

# COVID19 Pandemic Ongoing Challenges and current Guidelines

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# Conflict of Interest Disclosure

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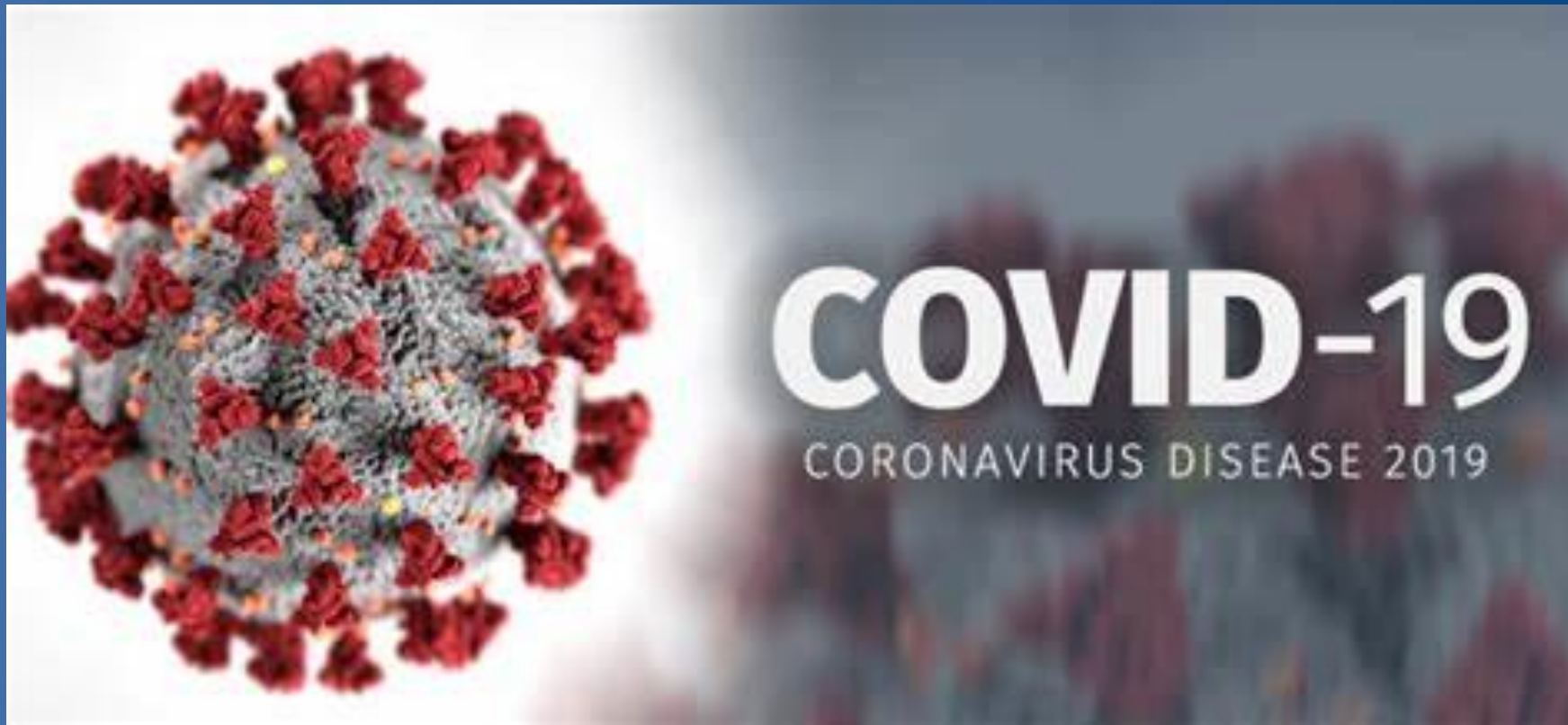
- I have no financial conflicts with this presentation
- Disclosures:
  - *Research Funding: U.S. Dept of Defense*
  - *Forum for Medical Preparedness for Disasters, National Academy of Sciences, Engineering, Medicine*
  - *Board of Directors, Team Red White Blue*





