbiased and balanced.	8. I intend to apply the knowledge from this course to my practice.
3. The course was relevant to my practice.	9. What I have learned from this course will have an impact on my knowledge.
4. I would recommend this course to my peers.	10. What I have learned from this course will have an impact on patient outcome.
5. What I have learned from this course will have an impact on my practice.	11. The overall rating for this course.
6. The course was well-organized and clear.	

	Basic Psychiatric Concepts 6 Contact Hours					Crisis Resource Management for Healthcare Professionals 3 Contact Hours					Nursing Assessment, Management and Treatment of Autoimmune Diseases - 6 Contact Hours				
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
2	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
3	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
4	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
5	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
6	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
7	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
8	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
9	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
10	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
	Excellent	Good	Average	Below Average	Poor	Excellent	Good	Average	Below Average	Poor	Excellent	Good	Average	Below Average	Poor
11	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
12	How many total hours did it take you to complete this course? Please indicate the number of hours: _____														
13	Please provide any additional feedback on this course: _____														

SECTION III: General

Fill in the circle below numbers **0=Not likely at all, 5=Neutral and 10=Extremely likely**

How likely is it that you would recommend Elite to a friend or colleague?..... 0 1 2 3 4 5 6 7 8 9 10

If your response is less than a 10, what about the course could we change to score a 10? _____

_____

List other topics that you would like to see provided: _____

❑ I agree to allow Colibri Healthcare, LLC to use my comments. If you agree, please provide your name and title as you would like to see them to appear.

_____