Using R in Outbreak Responses

By Travis Oishi

Type of the Chat

- 1: You have incorporated R or other software packages in your work duties

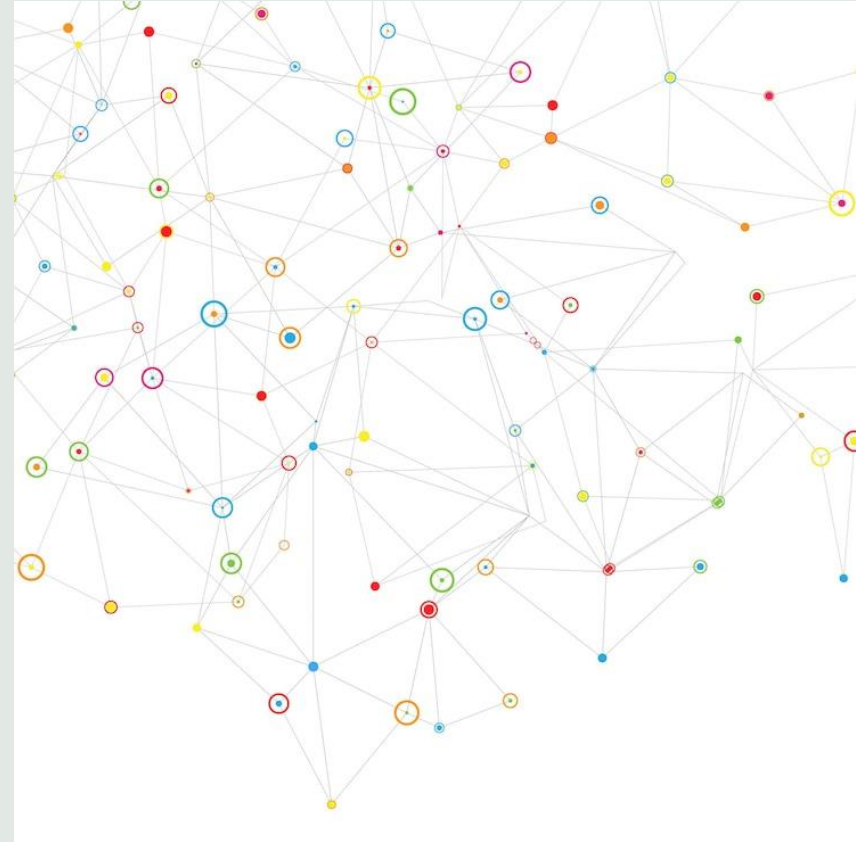- 0: You have not, but are still willing to learn

About Me

- Central Shenandoah Health District Epidemiologist
- Jr Epi for Central Shenandoah from Oct 2019 - March 2022
- Limited experience in R when I first started in 2019
- Started coding around Spring of 2020 to improve epi processes

Outbreaks

- Two or more linked cases of the same illness or the situation where the observed number of cases exceeds the expected number, or a single case of disease caused by a significant pathogen

- Outbreak responses include:
  + Identifying potential causes
  + Implementing control measures
  + Keeping up to date with information

Challenges

- Outbreaks may last for a while

- Keeping up to date, accurate information

- Dealing with inconsistent formatting

- Identifying and removing duplicate records

Benefits of R

- Completing tasks that you need to do more than once
- Processing complex equations
- Navigating large datasets
- Large scale data manipulation
- Less prone to human error