Exam 5 Study Guide

Please review the main concepts from the movie, Contagion, as well as R-Naught. Also, review your epidemiology math questions.

DHW – Ch. 14	Risk of Infectious and Communicable Diseases	ATI Ch. 3 pg. 23-25

1. What are long-term signs and symptoms of the notifiable STDs?
   - Chlamydia: May be asymptomatic at first but will travel up the reproductive tract and can possibly cause PID which may cause infertility.
   - Chancroid
   - Gonorrhea: PID/infertility
   - Hep B
   - HIV:
   - Syphilis: visual impairment, stroke, death, perinatal death, encephalopathy.
2. Compare and contrast endemics, epidemics, and pandemics.
   - Endemic: disease or infection that is prevalent w/in a population or geographic area.
   - Epidemic: increase of infection or disease in certain population or geographic area
   - Pandemic: global increase of infection or disease
3. How do you break the chain of infection?
   - With some diseases good hand hygiene breaks the chain by preventing the transmission of infectious agents from one person to another.
4. What are the parts of the chain of infection (be specific)?
   - Host, agent, reservoir, portal of exit, transmission, portal of entry, and on.
5. What are host factors at increase the risk of contracting a disease?
   - Age, race, sex, physical and emotional health, immune status.
6. What is the incubation period?
   - Time between exposure to an infectious agent and the manifestation of symptoms.
7. Whom is a provider required to report diseases to?
   State and local health departments.
8. What are risk factors for acquiring a STD (STI)?
   - Using unsafe sex practices such as not using a condom, having multiple sex partners, and having sex with a partner that has an STD.
9. What are the steps of an outbreak investigation? Pg 302
   - Establish and verify diagnosis of reported cases; identify agent.
   - Search for additional cases; collect critical data and specimens.
   - Characterize cases by person, place, and time.
   - Formulate and test tentative hypotheses regarding possible causative factors.
   - Implement control measures to control the outbreak.
   - Evaluate efficacy of control measures.
   - Communicate findings; prepare written report.

DHW – Ch. 15	Emerging Infectious Diseases	ATI Ch. 3 pg. 23-25

1. What are factors that affect emerging diseases?

Microbial adaptation and change
Human susceptibility to infection

Climate and weather
Changing ecosystems
Human demographics and behavior
Economic development and land use
International travel and commerce
Technology and industry
Breakdown of public health measures
Poverty and social inequality
War and famine
Lack of political will
Intent to harm (bioterrorism)

2. What are the most common vector borne diseases? WHO website.

Yellow fever, malaria, west nile virus, zika, dengue (mosquito)
Plague (fleas)
Lyme (tick)

3. What are Primary prevention strategies for infectious/communicable diseases?
   - Hand hygiene, proper PPE use of healthcare employees.

4. What are Secondary prevention strategies for infectious/communicable diseases?
   - Screen for these diseases.

5. What are the nationally notifiable diseases? CDC website

Cholera
Cryptosporidiosis
Cyclosporiasis
Giardiasis
Hepatitis A
Legionellosis
Malaria*
Salmonellosis
Shigellosis
Typhoid fever
Vibriosis
Yellow Fever*

6. What is herd immunity?
   - Type of immunity in which a large proportion of people in a population are not susceptible to a communicable disease and the few people who are susceptible will not likely be exposed and contract the illness.

7. Compare and contrast active vs. passive immunity? How do you get them?
   - Passive, person is given antibodies to a disease rather than producing them through their own immune system (Babies getting antibodies from mom) only lasts for weeks to months.
   - Active, results when an exposure to a disease triggers the immune system and produces antibodies. (Can be immunizations)

8. Why are some diseases reported?

9. What is natural immunity?
   - Exposure and infection of the actual live organism.

10. What is the antigenic shift?
    - Sudden change in the DNA and RNA, resulting in a new strain of the microorganism;

people usually have little immunity to this.

11. What equipment is needed for an outbreak of the avian influenza?

12. What indicates a positive TB-skin test?
    - 5-15mm skin reaction at PPD site.

13. What factors increase the spread of TB?
    - Spread from person-person through air (ABN precautions) when a person w/ TB coughs, sneezes, speaks, etc. Increased risk of people with HIV.

