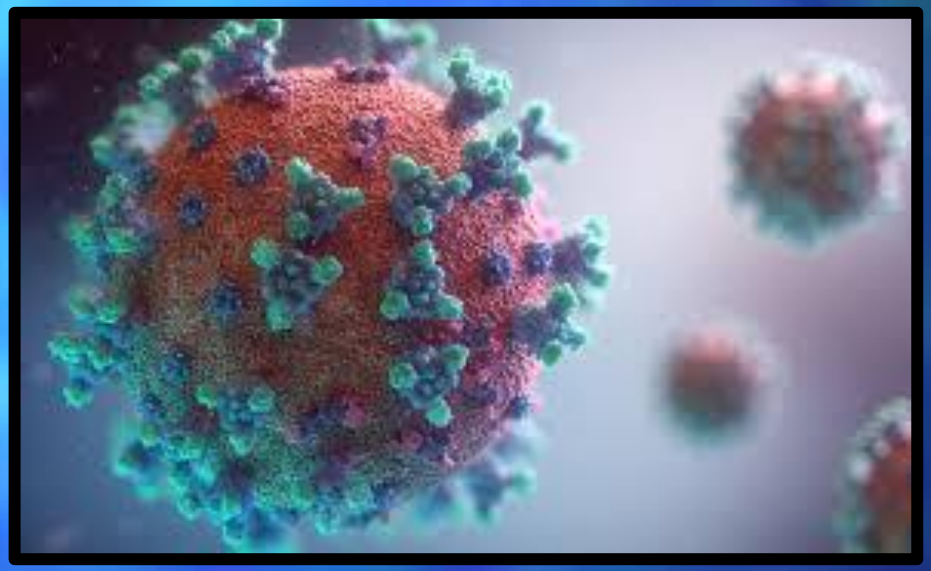
Ministering to the Community in a Time of Crisis



COVID-19
Second Wave

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- These PowerPoint Presentations are written and provided to prepare the Body of Christ for disasters such as the current pandemic
- These trainings are meant to enable people to safely care for themselves and minister to their neighbors
- By being properly equipped we are then able to bring the gospel of our Lord, Jesus Christ into the situation
- For more information, please visit outrunningthehorses.com

Second wave: A phenomenon of infections that can develop during a pandemic. The disease infects one group of people first. Infections appear to decrease. And then, infections increase in a different part of the population, resulting in a second wave of infections.

According to health officials, waves of infection describe the curve of an outbreak, reflecting a rise and fall in the number of cases.

With viral infections such as influenza or the common cold, cases typically crest in the cold winter months and recede as warmer weather reappears.

COVID-19 – Second Wave

- The following topics will be discussed
  - Characteristics of waves
  - Past Pandemics
  - COVID-19
  - Immunity
  - Vaccine

COVID-19 – Second Wave

- Introduction
  - Much discussion has taken place as to whether there will be a second wave of the circulating coronavirus
  - Dependent on the source of information you may get differing answers
  - This presentation does not speculate but instead is based on the history of past pandemic viruses

