

Introduction

COVID-19 is currently a topic that relates to everyone as a global pandemic.

- about 4 million global deaths
- about 191 million global cases
- about 3.84% who got tested are positive
- a new Delta variant is causing new cases reported to increase in great amounts

Vaccinations are one of the ways to track the amount of people who are less likely to get COVID.

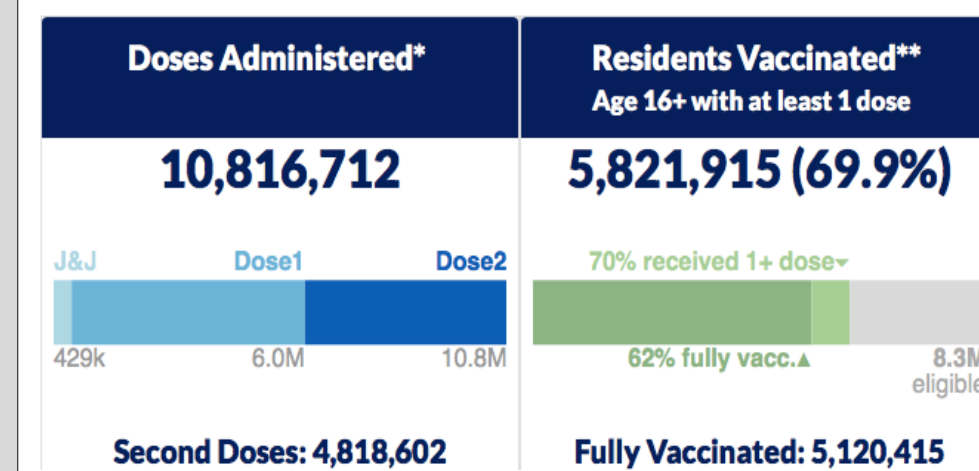


Figure 1. Vaccination Records

Studying social behaviors and reviewing policies through models and focus groups are also crucial parts of the process.

Objective

- Visualize UAS Data
- Characterize Behaviors by Age
- Explore different models for COVID
- Create COVID compartment Model
- Visualize Vaccinations By Age

