Vaccines

- 41 COVID-19 vaccine candidates currently in Phase 1-3 trials or major candidates in pre-clinical stages of development and research
- Operation Warp Speed – US is investing in 3 candidates:
  - Moderna
  - University of Oxford/AZ
  - J&J - Ad26.COV2-S
Warp Speed Candidates

**Moderna**
- mRNA
- Phase 2
- Phase 3 - 7/27/20
- Neutralizing antibodies
- Booster ↑ response
- Mild side-effects 50+% 
- Emerging platform
- $483M OWS

**Oxford/AZ**
- Chimpanzee adenovirus vector
- Phase 2/3
- Based on AV vector used for MERS vaccine
- Neutralizing antibodies and T-Cell
- No human vaccines
- $1B BARDA & OWS

**J&J**
- Human adenovirus vector
- Pre-clinical → Phase ½
- Neutralizing antibodies and T-Cell
- Based on AV vector used for Ebola vaccine
- Investigational vaccines – Ebola, HIV, RSV and Zika
- $1B J&J, BARDA & OWS
Timing

- Earliest later this year if phase 3 trials go well and vaccine(s) get FDA Emergency Use Approval ..... Q1 2021 likely
- Who gets the initial doses?
  - Healthcare workers and first responders
  - Teachers
  - High risk individuals
- General public 2\textsuperscript{nd}
Funding and Global Distribution

- Coalition for Epidemic Preparedness Innovations (CEPI) and WHO - COVAX
  - COVAX Facility - a global collaboration to accelerate the development, production, and equitable access to COVID-19 tests, treatments, and vaccines
  - Access to COVID-19 Tools (ACT) Accelerator
  - COVAX Advanced Market Access
- US buying access to 300M doses of Oxford/AZ vaccine and presumably other 2 vaccines under OWS
Persistent Symptoms

Increasing reports of longer-term symptoms:

- Cough
- Shortness of breath
- Malaise
- Muscle pains
- Impacted smell/taste
- Brain ‘fog’
- 50% of long term sufferers have psychological problems, 15% PTSD (post traumatic stress disorder)
Testing
33 States have higher than recommended positivity.

States with positivity equal or below 5%:
- States with positivity above 5%:

https://coronavirus.jhu.edu/testing/testing-positivity
New confirmed cases of Covid-19 in European Union, United States, Brazil, United Kingdom, Israel and Sweden

Seven-day rolling average of new cases (per million), by number of days since 0.1 average daily cases (per million) first recorded
New confirmed cases of Covid-19 in New York, California, Florida, Texas, Arizona and Louisiana

Seven-day rolling average of new cases (per million), by number of days since 0.1 average daily cases (per million) first recorded

Number of days since 0.1 average daily cases (per million) first recorded
CDC Guidance

For People with COVID-19 with Symptoms in Isolation:

1. **Symptom-based strategy** - discontinue isolation under the following conditions:
   - At least 10 days have passed *since symptoms first appeared* and
   - At least 24 hours have passed *since last* fever without the use of fever-reducing medications and
   - Symptoms (e.g., cough, shortness of breath) have improved

2. **Test-based strategy** – only if availability of ample testing supplies and laboratory capacity as well as convenient access to testing.
   - Resolution of fever without the use of fever-reducing medications and
   - Improvement in symptoms (e.g., cough, shortness of breath), and
   - Negative results of 2 PCR tests collected ≥24 hours apart.

For Persons Who have NOT had COVID-19 Symptoms but Tested Positive in Isolation:

1. **Time-based strategy**
   - At least 10 days have passed since the date of their first positive COVID-19 diagnostic test assuming they have not subsequently developed symptoms since their positive test. If they develop symptoms, then the symptom-based or test-based strategy should be used.

2. **Test-based strategy**
   - A test-based strategy is contingent on the availability of ample testing supplies and laboratory capacity as well as convenient access to testing. Negative results of 2 PCR tests collected ≥24 hours apart.
TREAT YOUR MASK LIKE UNDERWEAR

1. Do not touch or adjust (especially in public).
2. Do not borrow or lend.
3. Make sure fit is tight but comfortable.
4. Make sure it is CLEAN.
5. Wear the right side out.
6. If it is damp, change it.
7. Don’t go COMMANDO!

@A Chalkboard a Day
Questions