COVID-19 – Second Wave

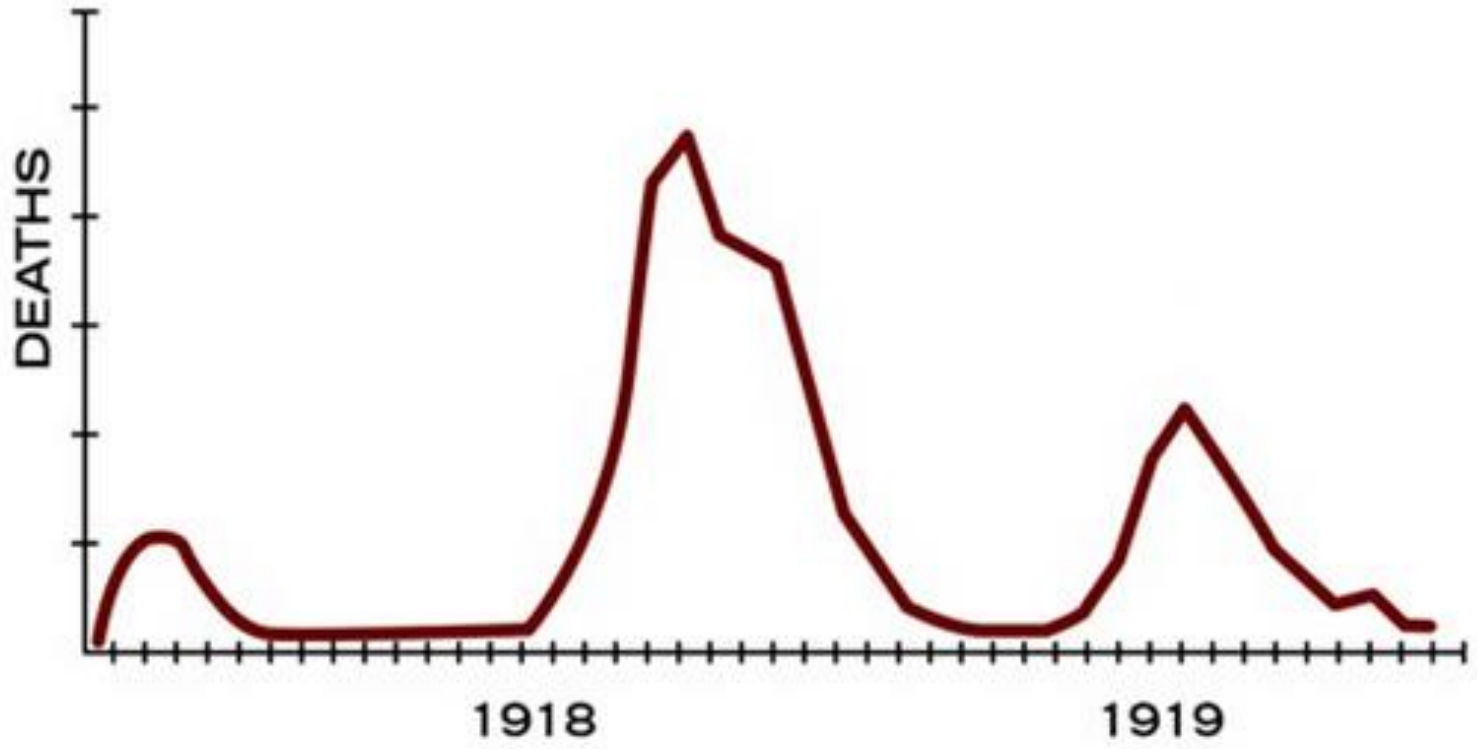
- Introduction
  - It is a mystery why illnesses come in waves
  - A characteristic of past pandemics has been multiple waves
  - Some possibilities are:
    - Behavioral changes in the virus
    - Its' spread through sub-populations (e.g. elderly)
    - Virus mutation
    - Waning immunity
    - Population growing weary of mitigation measures

COVID-19 – Second Wave
Waves of Past Pandemics

- 1918 Influenza
  - Came in three separate waves
    - The first was mild during Spring and Summer of 1918 (June through July)
    - The second was a more intense deadly wave in the fall of 1918 (October through January)
    - The last was a less intense wave following Spring 1919 (February through April)

1918 Influenza Waves

Figure. 1918 Pandemic Waves[3]



COVID-19 – Second Wave
Waves of Past Pandemics

- 1957 – 1958 H2N2 Influenza Pandemic (aka the Asian Flu)
  - Waves coincided with flu seasons
  - Wave peaked with children returning to school
  - Vaccine and invention of antibodies for secondary infection helped
  - 1-2 million deaths or 2-4 million

