



Vaccination Outreach for the Next COVID-19

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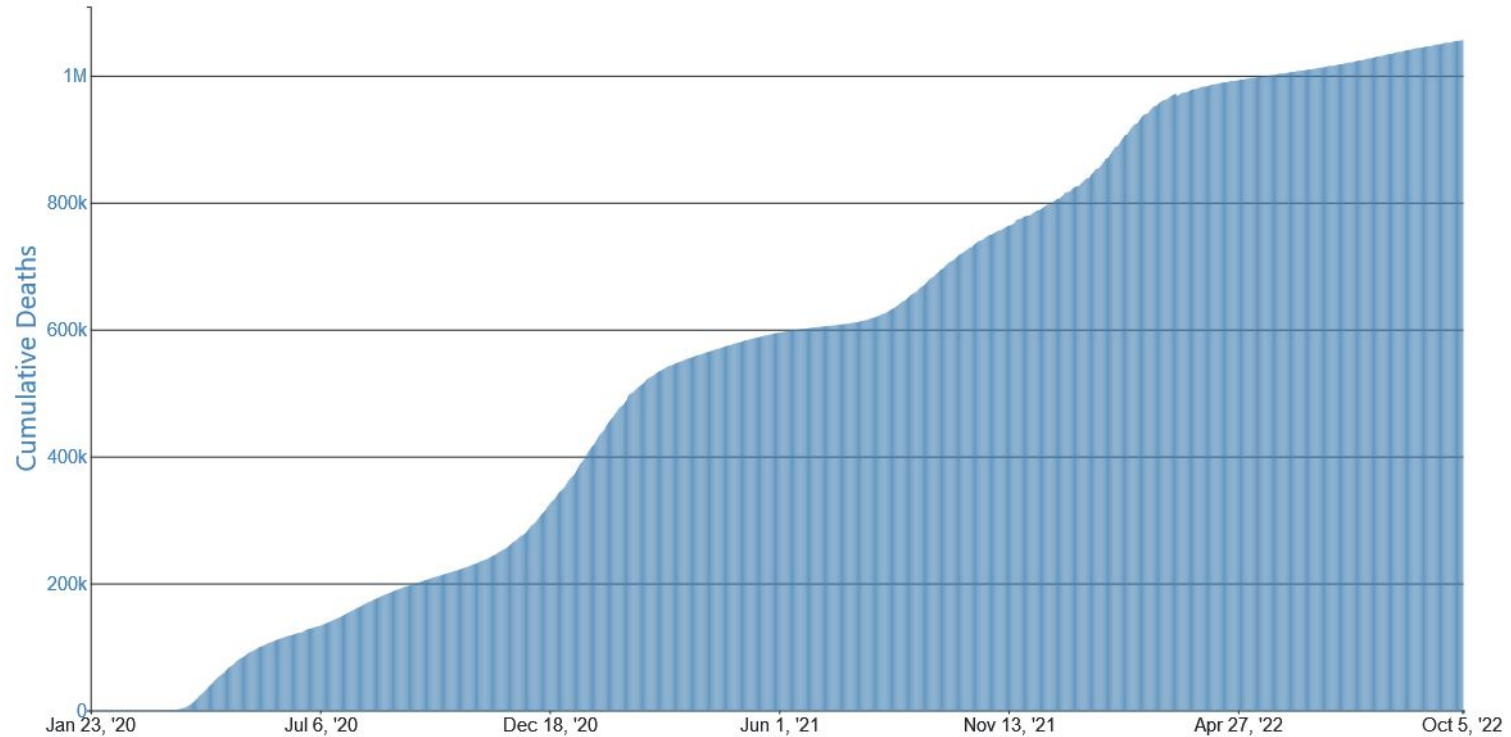
Presentation Agenda

- Business Problem
- Business Background Info
- Data Overview and Limitations
- Our Models
- Recommendations
- Future Insights

