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N442 Contagion Video handout

Use your textbooks to understand epidemiology and nursing implications for communicable diseases.

1. Do you think the discussion with the physician right after his wife dies realistically portrays how a medical provider could explain such a phenomenon?
   They could but it really needs to be in a private setting w/ education provided. Refer to a support person/ Clergy.
2. How many times do you touch your face during the movie?
   Too many!

   What do they quote as the range in which people touch their face in an hour?
   3-5 times a min 180 - 300 times an hour
   4000-7000 a day
3. Identify the chain of infection: (virus attaches to cell + kills the cell) Beth took a picture w/ a man w/ blood on his hands + it was tranferred to her hands. She is pt. zero! Person to person via respiratory droplets produced when coughing or sneezing.

1. Infectious agent.
2. Reservoir
3. Portal of exit
4. mode of transmission
5. Portal of entry
6. Susceptible host

4. What is/are the infectious agent?
   MEV 1 virus / Niapah virus
5. What diseases did they rule out?
   Bird flu, measles, ensephalitus, swine flu,
6. What is the reservoir? A bat + pig bourne virus
7. What are the portals of entry? The portals of exit?
   Entry = mouth/nose/inhaled into lungs/resp.
   Exit = blood/tissue/mouth/nose
8. What are the fomites? Can the virus live for 6 days on a box? → No it cant live for days on a box
   Inanimate object that can transfer the disease to a new host if its been exposed/contaminated.
9. What is the process they take to determine what the disease is?
   Sample of pt. zeros brain + grew on p. dish
10. What agencies get involved? CDC + who

Day 6 autopsy
5 deaths 32 cases @ Day 6

Day — 8 deaths 47 cases
15 87
Day 12 -> MED1 virus (infected 800,000)

11. What precipitates these agencies getting involved? an unknown virus starts to spreads quickly w/ cases and deaths multiplying by the day rapidly.

12. What is the role of these agencies?
To figure out how it is

13. What is the time frame from onset to manifestations of symptoms i.e. incubation period and then to death? (incubation period less than 10 days.)
1 to 6 days

14. What are the actions taken by the CDC in terms of containing the infection?
isolation, quarantine,

15. What is an "R naught" (R_0)? How fast the virus reproduces.
* basic repoduction number

16. What do the investigators do to protect themselves? Full PPE, Mask, Suit, gloves, hair covered, booties

17. Calculate the mortality rate from the disease in the first 7 days in Minneapolis?
17 %

18. What does the epidemiologist from the WHO do to track the progression of the disease?
Analyze data from cases + timeframes.

19. What is an epidemic? versus a Pandemic?
Epidemic: Sudden increase in # of disease cases in a specific area affecting many people w/in a short period of time.
Pandemic: Infectious disease suddenly increases + spreads across a large region. "world wide"

20. What is a quarantine?
Placed in isolation b/c of exposure to an infectious disease. To help prevent the spread of disease.

21. Why does the husband not get sick? What type of immunity does he have? → Naturally Resistant Immune system
Immunity 1/2 from him + 1/2 from his mother causing him to have a natural genetic immunity to resist the virus.

10:43 used ATM
2 hrs -> time of death

22. What are the symptoms of the virus? Flu-like, foaming @ the mouth, Seizures, Comas, headache, temp.,

23. How do they develop a vaccine?
The CDC creates a viable cell culture + uses it to develop the vaccine. Dr Hextall gives herself the experimental vaccine + goes to see her infected father + doesn't get sick, so the vaccine is effective.

24. How is the vaccine administered?
Injection w/ Dr Hextall + a nasal administration once developed.

25. Is it a live virus vaccine versus an attenuated virus vaccine? A live virus!
live = helps immune system by using a weakend version of the virus or bacteria.
Live-attenuated = a weakend form of virus/bacteria that has been cultured in the lab.
What is the difference?
live = weakend virus/bacteria
Attenuated = created in the lab as a form of the weakend virus/bacteria

26. What sort of immunity does the vaccine provide?
Active immunity

27. How can the vaccine be administered to the greatest number of people?
Water waste

28. How does the environment, transportation, communication, essential services, government, and health care facilities get involved?
The Spread the word on the development + administration of the vaccine.

29. In your opinion do local, national, and global politics make a difference in the development and distribution of the vaccine?
Yes

Explain your opinion? Politics factor into every form of the development + distribution of a vaccine. They decide rules, laws, policies, development, + release/adminstration of the vaccine.

30. Does it make a difference if there is a rush to develop the vaccine?
Yes b/c the required amount of testing is rushed + people may experience side effects or death that may not be experienced w/ the correct amount of time to test + develop the vaccine.

31. Does it make a difference that a vaccine may have other side effects? Ex: 1976—Swine Flu vaccine. Yes but if the side effects are less serious than death then life vs death - will result in choosing life.

32. As a community health nurse: Identify the primary, secondary, and tertiary prevention methods that could be used for infectious diseases at both the individual and community levels. Primary: vaccines + education
Secondary: Testing centers/
Tertiary: Educational resources provided + addressing S/S.

33. What are the steps that a community needs to do to respond to an infectious disease outbreak? quarantine + isolation methods while obtaining a vaccination.

Tokyo 30.6 million
Incubation less than 10 days