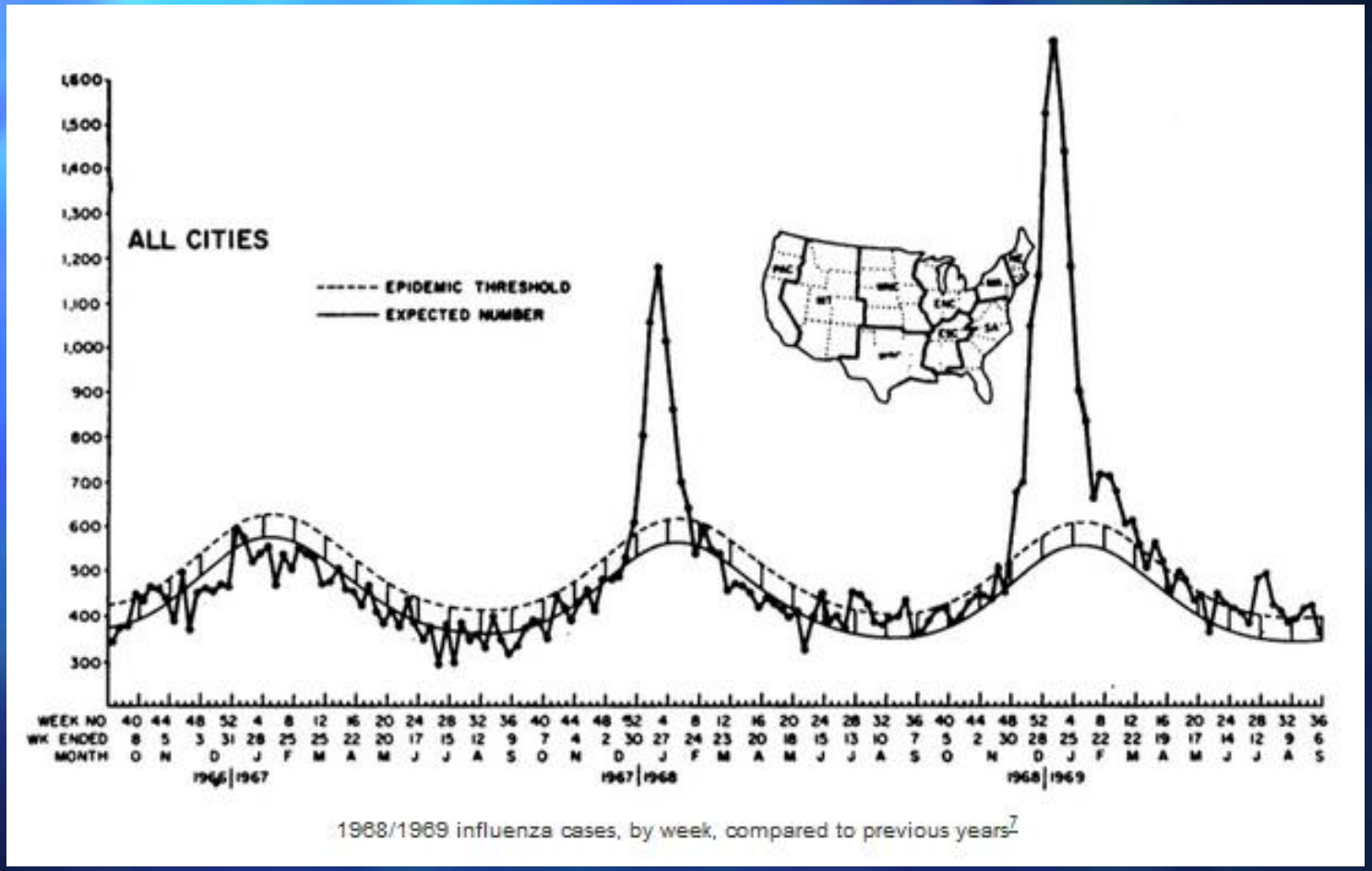
Asian Influenza Waves

1957/1958 influenza cases, by week[5]

COVID-19 – Second Wave
Waves of Past Pandemics

- 1968 – 1969 H3N2 Influenza Pandemic (aka the Hong Kong Flu)
  - Killed estimate 4 million people
  - Came in 2 waves
  - Evidence of increased transmissibility between successive waves

