

## **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 the main character's wife dies realistically portrays how a medical provider could explain such a phenomenon?**

I feel that some providers would be more empathetic and concerned about the cause of death of this patient. Also, the provider started speculating about the cause of death in front of the husband which only made him more anxious and concerned.

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

I did not touch my face since I was typing for this assignment.

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

2000-3000 a day, 3-5 times a minute (180-300 times an hour)

**3. Identify the chain of infection:**

Bat → pig → chef → Gwyneth Paltrow → several people at the casino → → → world

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

A virus

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

Measles, H1N1, meningitis, encephalitis, herpes,

**6. What is the reservoir?**

pig

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

Mucous membranes (mouth, nose, eyes, genitals)

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

Fomites are inanimate objects that the virus can be spread through (Glasses, door handle, chef's hand, cups, handles on the bus and subway, elevator buttons, drinking fountains, touching each other, phones)

The virus will not survive that long on a box

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

Autopsies of the infected people that died, studies under the microscope, studies in labs

**10. What agencies get involved?**

CDC, WHO and The Chronicle (the newspaper), Department of Homeland Security, FEMA, CIA

**11. What precipitates these agencies getting involved?**

The unknown cause of the disease and the fast rate of spreading.

**12. What is the role of these agencies?**

CDC is receiving the samples of the infected people and is supposed to identify the pathogen that is causing the disease. The WHO is concerned about the public, how to prevent the spread of the disease, how to ensure that the least amount of people get infected. They are trying to find out where the disease originated and whether it could be a biological weapon and an attack on the country.

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

Incubation period is less than 10 days,

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

They close the schools down in some districts, tell people to keep home children with symptoms. Isolating the sick ones and quarantining the ones they believe to have been exposed.

**15. What is an “R naught” ( $R_0$ ) ?**

It is the amount of people that are likely to be infected from a person that gets sick.

R=reproductive rate of the virus. It depends on multiple factors, like how big is the population of people susceptible to the virus, or how long is the incubation period.

R naught for this virus is thought to be 2 at first, then no less than 4..

### **16. What do the investigators do to protect themselves?**

Limit the amount of people working with the virus, use PPE, distance from infected people, send an epidemiologist to Hong Kong, the place they suspected this virus to originate from, social distancing.

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

There are press conference and the media that spreads information

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

**15 deaths**

4+possible 2 out of 15

Low 20s

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

Travel to Hong Kong to conduct interviews and track the origin of the disease. She look s at the footage of the camera recording from the casino where the wife went.

### **20. What is an epidemic? versus a Pandemic?**

Epidemic= a widespread occurrence of an infectious disease in a community at a particular time.

Pandemic= (of a disease) prevalent over a whole country or the world.

**21. What is a quarantine?**

A state, period, or place of isolation in which people or animals that have arrived from elsewhere or been exposed to infectious or contagious disease are placed.

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

They are speculating whether it is a part of his innate immunity or adaptive, which would mean he had the disease and developed antibodies against it

**23. What are the symptoms of the virus?**

Fever, cough, weakness, seizures, headaches, death, sore throat

**24. How do they develop a vaccine?**

They first try to grow the virus in other cells. However, this is very difficult because the virus kills any cell that it is entered in. Then one doctor successfully grew the virus in a bat cell despite the CDC shutting his lab down. Once the vaccine is developed, one doctor gives it to herself and exposes herself to her infected father to test if it works.

**25. How is the vaccine administered?**

Intranasally

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

Live attenuated

**What is the difference?**

Live attenuated vaccine means that a weaker form of the virus is used in the vaccine.

**27. What sort of immunity does the vaccine provide?**

The vaccine provides adaptive artificial immunity

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

Give vaccines to healthcare workers, police, firefighters that can then distribute the vaccine to others.

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

The National Guard is setting up roadblocks, they shutting off the board of trade, the public transportation is pulling their drivers off the roads, the secret service moved the president underground, the congress was figuring out how to work online. They expect the banks, grocery stores, gas stations etc to be influenced greatly. Healthcare workers are on strike.

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

They do because they can either support it or not. This would make people either get the vaccination or not.

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

Yes, the vaccine will be developed faster

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

I think it would make people less likely to get the vaccine or at least be more cautious about it. I think it would also be much harder to test the vaccine and let it be approved and distributed.

**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:** social distancing, quarantine, vaccinations

**Secondary:** Testing people who may have been exposed

**Tertiary:** Treatment of the patients infected

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

Adhere to the regulations and recommendations of CDC