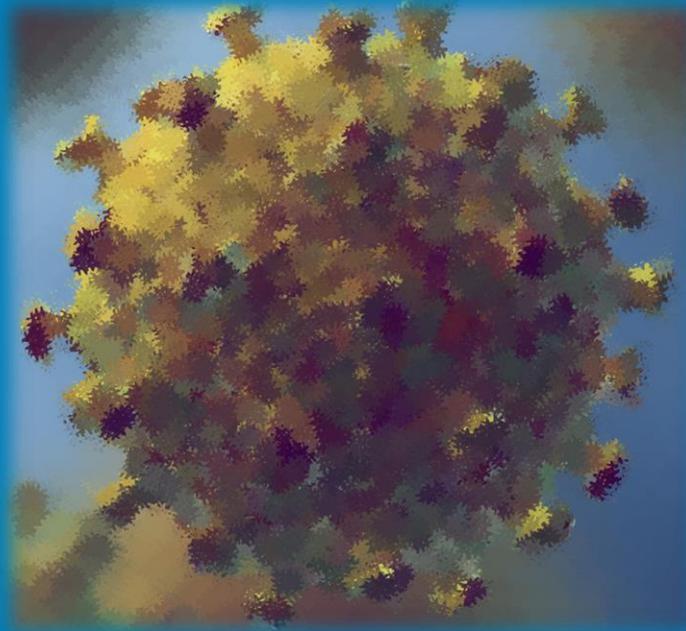


COVID-19: Current State of the Pandemic and Looking Ahead



Circle of Excellence
August 21, 2020

David Knoepfler, MD, MBA | Chief Medical Officer

Topics



Overlake's Experience



Resources & Materials



Screening & Visitor Management



Personal Protection: PPE & Distancing



Evaluation & Testing



Treatment & Prevention



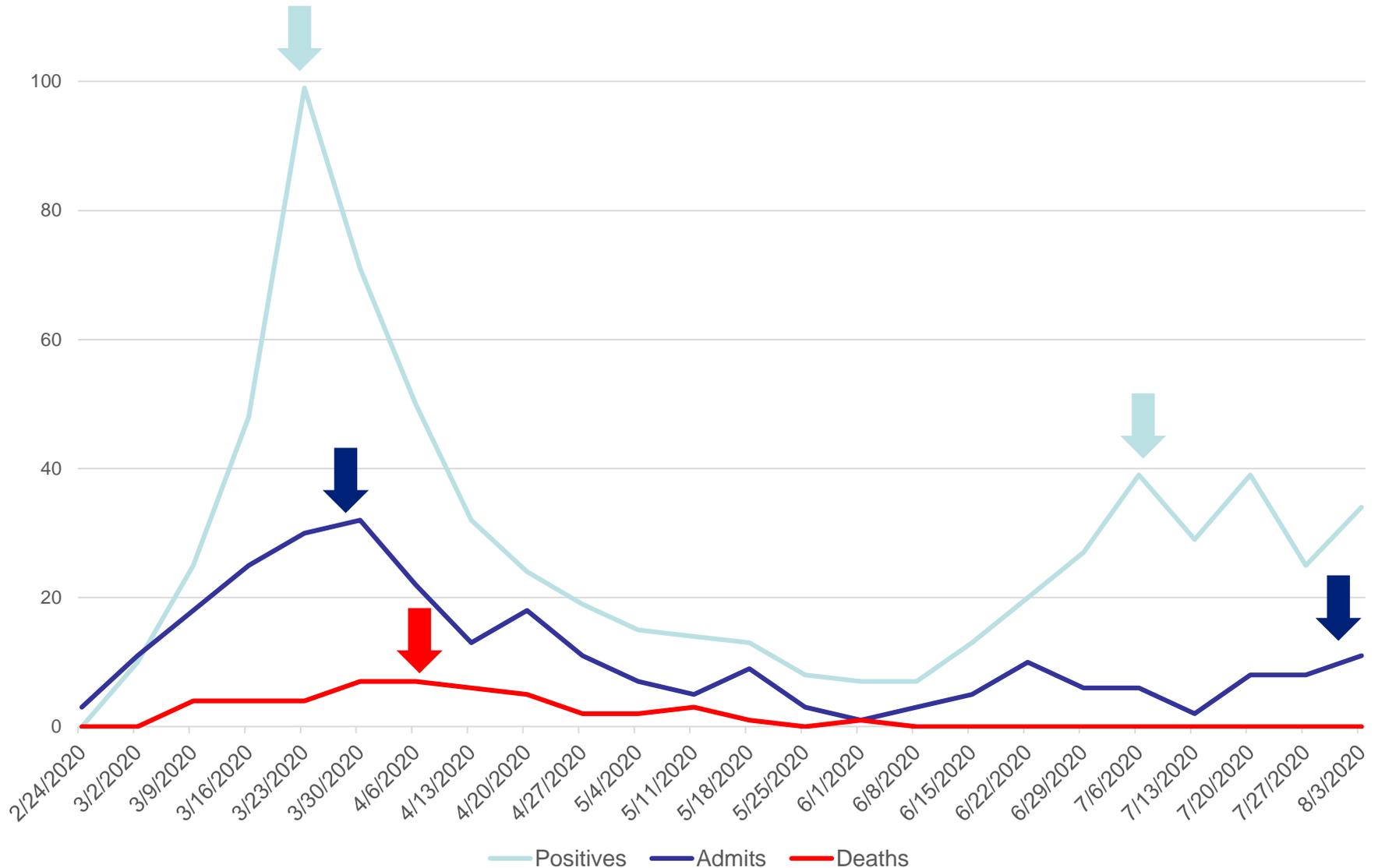
Hot Topics

Overlake Testing & Outcomes

Factor (as of 8/18/20)	Result
Tested	16,495 (now about 1,100/week)
Positives (+)	5.7% of those tested are (+)
Male	5.8% of those tested are (+)
Female	5.3% of those tested are (+)
Treated in hospital	252
COVID-19 census	8 - 11 (was 2-5)
Patient deaths	48 (none since May)
ICU mortality once on ventilator	40% (national = 70+%)
COVID-19 positive employees	51 (no deaths, 1 hospitalization)

Overlake Testing & Outcomes

Overlake: New Positives, Admissions, Deaths



Testing

- **PCR:** fragments of genetic material (swab)
- **Antibody:** body's response to virus (blood)
- **Culture:** live virus – infectious (swab)

What does the test mean or tell us?