Percent vaccinated once or more or very/somewhat likely to get vaccinated

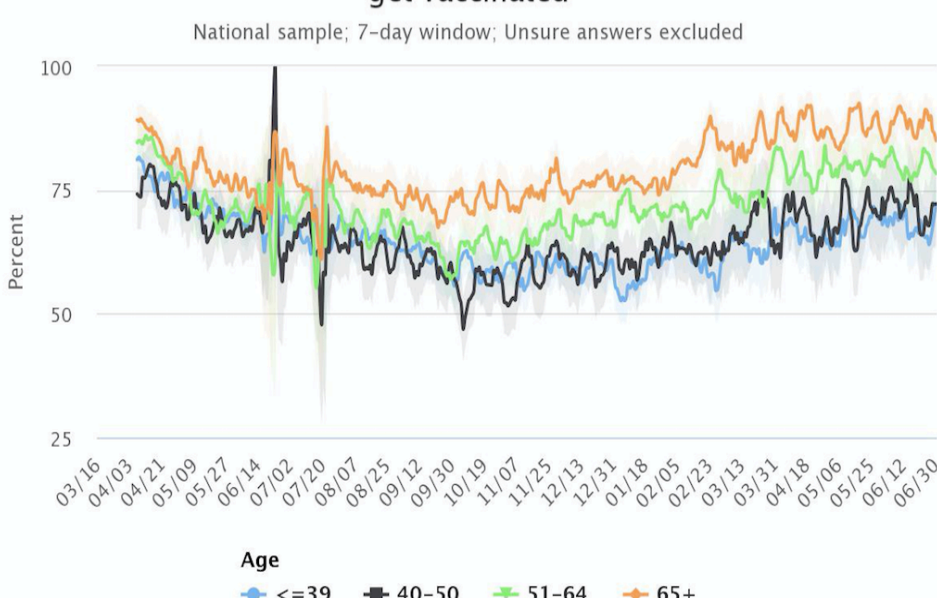


Figure 2. Likely to Get Vaccinated %

Skills Learned

Literary Research/Scholar Reading on Different Types of COVID Model

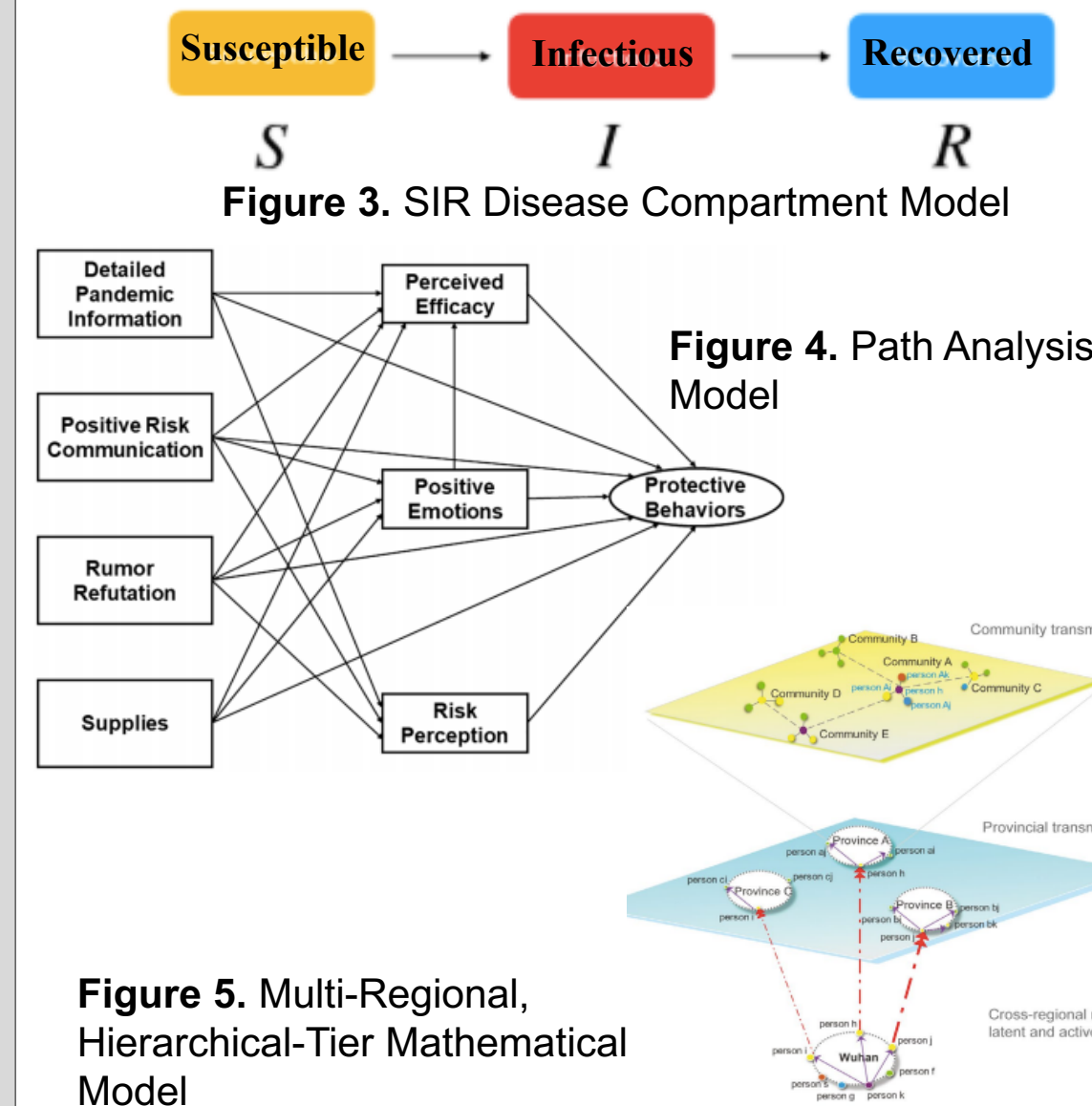


Figure 5. Multi-Regional, Hierarchical-Tier Mathematical Model

MATLAB Code and Visualization for Vaccinations Based on Age Breakdown

Building A Disease Compartment Model

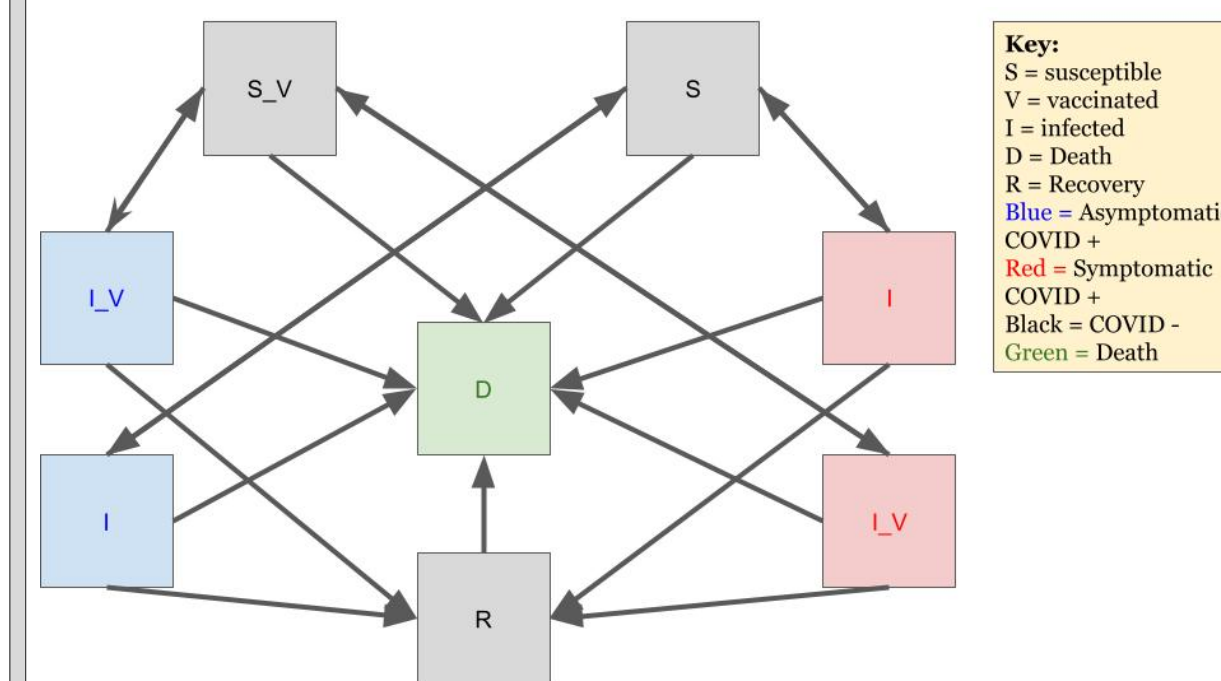


Figure 6. COVID Compartment Model

Impact of Professor's Research

Professors Sze-chuan Suen and Shinyi Wu are collaborating to build a COVID-19 model at the LA County level as well as incorporating health safety climate that assesses social behaviors in different service planning areas (SPA).

Professor Suen

- mathematical and computational modelling

Professor Wu

- focus group interviews analyzing the effectiveness of current policies and behaviors