Business Problem



Over 1 Million Lives Lost to COVID-19 In USA



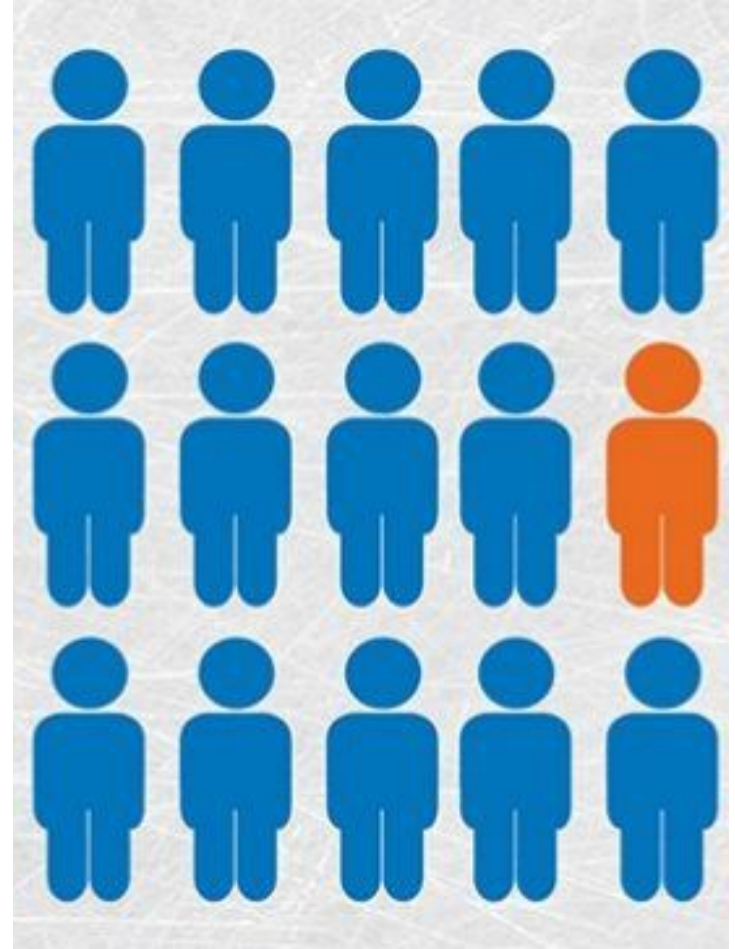
CDC Vaccine Outreach Can Save Lives

- Predict vaccination status with historic H1N1 data
- Targeted messaging to unvaccinated



Bottom Line: Achieve Herd Immunity

- Model identifies 9 out of 10 people who need vaccine information
- Physician involvement and education