- Sensitivity (false negative)
- Timing
- Immunity

COVID-19 Resources & Materials

Supplies & Equipment

- Masks/respirators
- Gloves & gowns
- Testing supplies
- Ventilators



Human Resources

- Providers
- Nurses

Cohorting

Screening & Visitor Management

Screening

- Symptoms
- Temperature



Visitors

- Screening process
- Numbers
- Children

Exceptions

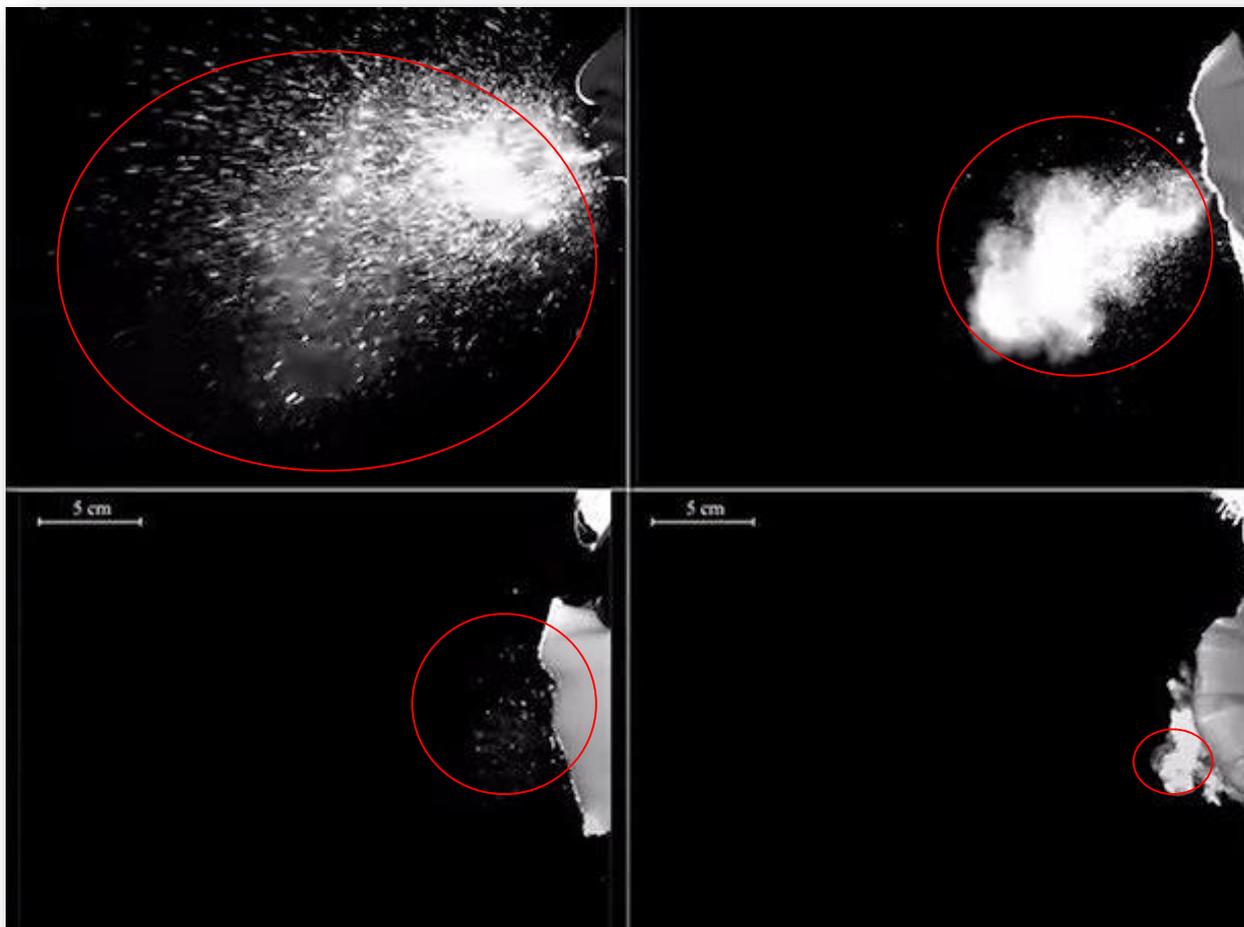
- Actively dying
- Caregivers
- Patient benefit

Others

- Vendors, deliveries

Protecting Patients, Visitors and Staff

Why do we mask?