Hong Kong Flu Waves

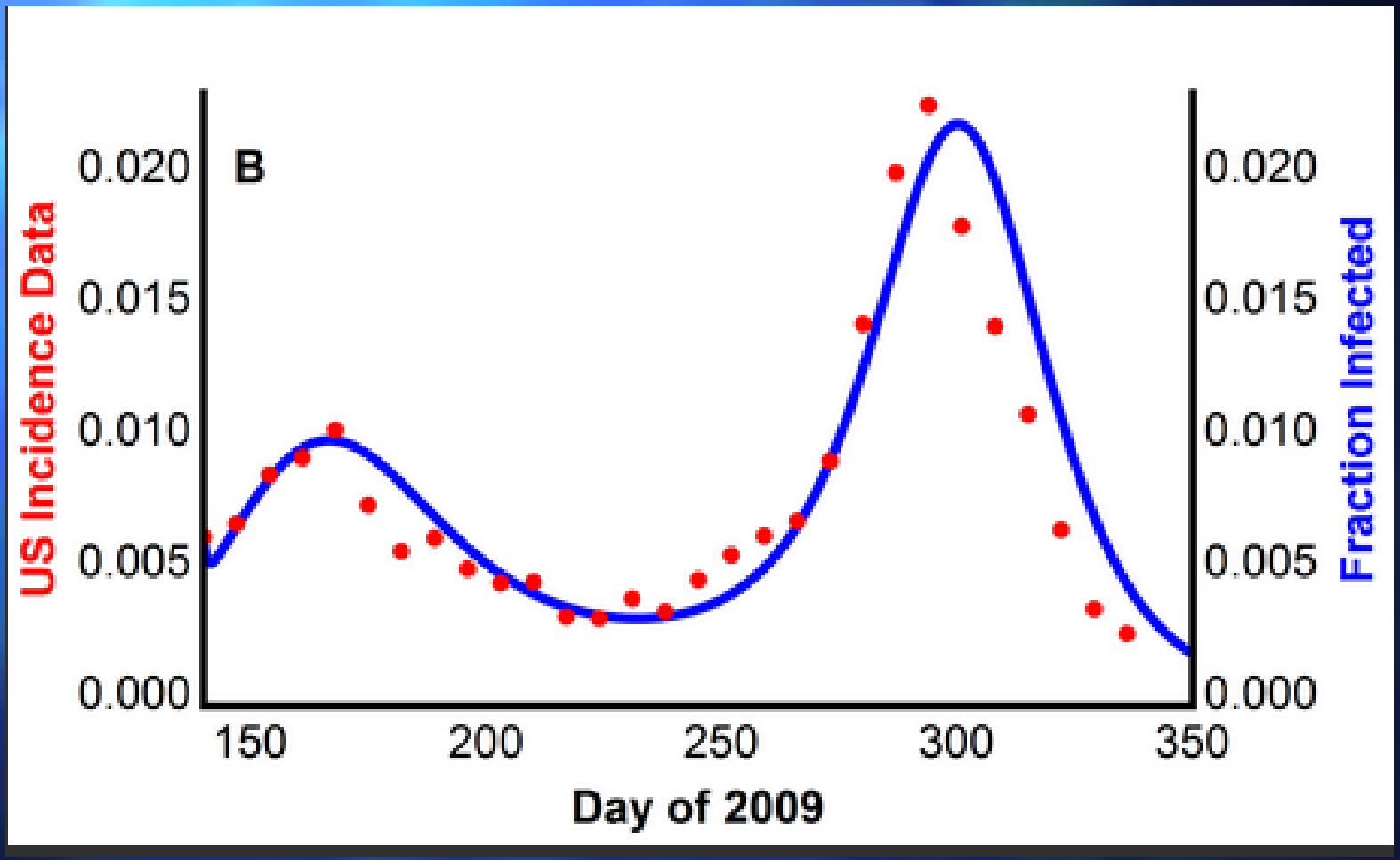


1968/1969 influenza cases, by week, compared to previous years[7]

