

Emerging Infectious Diseases

Final in class assignment: Scenarios for the “next big one”

Throughout this semester we have studied disease outbreaks and the ways that biological factors, ecology and opportunity come together to create epidemics.

In a group of 4 students assigned by the instructor, devise your own Spillover/Outbreak scenario for a potential pandemic- an epidemic that spans countries.

Consider characteristics of the agent, the host, and the environment. What are likely agents? What characteristics of disease life cycle will make the disease difficult to control? Use your knowledge of disease biology to find the best- and most realistic- agent.

Remember that an epidemic only occurs when disease spread is amplified by environmental conditions, gatherings of people, travel, or just bad luck.

What human behaviors will cause the greatest spread? What will cause challenges to control?

With your group, develop a scenario that you can explain to the class. Use poster, powerpoint or other media to make your case.

Assessment Rubric:

	5	15	25
Define pathogen	Confuses pathogen	Identifies pathogen type but doesn't specify its characteristics	Identifies virus, bacteria, protist and uses terms and characteristics correctly
Consideration of biological factors.	Describes spread without reference to life cycle	Identifies life cycle but not its contribution to spread	Identifies life cycle of pathogen and how it contribute to spread
Description of environment that contributes to spillover and spread.	Environment for spread not specified	Environment described but its contribution isn't clear	Environment explains contact between pathogen and host
Scenario for amplification	Not explained	Demonstrates some understanding of amplification	Creative and realistic understanding of amplification opportunities
Real potential for this to occur.	Wimpy	Worrisome	Scary
Presentation skills and evidence of participation of all members	Unequal presentation	Some speak Media could be stronger	All speak with confidence, good media
TOTAL POINTS			Possible 150