Nothing	Single layer cloth
Double layer cloth	Surgical

Protecting Patients, Visitors and Staff

Personal protection is for everyone's benefit

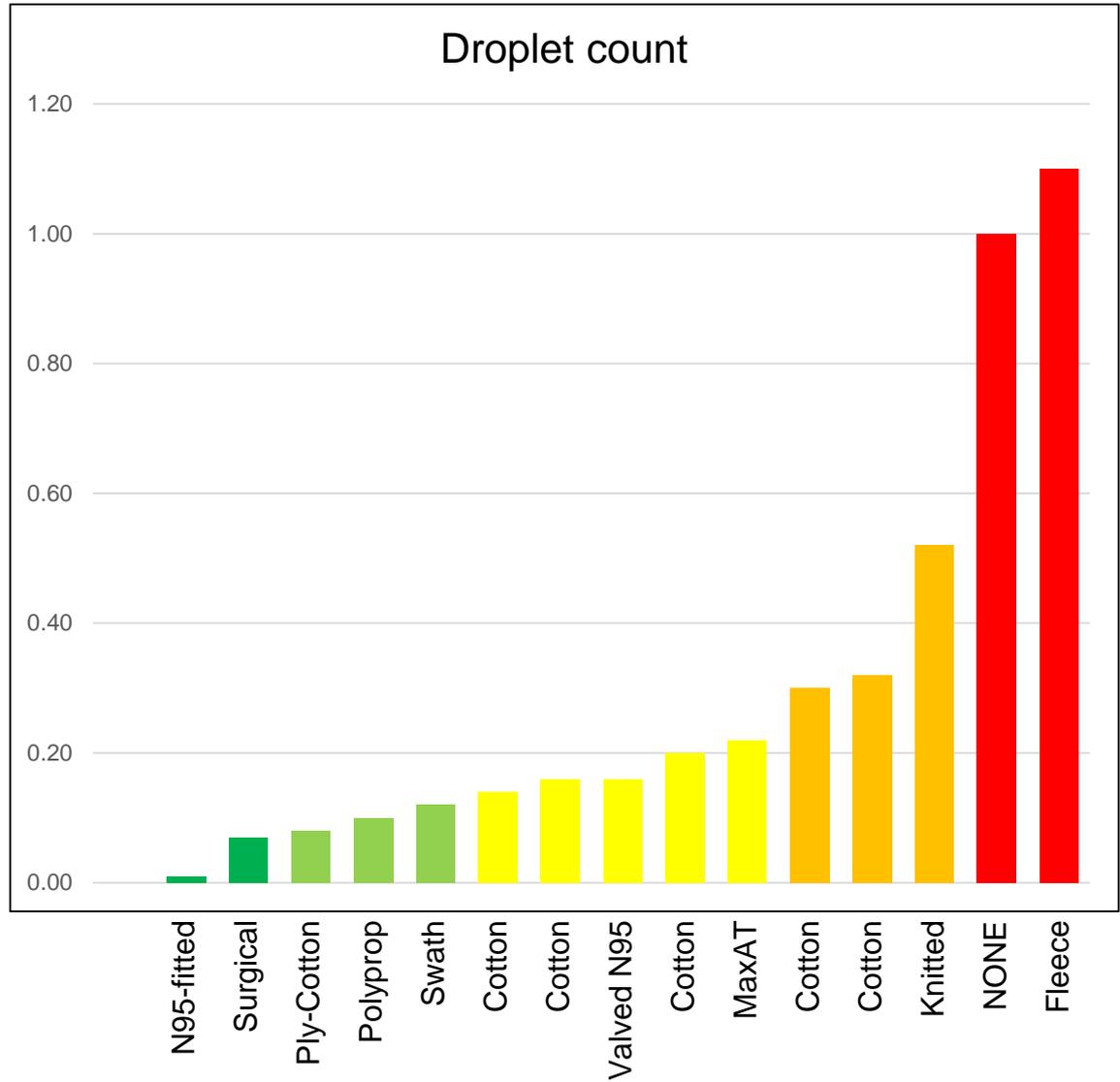
- Masking
- Eye protection
- Socially distancing
- Avoiding crowds