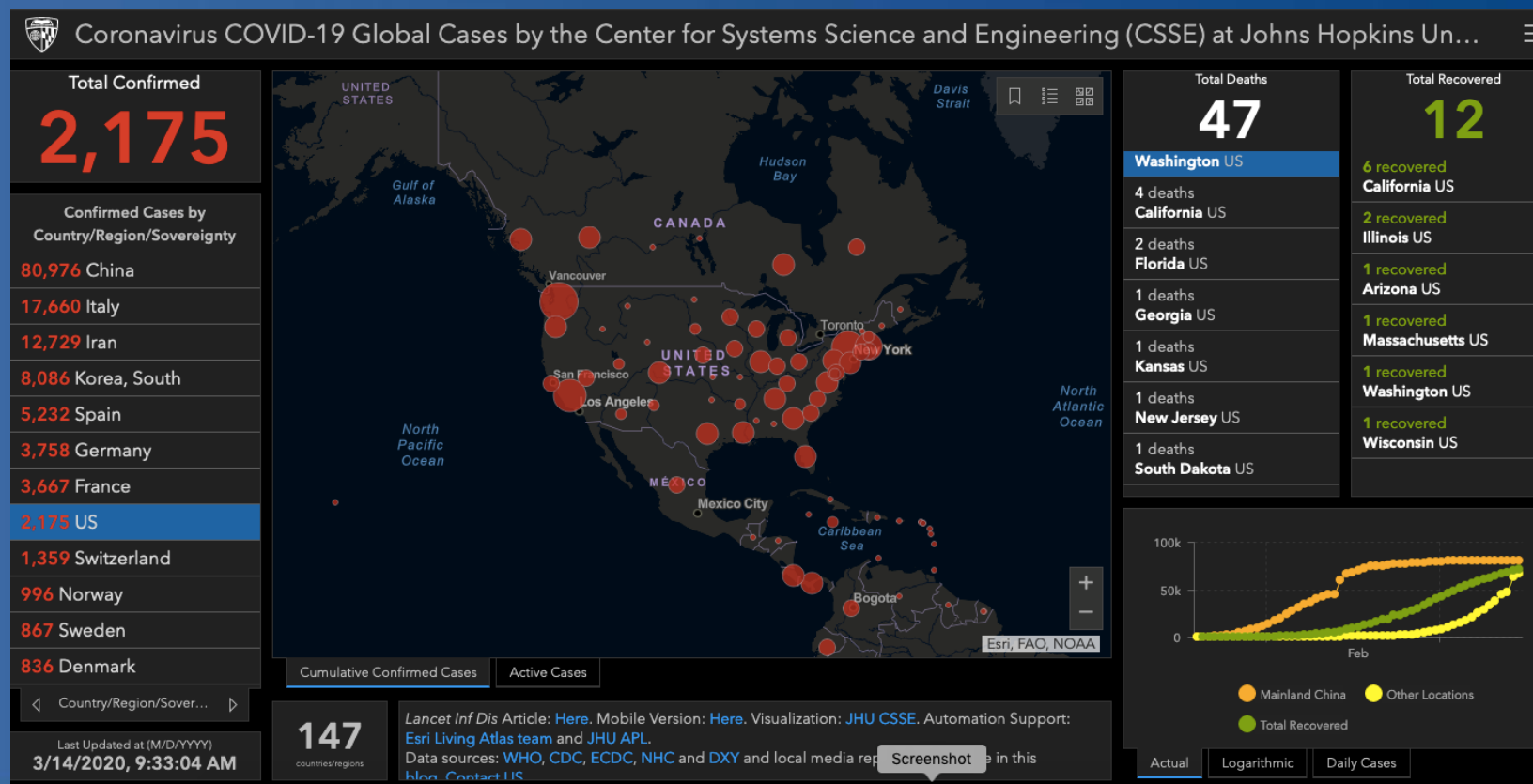
# COVID 2019-...

