

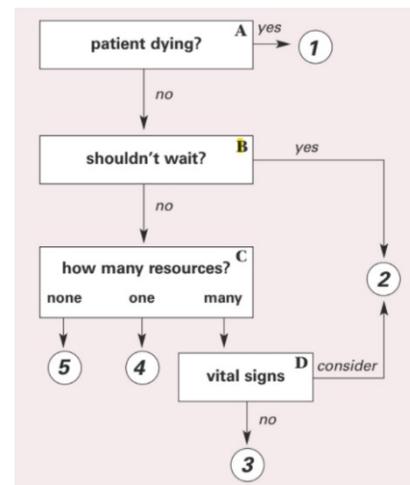
EXAM FOUR

1. Emergency Severity Index (ESI) - know levels and examples of patients in each level (Slides 16 - 22)

♥ 5 Level Triage System

♥ Resuscitation- level 1	Example: Cardiac Arrest	15 min
♥ Emergent- level 2	Example: CP w/ cardiac hx	30 min
♥ Urgent- level 3	Example: Abdominal pain	60 min
♥ Less Urgent- level 4	Example: Laceration	120 min
♥ Nonurgent- level 5	Example: Simple rash	120 min

Definition	ESI-1	ESI-2	ESI-3	ESI-4	ESI-5
Stability of vital functions (ABCs)	Unstable	Threatened	Stable	Stable	Stable
Life threat or organ threat	Obvious	Likely but not always obvious	Unlikely but possible	No	No
How soon patient should be seen by HCP	Immediately	Within 10 min	Up to 1 hr	Could be delayed	Could be delayed
Expected resource intensity	<ul style="list-style-type: none"> High resource intensity Staff at bedside continuously Often mobilization of team response 	<ul style="list-style-type: none"> High resource intensity Multiple, often complex diagnostic studies Frequent consultation Continuous monitoring 	<ul style="list-style-type: none"> Medium to high intensity Multiple diagnostic studies Complex procedures 	<ul style="list-style-type: none"> Low resource intensity One simple diagnostic study 	<ul style="list-style-type: none"> Low resource intensity Examination only
Examples	Cardiac arrest, intubated trauma patient, overdose w/ bradypnea, severe respiratory distress	Chest pain probably resulting from ischemia, multiple trauma unless responsive	Abdominal pain or gynecological disorders unless in severe distress, hip fracture in older patient	Closed extremity trauma, simple laceration, cystitis	Cold symptoms, minor burn, recheck (e.g. wound), prescription refill



2. Know how to triage patients in a mass casualty/disaster situation. Know examples of clients in disaster situation categories.

♥ Red - Immediate

- o First priority
- o Life threatening injuries but survivable w/ minimal intervention
- o Can progress rapidly to expectant if treatment is delayed
- o Examples:

1. Sucking chest wound, airway obstruction secondary to mechanical cause
2. Hemothorax, tension pneumothorax, asphyxia, unstable chest and abdominal wounds

3. Incomplete amputations, open fractures or long bones, 2nd/3rd degree burns of 15 – 40% TBSA.

♥ Yellow – Delayed

o Second priority

o Injuries are significant and require medical care but can wait hours without threat to life or limb

o Examples:

1. Stable abdominal wounds w/o evidence of significant hemorrhage, Genitourinary tract disruption
2. Soft tissue injuries, maxillofacial wounds w/o airway compromise
3. Vascular injuries w/ adequate collateral circulation
4. Fractures requiring open reduction, debridement & external fixation
5. Most eye and central nervous system injuries

♥ Green – Minimal

o Third priority

o Injuries are minor, and treatment can be delayed hour to days. Walking-injuries.

o Move away from the main triage area

o Examples:

1. Upper extremities fractures, sprains
2. Minor burns, small lacerations w/o significant bleeding
3. Behavioral disorders or psychological disturbances

♥ Black – Expectant

o Fourth priority

o Injuries are extensive & unlikely to survive even w/ definitive care

o Separate from other but do not abandon

o Comfort care

o Examples:

