Meet the Client: Montcalm CountyMontcalm County is a small county on the western coast of the United States with a population of 30,000 citizens. Registered nurses (RNs), licensed practical nurses (LPNs) and advanced practice registered nurses (APRNs) are employed in a variety of settings throughout the community and play a vital role in the development and coordination of the county’s emergency plan. The nurses in this county work collaboratively with one another and other healthcare professionals on the Disaster Management team to respond to the community’s needs in the event of a natural disaster or a mass casualty incident.

Which action by Jennifer, the Health Department RN, is an example of primary prevention in disaster management for Montcalm County?

Train potential rescue workers in basic first aid.

This example demonstrates planning before the disaster has happened; therefore, it is classified as primary prevention.

  **Planning**

Jennifer Allen is an RN and nurse manager for the Montcalm County Health Department. One of her primary responsibilities includes the continuous development of the county’s emergency preparedness plan, which follows the principles of disaster management:

Plans that prevent the occurrence of a disaster or reduce the effects of the disaster fall within which phase?

Mitigation.

Includes plans that prevent the occurrence of a disaster or reduce the effects of the disaster.

Jennifer preparing an educational session for the volunteer first responders on common reactions disaster victims display. Identify common physiological reactions that may be displayed after a disaster.

Palpitations.

Palpitations are a common reaction to a disaster.

Rapid heartbeat.

Rapid heartbeat is a common reaction to a disaster.

Apathy.

Apathy is not a common reaction to a disaster.

Chest pain.

Chest pain is a common reaction to a disaster.

Included in her education session with the volunteer first responders, Jennifer will discuss commonly delayed reactions that may be displayed after a disaster. Which commonly delayed reactions may be exhibited by victims after a disaster?

Teeth grinding.

Victims of a disaster may display teeth grinding.

Skin rashes.

Skin rashes are a commonly delayed reaction to a disaster.

Jennifer shares the Montcalm County Emergency Preparedness Plan with the area schools. A Montcalm County school nurse, Jodie Stone, RN, prepares to teach an education class on family disaster planning to the Parent Teacher Organization (PTO).

Place a spare electrically operated radio in a safe place for emergencies.

Battery operated equipment should be stored in case of loss of electrical services.

Plan a meeting place for family members for each type of likely disaster.

Planning a meeting place inside or outside of the home for specific disasters decreases confusion and promotes safety when a disaster occurs.

Keep medical information (allergies, blood type, prescription medication, health history, etc) on file in the emergency kit for each family member.

This will assist in ensuring that clients receive appropriate medical care if health or pharmaceutical records are not immediately retrievable.

Jodie conducts the PTO education meeting, and several parents have questions about the availability of prescription medications for their children in the event of an emergency. The mother of a child with asthma asks the school nurse if she should stock up on her child’s albuterol inhalers in case of emergency.

How should the school nurse respond to the mother’s question?

Keep a 1 to 2 week supply of medication in an easily accessible safe place.

The American Red Cross and the Department of Homeland Security recommend keeping a 7- to 14-day supply of medications in an emergency kit in case of disaster. The expiration date must be checked frequently.

During the meeting, Jodie explains that a disaster drill will be conducted with the students as part of the emergency preparedness plan.

What should the school nurse include in a disaster drill for elementary students?

Rehearse evacuation routes with the students, faculty, and staff.

Rehearsing evacuation routes will increase familiarity with the route during an actual disaster.

The school nurse successfully implements disaster drills with the students, and they practice safe evacuation routes from the building as one part of the drill.

To prepare the ED for possible victims of the earthquake, which action should Kacie take first?

Reassess the clients who are currently in the ED to determine if further injuries have occurred.