## Pandemic



# COVID19 United States

March 14, 2020



# OrthoHopkins Plan

- Effective March 18, across all JHM clinics and hospitals: elective surgery/ clinic care triaged
- Workforce protection= patient protection
- Dispersal and distancing: limit contact/ 6 feet
- Daily decontamination: new scrubs on entry
- Heightened security and hygiene

**LOOK OUT FOR EACH OTHER**

Sabharwal Ficke LaPorte: Modified residency programming & adoption of remote didactic curriculum during the COVID-19 pandemic. J Surg Educ. 2020





# Baltimore Convention Center Field Hospital

3 Week organization & operational



# Some Facts

- World focus past 30 months has centered around COVID
- 65 to 75% of population has been infected
- USA 1 million deaths involving COVID-19
- Global, national, county shutdowns

[https://www.cdc.gov/nchs/nvss/vsrr/covid\\_weekly/index.htm](https://www.cdc.gov/nchs/nvss/vsrr/covid_weekly/index.htm)



# At Risk Populations

**Table 1. Deaths involving coronavirus disease 2019 (COVID-19), pneumonia, and influenza reported to NCHS by time-period, jurisdiction of occurrence, sex and age-group.**

**Data as of:**  
8/17/2022

State		Sex		Age Group				
United States		All		All				
Year in which death occurred	Sex	Age Group	All Deaths involving COVID-19 [1]	Deaths from All Causes	Deaths involving Pneumonia [2]	Deaths involving COVID-19 and Pneumonia [2]	All Deaths involving Influenza [3]	Deaths involving Pneumonia, Influenza, or COVID-19 [4]
2020-2022	All Sexes	0-17 years	1,224	89,328	1,850	309	248	3,000
2020-2022	All Sexes	18-29 years	6,496	165,529	5,741	3,040	197	9,375
2020-2022	All Sexes	30-39 years	18,685	246,598	15,318	9,424	396	24,938
2020-2022	All Sexes	40-49 years	43,982	367,009	35,222	23,406	619	56,320
2020-2022	All Sexes	50-64 years	191,755	1,482,451	171,216	106,273	2,655	258,901
2020-2022	All Sexes	65-74 years	236,302	1,801,174	223,778	131,395	2,629	330,865
2020-2022	All Sexes	75-84 years	267,439	2,144,937	253,455	139,824	2,775	383,460
2020-2022	All Sexes	85 years and over	268,382	2,511,858	236,729	115,856	2,722	392,236
2020-2022	All Sexes	All Ages	1,034,865	8,808,884	943,309	529,527	12,241	1,459,095





# For Comparison

- >900 deaths per year in age group 0-19 unintentional drowning
- >45,000 deaths per year in age group 20-45 unintentional injury deaths
- >690k deaths/ year from cardiovascular disease



# Summary of Central Guidance

- February 2020 US Surgeon General states masks are not effective in preventing public and healthcare workers need them
- March 2020 CDC official statement- Healthy People not in healthcare sector and not caring for an infected person don't need to wear mask
- April 2020 CDC guidelines asymptomatic individuals are contributing to spread of COVID (no posted studies)
- July 2020 publishes one case study from one hair salon suggesting masking helps prevent spread (1<sup>st</sup> posted study)



...like herding monkeys.....