People infected with Mycobacterium tuberculosis within the previous 2 years
People with a history of untreated or inadequately treated TB disease, including people with chest radiograph findings consistent with previous TB
Infants and children aged <5 years who have a positive TB test result
Silicosis
Diabetes mellitus
Chronic renal failure
Certain hematologic disorders (leukemias and lymphomas)
Other specific malignancies (e.g., carcinoma of the head, neck, or lung)
Body weight >10% below ideal body weight
Prolonged corticosteroid use
Other immunosuppressive treatments
Organ transplant
End-stage renal disease
Intestinal bypass or gastrectomy

14. What factors can lead to the emerging/re-emerging infectious diseases? Already stated.

DHW – Ch. 20	Community Preparedness: Disaster and Terrorism	ATI Ch. 8

1. What client classifies as a “Black” triage tag?
   - Dead or no salvageable give available resources.

2. What client classifies as a “Red” triage tag?
   - Critical, Unstable, immediate intervention.

3. What client classifies as a “Yellow” triage tag?
   - Urgent, Stable but may later deteriorate.

4. What client classifies as a “Green” triage tag?
   - Delayed, injured or ill but stable and not likely to deteriorate (walking but wounded)

5. What is the nurse’s role in a Risk Assessment during disaster preparedness? Pg 494
   - IDENTIFY HAZARDS.
   - Public health nurses as first responders
   - Assess community needs as events unfold
   - Conduct surveillance for communicable disease
   - Prevent and control spread of disease
   - Maintain communication channels
   - Organize and manage PODs
   - Provide on-site triage as needed
   - Manage behavioral responses to stress
   - Ensure health and safety of self, colleagues, and public
   - Document events and interventions

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6. What occurs in the Planning phase of disaster management?

7. What is the purpose of evaluation and After Action Report?
   - Hot wash session is done while everything is fresh in the minds of the participants. It can help lead to a more formal "after action report" that is a detailed list of strengths and weaknesses, successes and failures, and suggestions for improvement.
   - BOOK: Retrospective analysis used to evaluate emergency response drills.

8. What are key areas of concern for data collection in disaster preparedness?
   - Data collection in 3 areas: Risk Assessment, All hazard vulnerability studies, Federal and state response networks. Identify all possible hazards.

9. What is included in an epidemiological analysis report (look at the recovery phase)?

10. What are the actions of a public health nurse in a disaster?

Assess the needs of the community as the events unfold
Conduct surveillance for communicable disease and unmet needs
Prevent and control the spread of disease
Maintain communication channels to ensure accurate dissemination of information to colleagues and the public
Organize and manage points of distribution centers and mass immunization sites as required
Provide on-site triage as needed
Manage behavioral responses to stress
Ensure the health and safety of self, colleagues, and the public
Document events and interventions

11. What are the emergency preparedness steps from the American Red Cross?
    - Identify hazards
    - Proactive planning
    - Evaluate possible damage.

12. What does the nurse need to document during a disaster?
    - Not possible that normal standards will be maintained. Time, place, general assessment of the field, name of incident commander should be noted, Document observations.

13. What are the nurse's roles in a bioterrorism disaster?

14. What are the manifestations of smallpox?

Influenza-like, high fever, body aches
Early rash, raised bumps (most contagious)
Pustular rash, raised firm bumps (contagious)
Pustules with scab formation (contagious)
Resolving scabs (contagious)
Scabs resolved (noncontagious)

15. Where would the community receive supplies, food, water and possibly medications after a disaster?
    - Point of distribution (POD) or Emergency dispensing sites (ESD)

16. What are factors that hinder disaster response in culturally diverse areas?
    - Social and economic inequalities should be thought of during the planning process. Poor and disenfranchised live in less desirable parts of a town, these areas aren't as resistant to natural weather extremes. They lack transportation for evacuation, immigrants may not be familiar with possible resources.

17. What are the nurse's role in field triage in a disaster? May perform duties outside of their scope, may be a triage officer, ensures safety.

18. What are examples of vulnerabilities in communities included in their disaster preparedness plans? - Social determinants.
19. What are the phases of emergency management response? - Preparedness - Mitigation - Response - Recovery - Eval

DHW Ch. 6, 7	Epidemiology-Rates	ATI Ch. 3
1. Calculation of rates related to bioterrorism, and communicable diseases.		
2. Review prevalence rate, prevalence proportion, and cause-specific mortality rates.		
3. Review how to calculate R-naught (R-0).		
4. What are the uses of the principles of epidemiology?		