COVID-19 – Second Wave
Waves of Past Pandemics

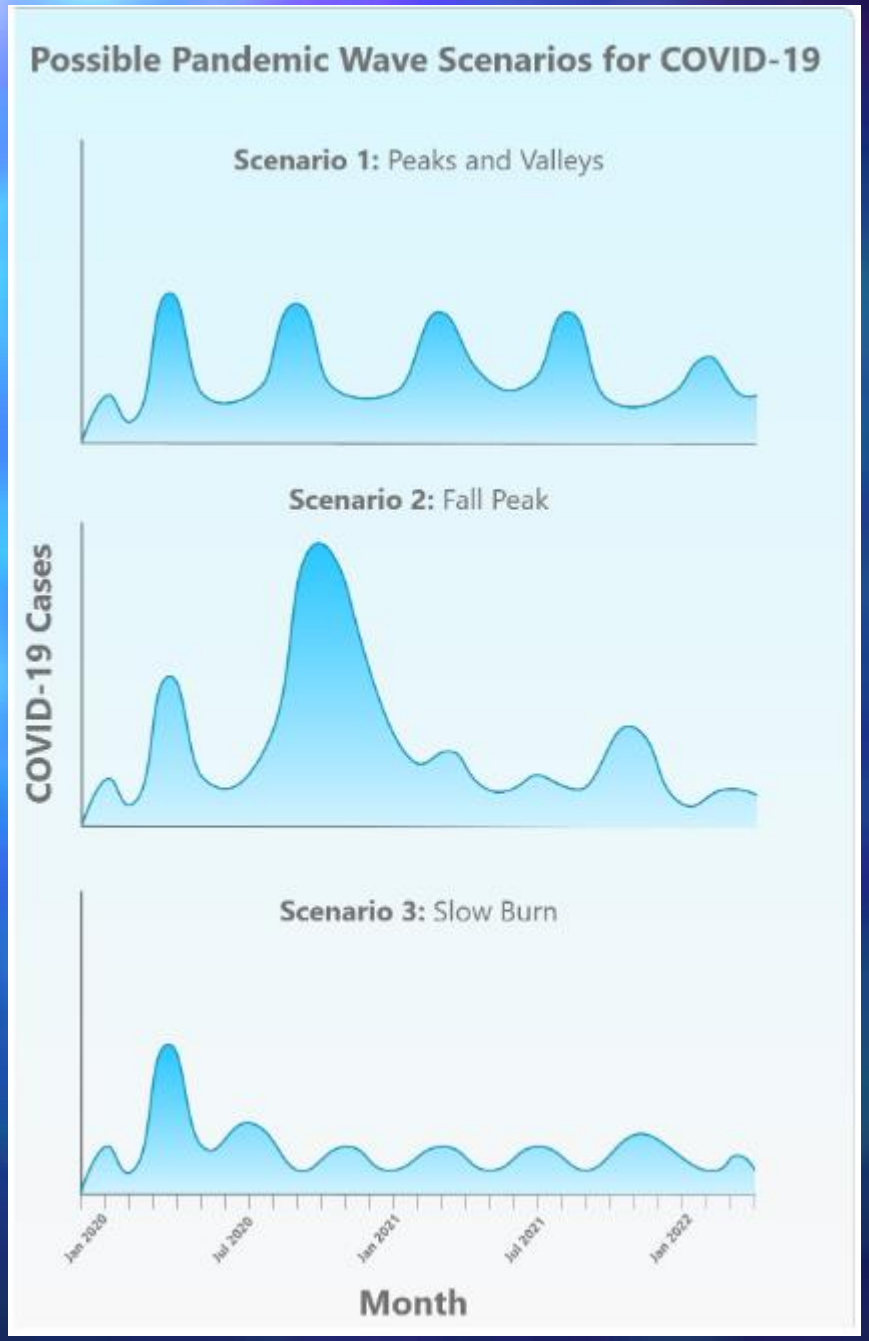
- 2009 – H1N1 Influenza (aka Swine Flu) Pandemic
  - First wave peaked at 23 weeks then subsided
  - Second wave returned at 35 weeks
    - Peaked at week 41
    - Then subsided