1. Unresponsive patients w/ penetrating head wounds
2. High spinal cord injuries, wounds involving multiple anatomic sites and organs
3. 2nd and 3rd degree burn in excess of 60% or BSA
4. Seizures, vomiting w/in 24 hrs. after radiation exposure, profound shock w/ multiple injuries

5. Agonal respirations, no pulse, no blood pressure, pupils fixed and dilated

3. Know who is able to triage patients

- ♥ RNs
- ♥ NPs
- ♥ MDs
- ♥ EMTs

4. Manifestations of partial-thickness burn – check s/s in med surg ATI

♥ Superficial Partial-Thickness – Damage to entire epidermis & some of the dermis

- o Pink → Red (pink and moist)
- o Blisters
- o Mild to moderate edema
- o No eschar
- o Painful & sensitive
- o Heals w/in 2 – 3 weeks, no scarring but minor pigment changes

♥ Deep Partial-Thickness – Damage to entire epidermis & deep into dermis

- o Red → White
- o Blisters are rare
- o Moderate edema
- o Eschar soft & dry
- o Painful & sensitive
- o Blanchable
- o Heals w/in 2 – 6 weeks
- o Scarring likely, possible grafting

5. Know electrolyte abnormalities in burns

♥ Na⁺ & K⁺ shift

- o K⁺ shift develops d/t injured cells & hemolyzed RBCs release potassium into the circulation → **Hyperkalemia**
- o Na⁺ rapidly moves to interstitial space & remains there until edema formation ends → **Hyponatremia**

6. Know your ABCs

- ♥ Airway
- ♥ Breathing
- ♥ Circulation

7. Fluid to utilize in burns

- ♥ Lactated Ringers
 - o 4 mL x kg x %TBSA burn

8. Rule of nines

- ♥ Head: 4.5%
- ♥ Face: 4.5%
- ♥ Chest: 18%
- ♥ Back: 18%
- ♥ Front of Arms: 4.5% x 2
- ♥ Back of Arms: 4.5% x 2
- ♥ Genitals: 1%
- ♥ Front of Legs: 9% x 2
- ♥ Back of Legs: 9% x 2

9. Best way to monitor cardiovascular system for extensive full thickness burns (READ BOOK)

- ♥ Freebie

10. Interventions to utilize during rehab phase (Is this what you're looking for?)

- ♥ Priorities
 - o Psychosocial support
 - 1. Talk with patient and allow them to express how they feel.
 - o Prevention of scars/contractures
 - 1. Moisturize
 - 2. Sun protection
 - 3. Passive ROM
 - 4. Ambulating

- o Resume activities such as work, family, & social roles as soon as possible

- ♥ Management

- o Patient/Caregiver participate in care

- o Possible nursing home or visiting nurses

- o Ensure patient knows recovery is slow

- o Give advice on scar management, moisturizing, & sun protection

- o PT, OT, vocationalist

11. Escharotomy/fasciotomy

- ♥ Escharotomy: Incision through the eschar

- o Relieves pressure & improves circulation

- ♥ Fasciotomy: Incision through the eschar & fascia

- o Relieves pressure when escharotomy does not & improves circulation.

12. Know what the OEM/OES is responsible for doing in a disaster

- ♥ OEM – Should be contacted in a community communication plan

- ♥ OES – Notified when a community determines regional abilities are unable to properly respond to the incident.

13. Anthrax S/S (do you want the manifestations? ATI/TEXT?) – will send

- ♥ Odorless and invisible – can travel long distance before disseminating

14. Anthrax treatment

- ♥ Penicillin

- ♥ Erythromycin

- ♥ Gentamicin

- ♥ Doxycycline

15. Family disaster supply kit/Disaster preparedness

- ♥ Identification, driver's license, insurance, SSN

- ♥ Backpack, warm/clean clothing, sturdy footwear

- ♥ Pocket-knife, first aid kit

- ♥ 3 – day supply of water, 3 – day supply of non-perishable food, can opener

o 1 gallon of water per person per day – recommendations for at least a 3-day supply