# Continued Timeline

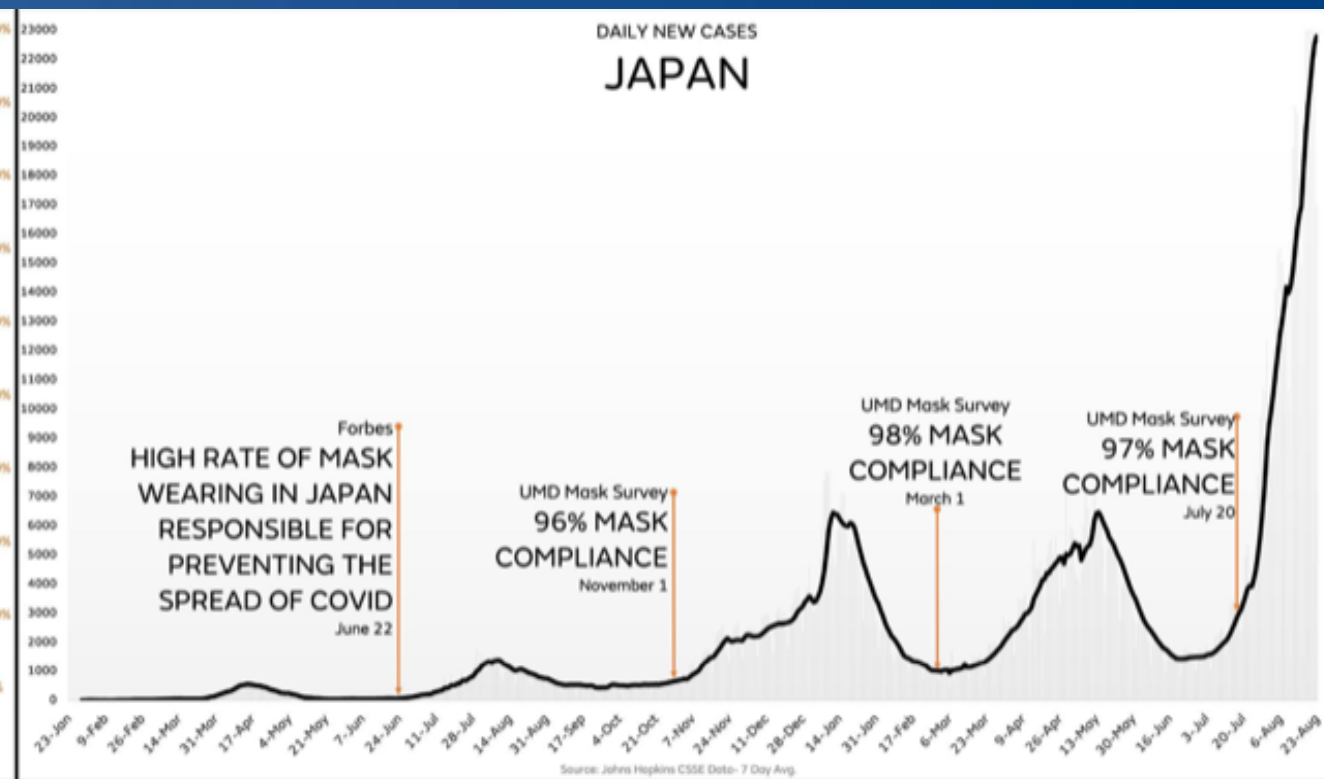
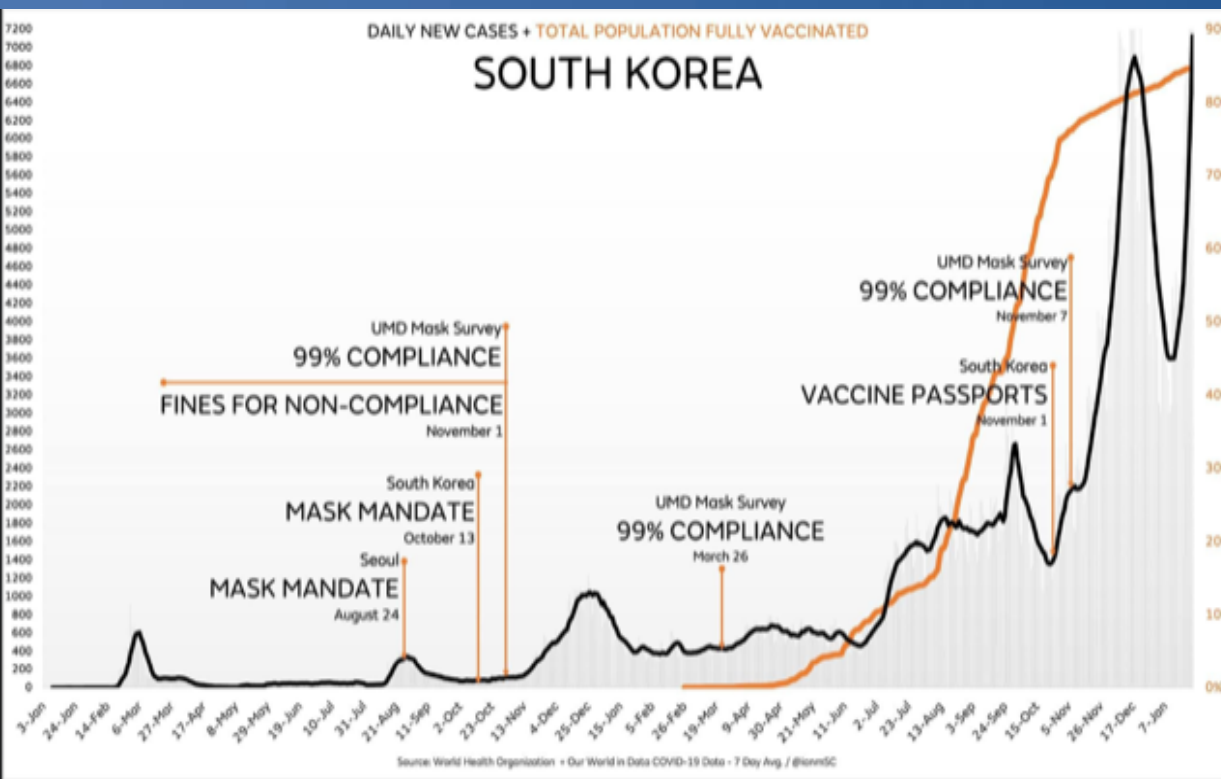
- Oct 2020- CDC suggests in statement that if 95% of Americans wore masks it could save a half million lives. No study attached. No medium or large-scale retrospective or RCTs at this time
- March 2021-CDC releases guidelines allowing unmasking with close friends and family if vaccinated, not in public.
- April 2021-CDC expands maskless areas to outdoors for both groups. No accompanying study or published literature.
- May 2021-Vaccinated people do not need to wear masks in any setting
- July 2021-Delta variant emerges. After more than 6000 vaccinated individuals died from COVID-19, CDC admits that vaccinated still catch and spread the disease and can have severe symptoms
- August 2021-CDC-Everyone needs to wear masks at all times
- April 2022-CDC stops order to wear masks on public transport or in federal buildings.
- K-12 teachers, students and visitors should all be wearing masks