Protecting Patients, Visitors and Staff

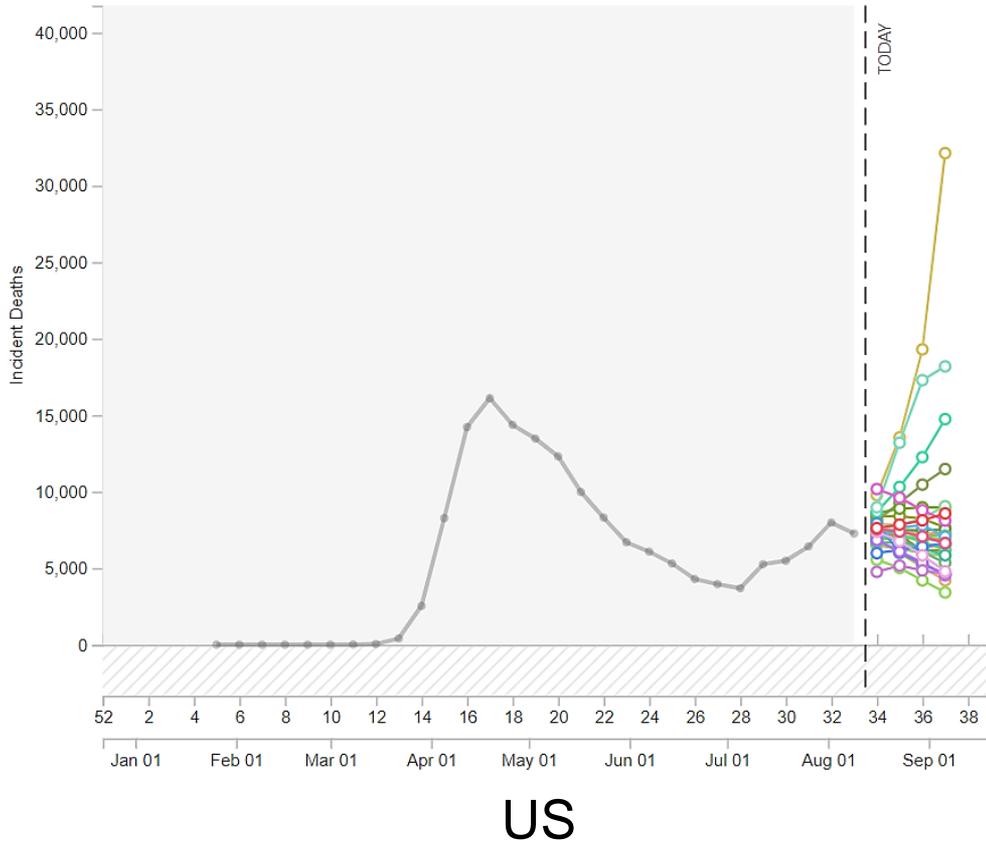


**NO
MASK**

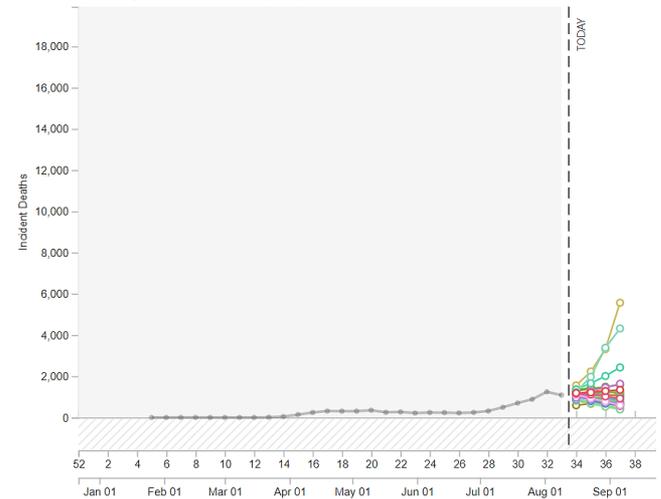
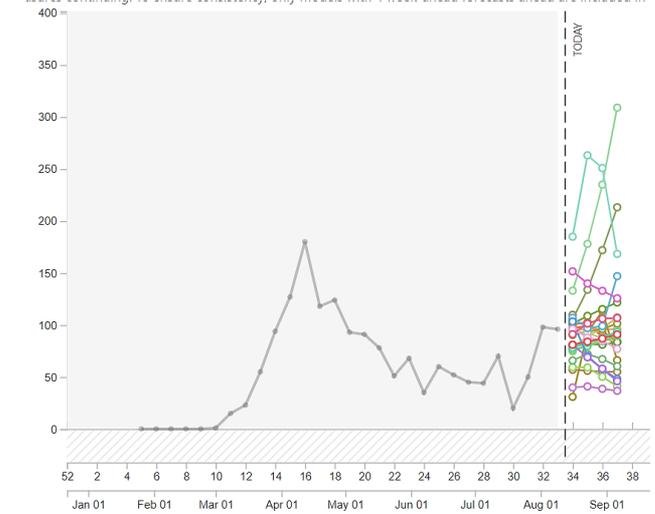