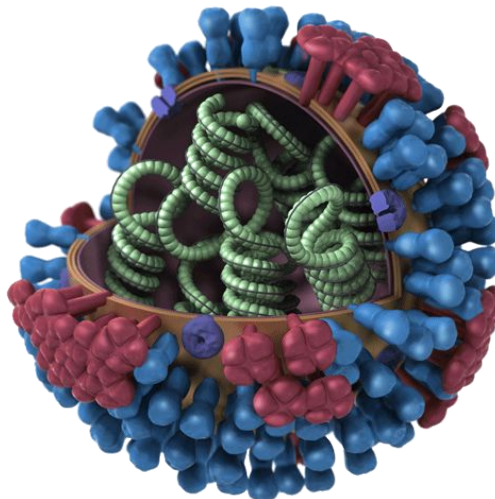


Data Overview

27,000 Phone Surveys



2009 H1N1 Pandemic



20% Vaccinated



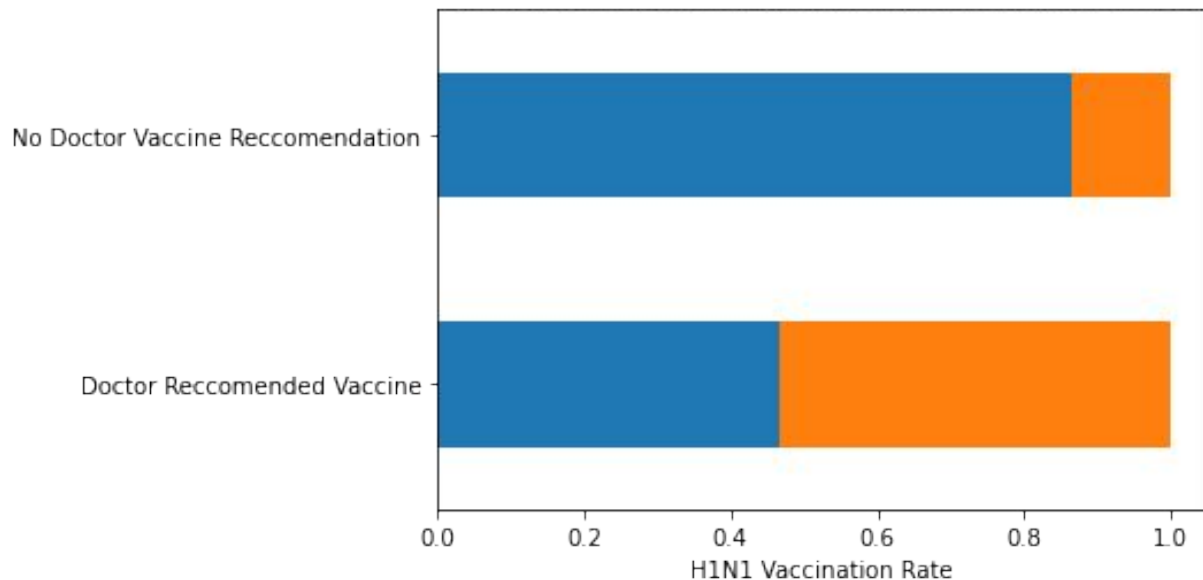


Limitations

- Self-reported answers
- Missing data
- Elderly overrepresented

Doctor Recommendation Key to Getting People Vaccinated

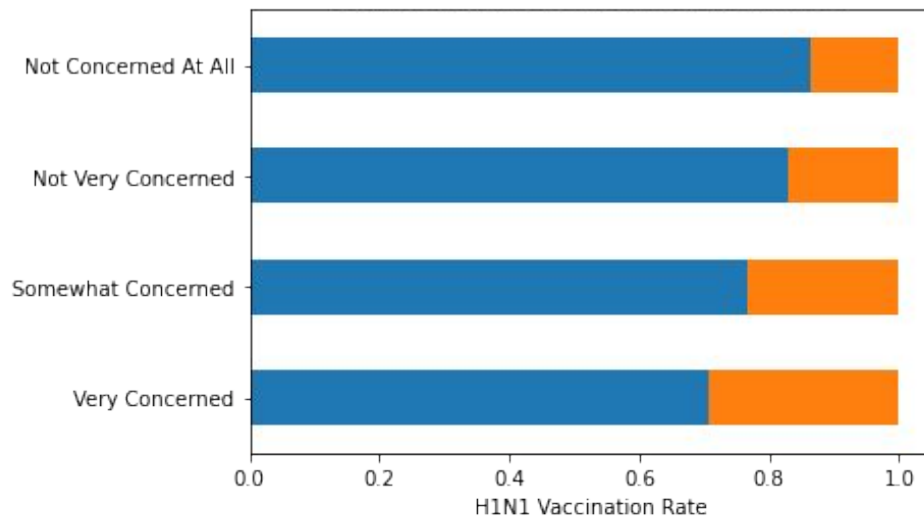
Blue: Unvaccinated
Orange: Vaccinated



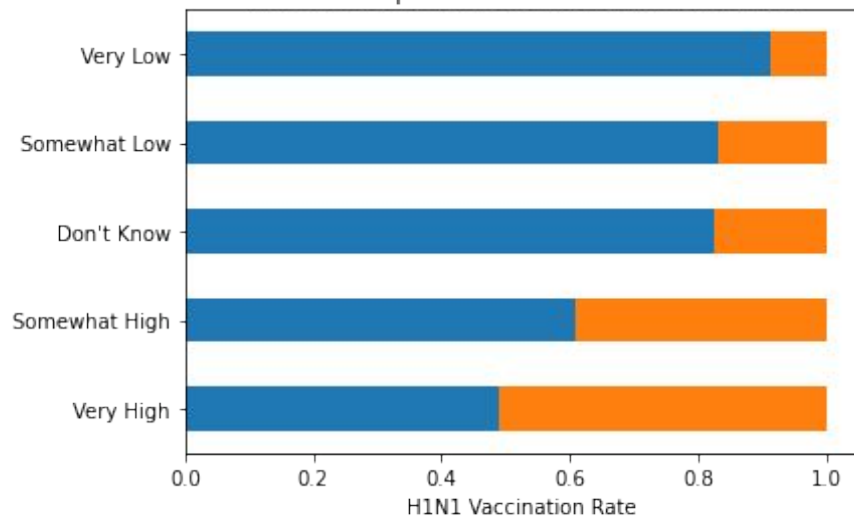
Concerned people are more likely to get vaccinated

Blue: Unvaccinated
Orange: Vaccinated

H1N1 Concern vs H1N1 Vaccination Rate



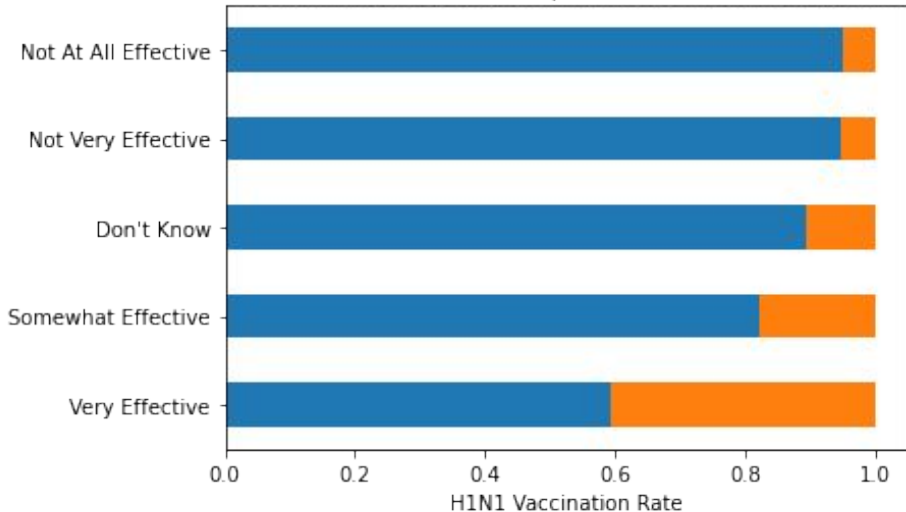
H1N1 Risk Opinions vs H1N1 Vaccination Rate