The clients currently in the nurse’s care should be the first priority. They should also be triaged to determine if they can be released or moved to make room for the injured

**Prioritization**

Kacie Moore, RN is the charge nurse in the Emergency Department (ED) of the Montcalm County Hospital. While working the 7 am to 7 pm shift, she suddenly feels a sharp jolt from the ground, followed by a few stronger, sharp shakes that pass quickly. Kacie has lived on the west coast for 35 years, and she recognizes the event as a small earthquake. The nursing supervisor dir

Kacie and the other nurses assess the clients in the ED and find no new injuries. Discharge is expedited for those who qualify, and Kacie sets up a triage center in the waiting room. The house supervisor quickly calls in extra staffing for the hospital. First responders in Montcalm County use the most common triage tool, the Simple Triage and Rapid Treatment (START) tool.

An announcement is made via radio broadcast that an old apartment building in downtown Montcalm County has partially collapsed. Kacie prepares the ED for potential casualties.

ects the staff to implement the emergency response plan.

**First Responders**

Bryan White is an RN and a volunteer fire fighter who is trained as a first responder. He arrives at the collapsed building and finds a pregnant woman limping out of the building holding her right leg, which appears to be fractured. Her pedal pulse is present, and her respirations are 24 breaths/min. She cannot walk on her own, but she answers questions coherently and she points to where others are in need of help.

Bryan is the first responder to arrive at the scene because he lives in the downtown area. After helping the pregnant woman find a safe place to sit, Bryan carefully enters the collapsed area of the building. He sees an elderly woman inside the rubble; she is nonresponsive and has no respirations.

Which action should Bryan take first?

Reposition her head to attempt to open the airway.

The client may have a blocked airway due to positioning. Repositioning the airway may stimulate respirations and save the client

Bryan attempts to open the woman’s airway, but he is unsuccessful. He codes her as black and moves on to the next victim. Bryan assesses a young boy who is surrounded by debris and lying face down, unconscious, with a large beam across his upper back. He is pale and cool to touch with respirations of 8 breaths per minute and a pulse of 42 beats per minute.

Clear the debris in and around the boy's mouth and nose.

Clearing the airway should be the initial action. The child is exhibiting symptoms of neurogenic shock. All interventions should be implemented only after the airway is cleared.

Other responders quickly arrive at the scene of the collapsed apartment building and begin to help Bryan with triage, rescue, and recovery.

**Community Resources**

During a disaster, a team of multidisciplinary members, many of whom are in the healthcare profession, respond to the crisis situation. Representatives from the American Red Cross (ARC) arrive at the scene of the collapsed apartment building.

Kayla Jones is an RN who works for the American Red Cross and who is in charge of setting up a temporary shelter for residents who lost their homes in the apartment collapse. With volunteer assistance, Kayla sets up a temporary shelter in a local gymnasium.

The nurse recognizes that which action takes priority according to Maslow’s hierarchy of needs?

Obtain food and water for shelter residents.

Food, water, and air are the first priority according to Maslow’s hierarchy of needs.

Kayla coordinates the food and water supply and mobilizes the volunteer shelter for nurses to assess current health needs for shelter residents.

**Medication Administration**

The ARC shelter is providing residence for 24 clients. Residents arriving at the shelter have not been injured, but many were not able to gather their prescription medications prior to leaving the apartment building.

One of the nurses volunteering in the shelter assesses the medication needs of four clients. The nurse should first address the needs of the client with which condition and medication need?

A 35-year-old man injecting regular insulin for type I diabetes mellitus.

Missed insulin injections could rapidly lead to acute complications of diabetes mellitus, including diabetic ketoacidosis. This is the problem that needs to be addressed first.

The shelter nurse contacts the primary HCPs for the clients and obtains prescriptions that are filled for each client. The shelter nurse also obtains a glucometer, and the client with type I diabetes mellitus checks his blood glucose before lunch. The blood glucose is 239 mg/dL, and the client has a prescription to inject regular insulin 6 units subcutaneously.

Which action should the nurse implement?

Provide the client with a meal within 30 minutes of insulin injection.

The onset of regular insulin is 30 minutes to 1 hour. If the client does not eat, he may become hypoglycemic

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The client receives his insulin and a meal. His blood glucose decreases to 130 mg/dL that evening.