Forecasting Models

Ensemble forecasts - new deaths



Models make assumptions



Travel

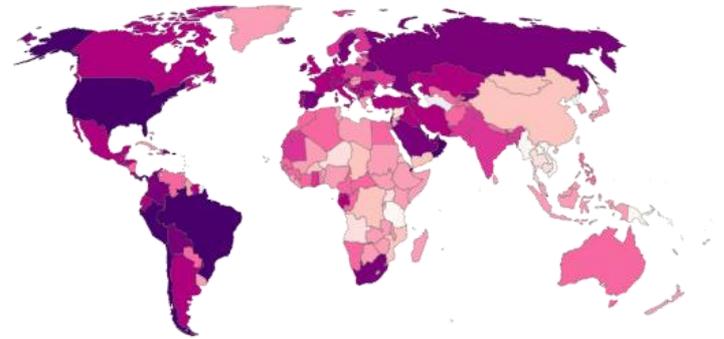
- Risk assessment (prevalence, models, exposure)
- Risk tolerance
- Risk mitigation



What is your risk tolerance?

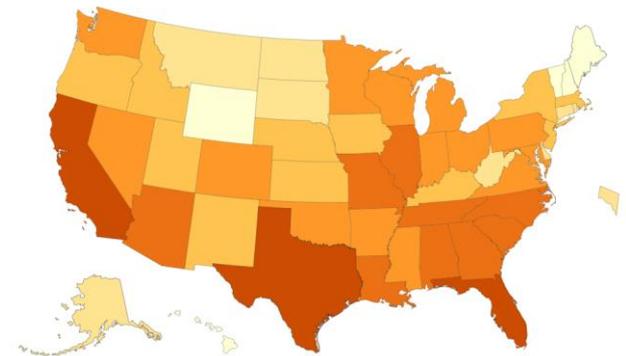
International

- Where do you want to go?
- Who will allow you in?