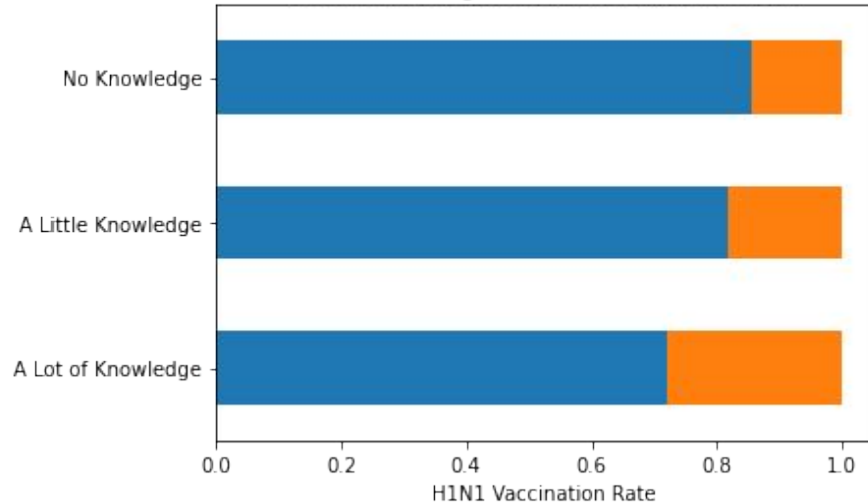
Knowledgeable people are more likely to get vaccinated

Blue: Unvaccinated
Orange: Vaccinated

H1N1 Vaccine Effectiveness Opinion vs H1N1 Vaccination Rate



H1N1 Knowledge vs H1N1 Vaccination Rate



Modeling Process



Some Important Features

Dr. Recommendation

Concern Level

Perceived Vaccine
Effectiveness

Our Model

Vaccinated

Unvaccinated

Our Best Model was 90% Precise

9 in 10 unvaccinated were
correctly identified



Alternate: Demographic Model 30% Precise

Important Features:

- Age
- Location
- Children



Recommendations

- Physician involvement and access
- Virus education
- Convince public of vaccine effectiveness





Future Insights

- COVID-19 revealed demographic divides
- Ways to change vaccine opinion
- Access to healthcare

The political divide over the coronavirus vaccine



41%

**of Republicans say
they do not plan to get
vaccinated.**

4%

**of Democrats say they
do not plan to get
vaccinated.**

PBS NewsHour/NPR/Marist Poll National Adults. Interviews conducted May 4 through May 10, 2021, n=1249 margin of error +/- 3.3 percentage points. Democrats: n=371, margin of error +/- 6.1 percentage points. Republicans: n=285, margin of error +/- 7.0 percentage points

Questions



Credits:

This presentation template was created by Google Slides.
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Patrick Arnold

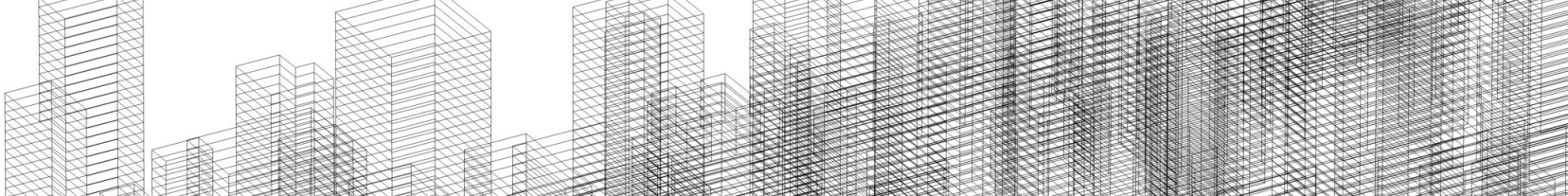
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Appendix

<https://ourworldindata.org/vaccination>

<https://www.hopkinsmedicine.org/news/newsroom/news-releases/herd-immunity-is-a-dangerous-strategy-for-fighting-covid-19-says-johns-hopkins-expert>

<https://www.pbs.org/newshour/health/as-more-americans-get-vaccinated-41-of-republicans-still-refuse-covid-19-shots>