Next Steps

After learning about visualizing data and creating models, I would like to delve further into listening in on the focus groups as well as learning more about behavioral aspects that affect COVID policies to build a more accurate and relevant model.

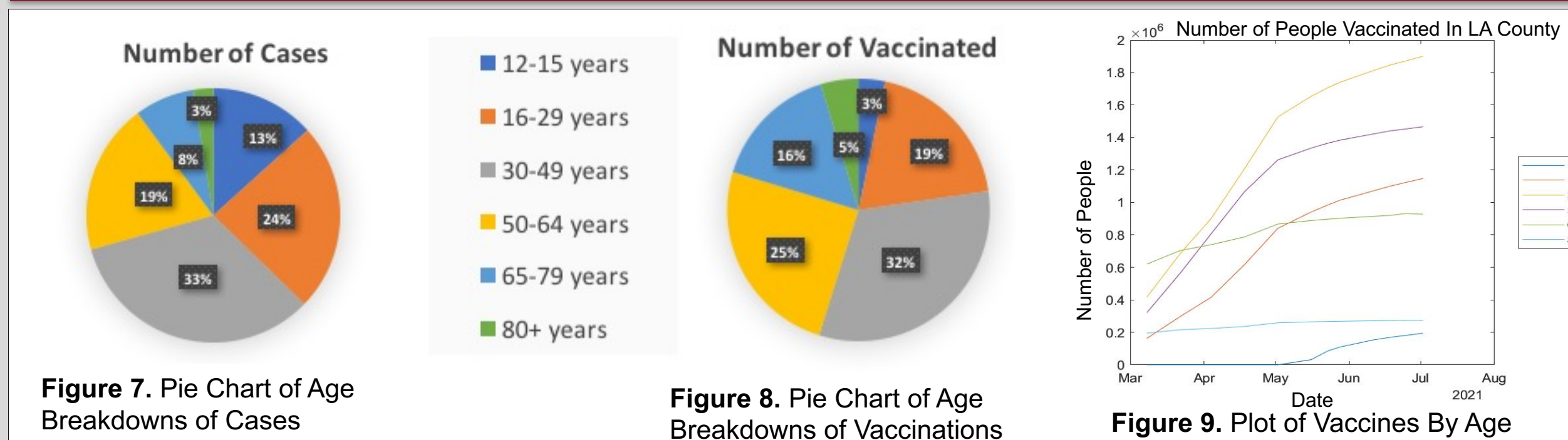
Acknowledgements

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Visualizing Data and Viewing Trends



Three different ways to visualize

- Pie Chart Cases (7/21/2021)
- Pie Chart Vaccines (7/2/2021)
- Line Graph (3/8/21 – 7/2/21)

Conclusions

- Proportions of Cases for ages 12-15 are far greater than the number vaccinated
- Vaccinations were especially useful in the 50-79 age category as seen through case/vaccination proportions
- 30-49 age group = greatest amount of vaccinated
- 12-15 age group = least amount of vaccinated
- Reasons for older age trends
 - Concerns for Risk Vs Benefit
- Reasons for younger age trends
 - Education
 - Geography