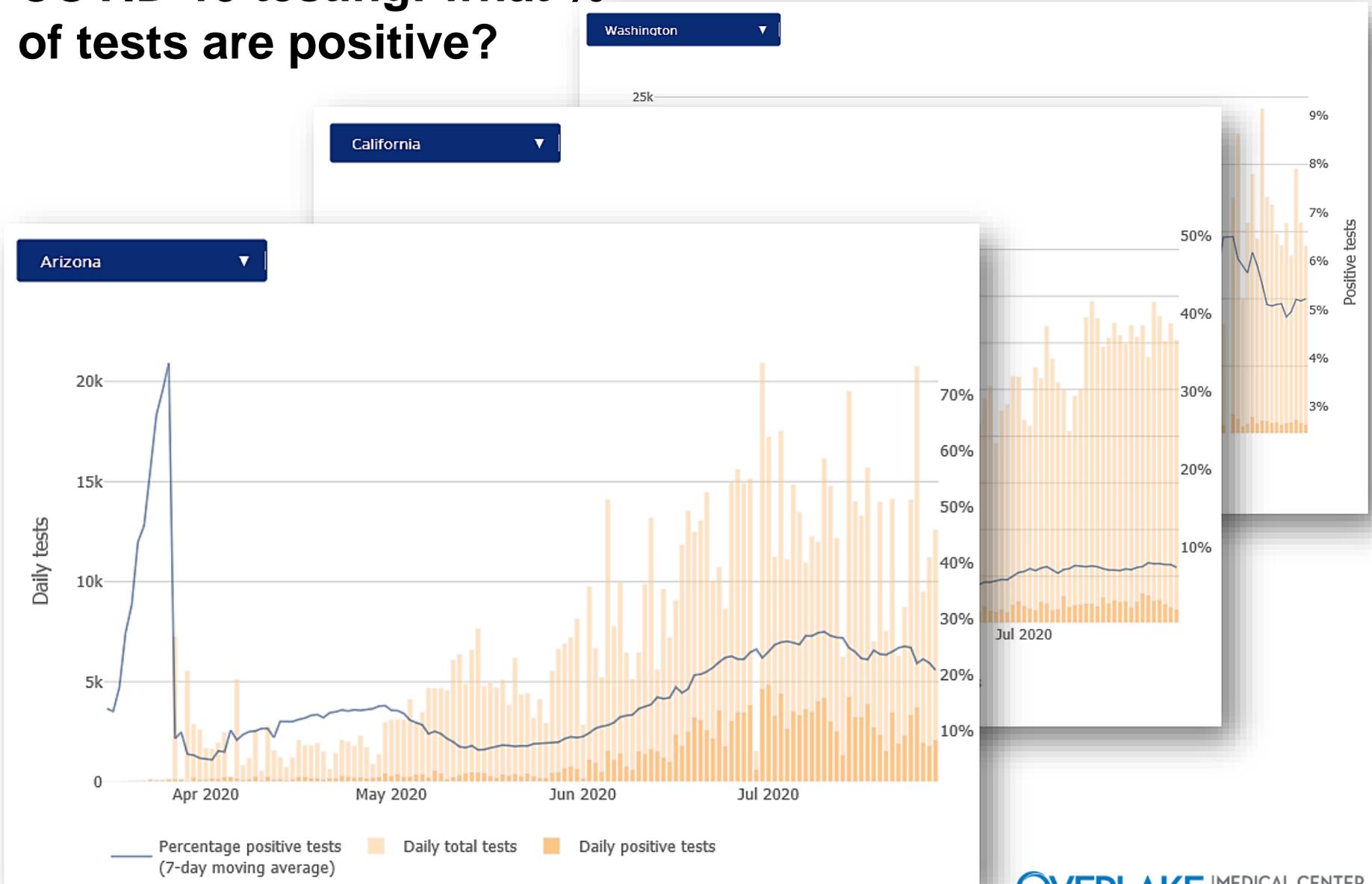
America

- Assessing risk: prevention vs new cases vs mortality
- Testing: pre and post flight
- Quarantines



Travel – Risk Assessment

COVID-19 testing: what % of tests are positive?



Travel – Risk Assessment

Reproductive factor R_0

Washington

Current R_t	Cases	Tests
1.07	57,870	1,009,484

Effective Reproduction Rate - R_t

Share

If it's above 1.0, COVID-19 will spread quickly. If it's below

California

Current R_t	Cases	Tests
0.87	522,534	8,408,885

Effective Reproduction Rate - R_t

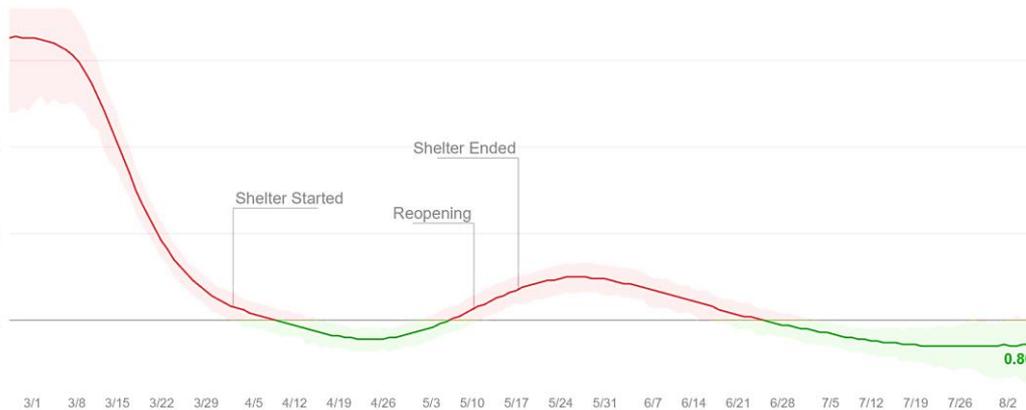
Share

Arizona

Current R_t	Cases	Tests
0.86	182,201	985,513

Effective Reproduction Rate - R_t

R_t is the average number of people who become infected by an infectious person. If it's above 1.0, COVID-19 will spread quickly. If it's below 1.0, infections will slow. [Learn More](#).



