

- 1. Do you think the discussion with the physician right after the main character's wife dies realistically portrays how a medical provider could explain such a phenomenon?**

No. The physician provides very little information about what happened after the husband left the room. He also provides guesses as to what may have killed the wife without having any information to back-up any of the possibilities.

- 2. How many times do you touch your face during the movie?**

22

What do they quote as the range in which people touch their face in an hour?

3-5 times a minute

- 3. Identify the chain of infection:**

Organism → person → mouth (cough) → airborne → touching face, inhalation → sick humans

- 4. What is/are the infectious agent?**

MEV-1

- 5. What diseases did they rule out?**

SARS
Paramyxovirus
Flu

- 6. What is the reservoir?**

Humans

- 7. What are the portals of entry? The portals of exit?**

Entry: touching face, inhalation
Exit: mouth, nose (cough, sneeze)

- 8. What are the fomites? Can the virus live for 6 days on a box?**

Touching face, doorknobs, water fountains, buttons, each other
No, it cannot live for 6 days on a box.

9. What is the process they take to determine what the disease is?

Examine samples from autopsies, grow the virus in a lab to perform experiments

10. What agencies get involved?

CDC
WHO
Department of Homeland Security

11. What precipitates these agencies getting involved?

The rapid number of increasing cases, involvement of multiple countries/regions

12. What is the role of these agencies?

Determine the virus, exposures, symptoms, treatment
Relay information to the public
Examine the virus for similarities to existing viruses
Determine ability of people to weaponize a virus

13. What is the time frame from onset to manifestations of symptoms i.e. incubation period and then to death?

4 days

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

Quarantine those believed exposed, isolation for those who are sick

15. What is an “R naught” (R_0) ?

Reproductive rate of virus
How many extra people are infected for each person who gets infected

16. What do the investigators do to protect themselves?

Level A precautions (self-contained breathing apparatus, chemical resistant, vapor tight suit, chemical resistant gloves and boots)

17. How do the personnel involved communicate the risks to the public?

Press conference from CDC/WHO
News

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

Minneapolis Population at start = 3.3 million
Day 7 death count= 6

Mortality rate → 0.2%

19. What does the epidemiologist from the WHO do to track the progression of the disease?

Talk with patients who have contracted disease, speak with local officials
Home assessments of those infected
Examines security footage from estimated night of Beth's contraction

20. What is an epidemic? versus a Pandemic?

Epidemic: a disease affecting many people within a shared community/region
Pandemic: a disease affecting many people through multiple countries or continents

21. What is a quarantine?

Period of isolation for those who have been exposed to a contagious disease to lower risk of spread

22. Why does the husband not get sick? What type of immunity does he have?

The husband has passive immunity from being in contact with his wife and son.
He has a healthy immune system that was able to develop this immunity.

23. What are the symptoms of the virus?

Dry cough, discoloration around mouth, difficulty swallowing, fever, seizure, fatigue, tachycardia, headache, coma, death, chills, malaise

24. How do they develop a vaccine?

Animal trials with monkeys, attempt with attenuated vaccine first, move to live virus when trial animals continue expire.

25. How is the vaccine administered?

Intranasal

Bingo style birthday draw

26. Is it a live virus vaccine versus an attenuated virus vaccine?

Live virus vaccine

What is the difference?

Live: contain larger portions of the virus and create a stronger and longer-lasting immune response

Attenuated: contain weakened virus to generate a protective immune response without causing disease

27. What sort of immunity does the vaccine provide?

Active immunity

28. How can the vaccine be administered to the greatest number of people?

Vaccine should be given to all local health agencies. Advertisement for vaccination should be made clear, and number of vaccines available for a day should not be advertised. The agencies should limit traffic flow to minimize risk for riots. Aggressive crowds may cause damage to vaccines and packaging, lowering the number of people who receive the vaccine.

29. How does the environment, transportation, communication, essential services, government, and health care facilities get involved?

Environment: assists in spread, becomes full of rioting, violence related to resources

Transportation: public transportation should remain open, but with requirements and social distancing rules

Communication: online bloggers, news, press releases

Essential Services: police offer support, EMS services perform triage assistance

Government: provides military support for control of panic

Health care facilities: provide disaster level care and triage

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

Yes

Explain your opinion?

If multiple countries are working on developing a vaccine, it may become a political race to see who the strongest and leading country in scientific breakthrough is.

31. Does it make a difference if there is a rush to develop the vaccine?

Yes. Vaccines that are rushed may not be put through sufficient human trials and can cause negative adverse effects.

32. Does it make a difference that a vaccine may have other side effects? Ex: 1976—Swine Flu vaccine.

In some cases, yes. Those who are immunocompromised may be unwilling to receive vaccines that may further weaken their immune system or cause other illness. Many parents are also hesitant to vaccinate their children.

33. 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: education about the transmission of disease and hygiene

Secondary: vaccinations when available, screening for symptoms

Tertiary: management of symptoms, quarantine/isolation of infected

34. What are the steps that a community needs to do to respond to an infectious disease outbreak?

Obtain information and disperse as able

Notify public health departments, office of emergency management

Have an established protocol

Designate tasks for employees

Identify outbreak

Internal/external communication

Data tracking

After action review

