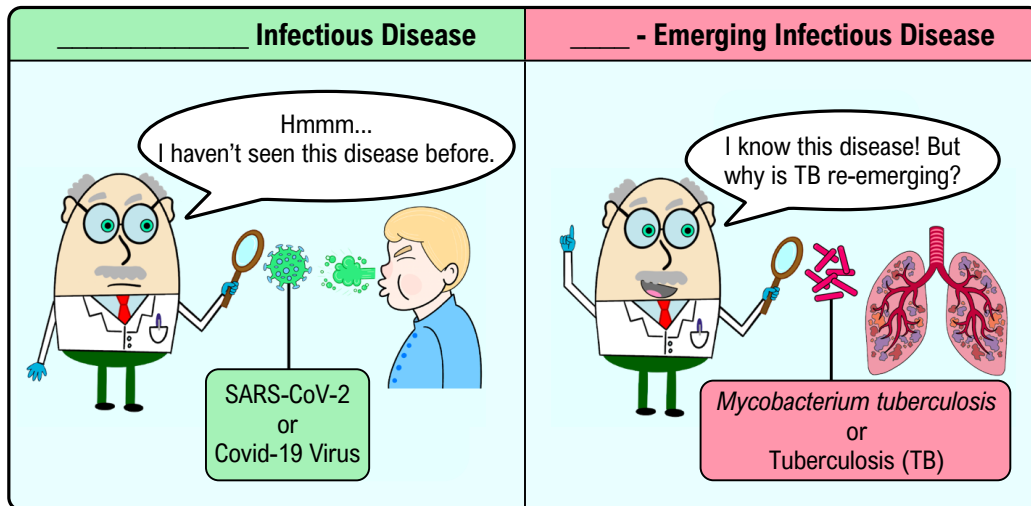


## TOPIC: EMERGING INFECTIOUS DISEASES

### Emerging & Re-Emerging Infectious Diseases

◆ *Recall:* CDC/WHO are public health agencies that combat diseases:

- **Emerging Infectious Disease:** is either \_\_\_\_\_ **OR** not new but *only recently* increasing in incidence/spread.
- **Re-Emerging Infectious Disease:** *previously controlled* disease that suddenly \_\_\_\_\_ in an outbreak.



## TOPIC: EMERGING INFECTIOUS DISEASES

### EXAMPLE

Appropriately fill in the blanks throughout the table below:

	Emerging Infectious Diseases	Re-emerging Infectious Diseases
<b>Definition</b>	Previously unknown disease or a disease that has recently ____ incidence or geographic range.	Diseases that were previously under _____ but are now prevalent again.
<b>Cause</b>	Novel pathogens, mutations, human-animal interactions, globalization, environmental change.	Lapses in control measures, antimicrobial resistance, pathogen adaptations.
<b>Examples</b>	COVID-19, HIV/AIDS (in the 1980s), Ebola	Tuberculosis, cholera, measles, dengue fever.
<b>Public Health Concern</b>	Hard to _____, require new surveillance & research.	Often require renewed or improved interventions (e.g. new _____).








### PRACTICE

Which option is the least effective strategy to control an outbreak of an emerging infectious disease?

- a) Having scientists study the structure of the pathogen so they can work on producing a vaccine.
- b) Conducting public awareness campaigns to educate people on how to prevent the spread of the disease.
- c) Restricting travel to and from the area that experienced the outbreak to contain the disease.
- d) Focusing solely on treating symptomatic individuals and not conducting wider research on the disease.

## TOPIC: EMERGING INFECTIOUS DISEASES

### Factors Contributing to Emerging & Re-Emerging Infectious Diseases

Factors Contributing to Emerging and Re-Emerging Infectious Diseases	
<b>Microbe Evolution</b>	Natural selection may lead to microbial _____ to antibiotics. 
<b>Population Increase</b>	Overcrowding creates unsanitary conditions & _____ exposure to pathogens. 
<b>Food Production</b>	Widespread distribution of _____-contaminated food results in outbreaks of disease. 
<b>Misuse of Antibiotics</b>	May _____ normal microbiota; could be favorable for opportunistic pathogens. 
<b>Climate Change</b>	Climate impacts growth & survival of _____ & vector species. 
<b>Complacency</b>	Inadequate public _____ leads to decreased vaccination. 
<b>Societal Changes</b>	Increased international travel & use of daycare centers may allow diseases to emerge or re-emerge. 

## PRACTICE

How would you expect global warming to affect the spread of vector-borne diseases?

- a) Many vectors of disease are insects which thrive in warmer temperatures, thus increasing prevalence of disease.
- b) Global warming increases the geographical range of vector-borne diseases that thrive in warm climates.
- c) Global warming lengthens the “warm” seasons when vector-borne diseases are most prevalent.
- d) All of the above.