H1N1 Influenza Waves



COVID-19 – Second Wave

- COVID-19
  - Three potential futures of COVID-19:
    - Recurring small outbreaks
    - Monster wave
    - A persistent crisis



COVID-19 – Second Wave

- COVID-19
  - There is an expectation of a second wave of COVID-19 due to the following:
    - Warmer weather may reduce transmissibility by 20%
    - Cooler weather will have increase due to usual pattern of coronaviruses
    - New transmission is expected to peak winter

COVID-19 – Second Wave

- COVID-19
  - There is an expectation of a second wave of COVID-19 due to the following:
    - Harder time controlling in the cooler weather
      - –Cooler temperatures harden the protective gel-like capsid of the virus particles while they are in the air
      - –A stronger shell allows them to survive long enough to travel person to person

COVID-19 – Second Wave

- COVID-19
  - There is an expectation of a second wave of COVID-19 due to the following:
    - People grow tired of mitigation measures
      - Social distancing
      - Handwashing
      - Mask Wearing
    - Schools may open

COVID-19 – Second Wave

- The World Health Organization
  - COVID-19 may never go away due to:
    - It is endemic in all populations
    - It may return seasonally like other coronaviruses

COVID-19 – Second Wave

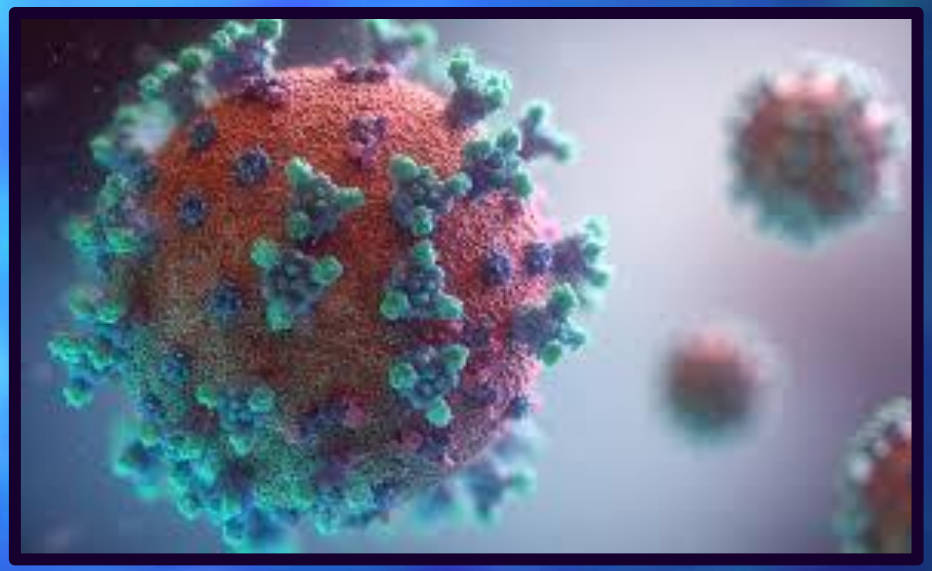
- Immunity
  - Human immune system does not like to make antibodies for a glycoprotein
  - Immunity wanes
  - People can be re-infected
  - Clusters are reemerging in Wuhan, China, due to waning immunity

COVID-19 – Second Wave

- Some viruses that have not "gone away"
  - H1N1
  - HIV
  - Enterovirus (polio)
  - Malaria
  - Measles
  - Rubella
  - Varicella Zoster (chicken pox)
  - Mumps

COVID-19 – Second Wave

- Conclusion
  - History of pandemics tell us there will likely be a second wave
  - Second wave may be more intense
  - Three possible futures:
    - A monster wave
    - Recurring small outbreaks
    - A persistent crisis



Questions?

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