- ♥ Blankets/sleeping bag/pillow
- ♥ Adequate supply of prescription medication – ensure medications are not expired
- ♥ Battery operated radio, flashlight, & batteries
- ♥ Credit card, cash, traveler's checks, money
- ♥ Extra set of key and full tank of gas
- ♥ Cell phone
- ♥ Toiletries
- ♥ Matches in waterproof container
- ♥ Medical equipment
- ♥ Additional pet supplies
- ♥ Cleaning products

16. Examples of biological weapons of mass destruction

- ♥ Smallpox
- ♥ Botulism
- ♥ Anthrax
- ♥ Tularemia
- ♥ Ebola Virus
- ♥ Plagues

17. Botulism s/s, how it is spread, and nursing responsibilities

- ♥ S/S
 - o Progresses to paralysis of arms, legs, trunk, and/or respiratory muscles
 - o Diplopia
 - o Dysphagia
 - o Lack of fever
 - o Ingested: Neurological s/s begin w/in 12 – 36 hours
 - o Inhalation: Neurological s/s will begin w/in 24 – 72 hours
- ♥ How is it spread?
 - o Inhalation
 - o Improperly canned food
 - o Contaminated wound

- o Direct contact - cannot spread from person to person

- ♥ Nursing responsibilities

- o Support client's airway

- o Perform passive ROM

- o Turning, coughing, incentive spirometer

18. Smallpox transmission – HIGHLY contagious

- ♥ Contact

- ♥ Droplet

- o Will need mask, gown & gloves when caring for patient

19. Nursing priorities for inhalation injury

- ♥ Rapid initial & ongoing assessment is critical → airway compromise & pulmonary edema can develop over the 1st 12-24 hrs.

- ♥ Ensure patient is breathing with an adequate amount of oxygen

- o Hyperoxygenation 100% O₂ if not intubated

- ♥ Complete fluid resuscitation

- ♥ Two IV's, if not more

20. Assessment findings of a respiratory injury as a result of a burn

♥ Upper Airway	♥ Lower Airway
♥ Blisters, edema	♥ High degree of suspicion if patient was trapped in a fire in an enclosed space or clothing caught fire
♥ Hoarseness	♥ Presence of facial burns or singed nasal or facial hair
♥ Difficulty swallowing	♥ Dyspnea
♥ Copious secretions	♥ Carbonaceous sputum
♥ Stridor	♥ Wheezing
♥ Substernal & intercostal retractions	♥ Hoarseness
♥ Total airway obstruction	♥ Altered mental status
♥ Upper airway edema	♥ Hypersecretion
	♥ Bronchospasms
	♥ Loss of ciliary action
	♥ Severe edema
	♥ Atelectasis
	♥ Hypoxia

♥ Inhalation damage r/t impending loss of airway

- Hoarseness
- Brassy cough
- Drooling/difficulty swallowing
- Audible wheezing, stridor
- Sx appearance in airway
 - It is time to intubate!!!!

21. PPE

- ♥ Level A: Highest level of respiratory, skin, eye, & mucus membrane protection
 - Includes self-contained breathing apparatus (SCBA) & fully encapsulating
 - Vapor-tight, chemical, resistant suit w/ chemical resistant gloves & boots

- ♥ Level B: Highest level of respiratory protection but a lesser level of skin and eye protection
 - o Includes SCBA & chemical-resistant suit
 - o Not vapor tight
- ♥ Level C:
 - o Requires the air-purified respirator (N95): uses filters or sorbent materials to remove harmful substances from the air
 - o A chemical-resistant coverall with splash hood, chemical-resistant gloves & boots
- ♥ Level D:
 - o Typical work uniform

22. Heat stroke s/s

- ♥ Temperature > 40 C (104 F)
- ♥ Lack of perspiration (anhidrosis)
- ♥ Hypotension
- ♥ Tachycardia
- ♥ AMS → hallucinations, loss of muscle coordination, combative
- ♥ Abnormal K⁺ & Na⁺ levels
- ♥ Death is directly r/t amount of time the patient's body temperature remains elevated