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The shelter resident taking levothyroxine (Synthroid) regularly takes 75 mcg per day. The bottle delivered from a different pharmacy contains levothyroxine (Synthroid) 0.150 mg per tablet. The nurse advises the client to take how many tablets? (Enter numeric value only. If rounding is required, round to the tenth.)

1 mg = 1000 mcg0.150 mg x 1000 = 150 mcg = 0.5 tablet

The shelter nurses clean the mattresses to prevent the spread of bacteria to the clients. According to the epidemiology triangle, what does the mattress represent?

Environment.

The shelter or the mattress is the environment

**Epidemiology**

The ARC nurses are trained in epidemiology, and they understand that contagious diseases can quickly spread in a shelter.

The shelter nurses understand intrinsic factors influence the epidemiological triangle and the spread of disease.

The ARC nurses know stress reduction can slow down the epidemiological process and reduce the spread of disease from host to host.

Which technique should the nurse employ to reduce stress?

Listen to victims tell and retell their feelings related to their current situation and the disaster.

Victims often need to tell their story more than once to reduce the mental shock and relieve stress.

The ARC nurses continue to work diligently to prioritize and care for the physiological and psychological needs of the shelter residents until more permanent housing can be found.

Vanessa McBrayer, RN is a home healthcare nurse in Montcalm County. Her primary objective is to allow individuals to stay at home while receiving a variety of healthcare services that would otherwise require hospitalization. Vanessa is in the home health office preparing for her daily visits when the initial impact of the earthquake is felt. Vanessa and the other home care nurses prepare to institute the home care emergency response plan.

Vanessa is assigned a group of clients to contact. Fortunately, the telephone is working in most areas of the county. She is able to reach all but four of the clients or their emergency contacts to ensure they are safe.

Vanessa prepares to make a home care visit to the four clients she has been unable to reach. Which client should the home healthcare nurse visit first?

A 64-year-old man in the beginning stages of dementia who lives alone.

This client should be assessed first. He is at highest risk because he could be confused and he lives alone.

The home health nurse makes a visit to each of the four clients, and she finds that no one was injured during the earthquake.

**Delegation and Assignment**

Douglas, an RN, is the charge nurse for the telemetry unit at Montcalm County Hospital. He was at home enjoying his first day off in 5 days when the impact of the earthquake struck. Douglas makes sure his family is safe, then he drives to the hospital, where he is needed. According to the emergency response plan, one of Douglas' duties is to utilize available personnel to their full capacity.

The student nurse assists with a client’s discharge, and the charge nurse calls housekeeping to prepare the room for another client being admitted to the telemetry unit from the ED. The client admitted to the telemetry unit reported an onset of chest pain during the earthquake. The client has been scheduled for a cardiac catheterization, but the catheterization lab is currently full.

Which task should the nurse delegate to the unlicensed assistive personnel (UAP)?

Take initial vital signs.

UAPs are trained and competent in taking vital signs.

That evening, Douglas prepares staffing for the next shift. Two RNs and one licensed practical nurse (PN) will be staffing the unit.

Which client should be assigned to the PN?

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A client who had a stroke 2 years ago who requires gastrostomy feedings every 4 hours.

This client does not have a life-threatening condition or need frequent assessment, so the client should be assigned to the PN. Grastrostomy feeding is within the scope of practice for the PN.

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Douglas prepares to end his shift, but he is worried because nursing staffing is still critically low in the hospital.

Douglas feels stress from the hectic atmosphere and the trauma of the day. At times he feels like he wants to cry.

What coping strategy should be utilized by the nurse to reduce stress?

Discuss stressful feelings with the psychological counselor visiting clients on the unit.

Douglas briefly discusses his feelings with the counselor and is surprised to find he feels better.

The nurses and other healthcare professionals in Montcalm County continue their recovery efforts. They know that it may take months for community members to heal physically and psychologically. Damaged physical structures will need to be rebuilt, and the community will need to work together to continue revising the emergency preparedness plan based on the evaluation of the response to this disaster.