Positive Tests

If it's above 1.0, COVID-19 will spread quickly. If it's below



Travel – Risk Mitigation

What you touch:

- Hand washing/sanitizer
- Eyes/mouth/nose
- Seats/trays
- Seat cleaning
- Eating/drinking

What you breath:

- Masking
- Ventilation systems
- Middle seat
- Passenger with no mask

Evaluation & Testing

PCR test – nasal swab

- Get tested if symptomatic
- Get tested 6 days after an exposure
- Testing is accurate as of that moment only
- False negatives



Treatment

- Antivirals
- Antibodies
- Immune system modulators
- Blood thinners
- Non-medication

Prevention

- Vaccines
- Medications
- Convalescent sera (blood plasma from survivors)

Treatment

Options

- Remdesivir
- Steroids (dexamethasone/Decadron)
- Convalescent sera (blood plasma from survivors)

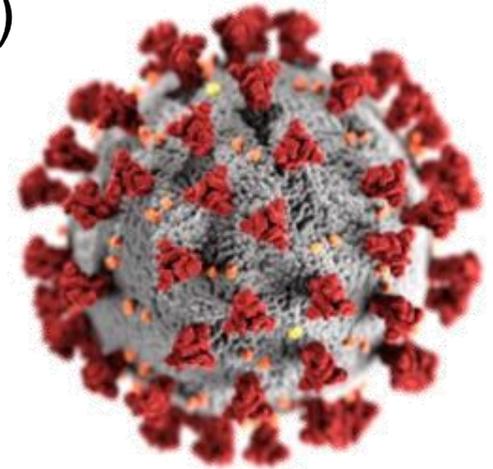
Non-medication

- Positioning and ventilatory support

Prevention

Vaccines

- More than 100 vaccines with dozens in trials
- About 4 are closer than the rest (moving to Phase III)
 - ✓ Oxford/AstraZeneca (spike proteins)
 - ✓ CanSino (viral vector)
 - ✓ Moderna (mRNA vaccine)
 - ✓ CoronaVac (dead/inactivated virus)
- Manufacturing
- Cost



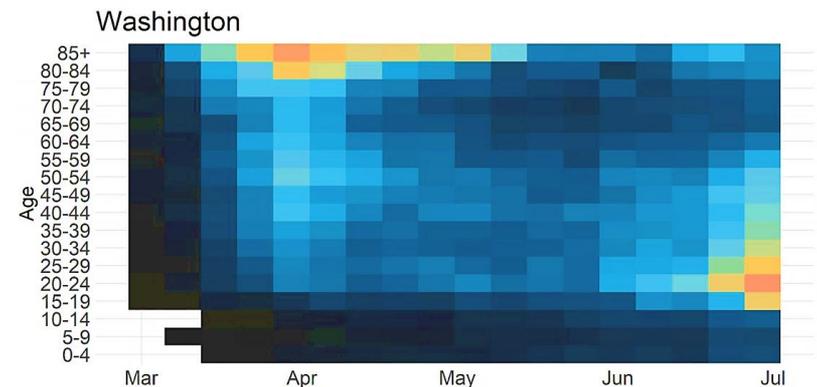
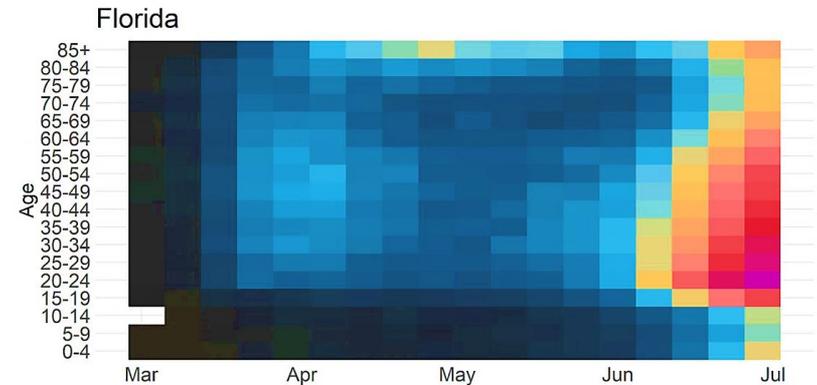
Pediatric COVID-19

- Over 100,000 children positive in first 2 weeks of August
- Children are contagious
- Pediatric hospitalizations are rising quickly
- One third are admitted to the ICU
- COVID-19 is a vascular disease: MIS-C

Pediatric COVID-19

Transmission

- Children and teens do get COVID-19
- They are infectious!
- Spread occurs via family, work, etc.



QUESTION & ANSWER