23. Complete airway obstruction s/s

- ♥ Clutching neck
- ♥ Decreasing O₂ saturation
- ♥ Unable to speak
- ♥ Unable to breathe
- ♥ Unable to cough
- ♥ Absence of breath sounds
- ♥ Can lead to unconsciousness

24. Partial airway obstruction s/s

- ♥ Stridor/wheezing
- ♥ Spontaneous coughing
- ♥ Verbalizing they feel like they cannot breathe
- ♥ Allows passage of O₂ still

- ♥ Gagging
- ♥ Throat clearing

25. Primary/secondary survey

♥ Primary

- Rapid assessment of life-threatening conditions
- Should be completed systematically (all together)
- Use standard precautions
- Guide primary survey with ABCDE principle
 1. Airway: Inhalation injury, obstruction (partial or complete), penetrating wounds &/or blunt trauma to upper airway
 2. Breathing: Anaphylaxis, flail chest w/ pulmonary contusion, hemothorax, pneumothorax
 3. Circulation: Direct cardiac injury (MI), pericardial tamponade, shock (massive burns, hypovolemia), uncontrolled external hemorrhage, hypothermia
 4. Disability: Head injury, stroke (Glasgow coma scale)
 5. Expose/Examine

♥ Secondary

- Head to toe assessment
- Obtaining history
- Initial fluid resuscitation
- Provision of psychological support
- Diagnostic/lab testing
- Vital signs

26. RACE- fire emergency

- ♥ R: Rescue
- ♥ A: Alarm
- ♥ C: Contain
- ♥ E: Extinguish/Evacuate

27. Parkland (Baxter) Formula

- ♥ 4 mL x kg x %TBSA burn
- ♥ Will determine how much fluid replacement a patient needs
 - LACTATED RINGERS
- ♥ Application
 - ½ of total in 1st 8 hrs.
 - ¼ of total in 2nd 8 hrs.
 - ¼ of total in 3rd 8 hrs.
- ♥ Example: 70 kg patient with 50% TBSA burn
 - 4 mL x 70 kg x 50% TBSA = 14,000 mL / 2
 - 7,000 mL in first 8 hrs.
 - 7,000 mL x .25 = 3,500 mL
 - 7,000 mL x .25 = 3,500 mL
 - Check your work: 7,000 + 3,500 + 3,500 = 14,000

28. S/S that fluid resuscitation is working - (think hypovolemia to normal stasis)

- ♥ Increase in blood pressure
- ♥ Decrease in heart rate
- ♥ Weight increase
- ♥ Increased urine output (at least 30 mL/hr)

29. Frostbite nursing interventions

- ♥ Restore normal body heat - Internal (core) and passive (spontaneous) rewarming
- ♥ Warm IV fluids
- ♥ Warm humidified O₂
- ♥ Bair hugger
- ♥ Warm blankets
- ♥ Use rectal thermometer
- ♥ Environmental controls
- ♥ Monitor airway, vitals, urinary output, labs, ABG's and ECG
- ♥ Remove constrictive or wet clothing and jewelry
- ♥ If lower ext. are included, do not allow ambulation
- ♥ Elevate affected ext.

30. Carbon monoxide poisoning causes & s/s

♥ Causes

o Gas running items

1. Furnaces, stoves, dryers

♥ S/S:

o Headache

o Flushing

o Decreased visual acuity

o Decreased cerebral functioning

o Slight breathlessness

o N/V

o Drowsiness

o Confusion & stupor (patient hard to arouse, right before coma occurs)

o Tinnitus & vertigo

o Pale to reddish-purple skin

o Tachycardia

o Depressed ST segment

31. Superficial burn manifestations – damage to the epidermis

♥ Pink → Red

♥ No blisters

♥ Minimal edema

♥ No eschar

♥ Painful/tender

♥ Sensitive to heat

♥ Heals w/in 3 – 6 days

♥ No scarring

32. Preplanning for community disaster

♥ Have a plan in place

♥ Ensure that community/hospital has resources available

♥ Know what type of disasters can occur in your area

33. You will be given a list of patients and will have to pick out who can be discharged to free up space for disaster

- ♥ Ambulatory patients first , elective procedure patients
- ♥ Any patient that is not in dire need of treatment