# Large-Scale Data on High Masking Compliance



# Other Considerations For Masks

- Estimates put millions of tons of facemasks have entered the oceans since 2020
  - *Most have nonbiodegradable pieces*
- Sharp Increase in pediatric speech/language development diagnoses in 2021/2022
  - *Likely multifactorial*
  - *Speech specialists initial guidance includes wearing translucent masks or no masks to allow children to watch mouth movements*



# COVID impact- Supply Chain

- Difficult to find supplies.
- Vendors.
- Raw material issues.
- Inadequacy in resilience.
- Absence of communication.
- Increasing costs.



<https://www.christopherreeve.org/blog/daily-dose/covid-19s-effect-on-the-medical-supply-chain-1>





# COVID Impact- Nursing

- Large inner-city hospitals required avg 12 mos to recover from elective case cancelations
- 12% healthcare workers were laid off/ suspended
- >1 million patients backlogged for joints and spine surgery

The profile of a hospital with the greatest retention capacity and lowest turnover is a hospital with less than 200 beds and located in the South-Central or West. Conversely, a hospital with the highest turnover is a facility in the North-Central with between 200 to 349 or more than 500 beds.

REGION	HOSPITAL TURNOVER	FULL/PART TIME TURNOVER
<b>North East</b> – (CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI & VT)	25.7% (+10.0%)	21.8% (+8.5%)
<b>North Central</b> – (IA, IL, IN, KS, MI, MN, MO, MT, ND, NE, OH, SD, WI & WY)	28.6% (+4.8%)	24.7% (+3.5%)
<b>South East</b> – (AL, FL, GA, KY, MS, NC, SC, TN, VA & WV)	27.9% (+3.3%)	24.0% (+2.9%)
<b>South Central</b> – (AR, CO, LA, NM, OK, & TX)	22.9% (+3.9%)	19.4% (+3.1%)
<b>West</b> – (AK, AZ, CA, HI, ID, NV, OR, UT & WA)	23.1% (+7.3%)	18.3% (+5.2%)
BED SIZE		
<b>&lt;200 Beds</b>	24.4% (+4.5%)	20.3% (+3.2%)
<b>200-349 Beds</b>	27.2% (+4.2%)	22.4% (+2.6%)
<b>350-500 Beds</b>	25.0% (+5.0%)	20.6% (+3.7%)
<b>&gt;500 Beds</b>	26.2% (+7.8%)	22.6% (+6.7%)
<b>NATIONAL AVERAGE</b>	25.9% (+6.4%)	22.0% (+5.3%)

An overwhelming majority (96.1%) of hospitals view retention as a “key strategic imperative” and, to a lesser degree, is evident in operational practice/planning. Almost all hospitals have retention initiatives. In fact, close to three quarters (72.6%) have a formal retention strategy, yet less than half (44.5%) are tied to a measurable goal. Establishing a measurable goal needs to be a



# COVID Impact Ortho

## Impact of the Covid-19 Pandemic on Orthopaedic and Trauma Surgery – A Systematic Review of the Current Literature

PHILIPP BLUM<sup>1</sup>, DAVID PUTZER<sup>2</sup>, MICHAEL C. LIEBENSTEINER<sup>1</sup> and DIETMAR DAMMERER<sup>1</sup>

- Systematic review of Impact to orthopaedic surgery worldwide
  - 36 studies- 50-74% reduction in elective surgery
  - Trauma reduced 21%



# Cancellation of All Elective Cases

- Elective cases contribute 78% of inpatient hospital revenues
- MSK, Circulatory and digestive category elective contribute 33%
- Cancelling all elective cases only reduced ICU overcapacity by 30%
- American Hospital Association estimates losses as high as \$50 billion/month
- Despite massive government bailouts 27 hospitals in 14 states closed permanently in 2020 and 2021





# Perioperative Risk

- 228913 patients- retrospective cohort Ann Surg July 2022
- Risk stratified from test + infection
  - *0-4 weeks*
  - *4-8 weeks*
  - *>8 weeks post VAX*
- Vax- no increased risk
- No Vax- no increased risk w General anesthesia >8 weeks

ORIGINAL STUDY

**Covid-19 Vaccination and the Timing of Surgery Following Covid-19 Infection**

Le, Sidney T. MD<sup>\*†</sup>; Kipnis, Patricia PhD<sup>\*</sup>; Cohn, Bradley MD<sup>‡</sup>; Liu, Vincent X. MD, MSc<sup>\*‡</sup>



# ASA Recommendations 2022

- Test all severely immunocompromised
- In high COVID prevalence:
  - *All patients should be screened*
  - *Elective surgery delayed for positive tests*
  - *7 week delay unless risks > benefits*
- Death/ ICU rates – lagging indicator
- Community transmission (CDC) –LEADING indicator

TABLE 1. COVID-19 Community Levels, Indicators, and Thresholds

New COVID-19 Cases Per 100,000 people in the past 7 days	Indicators	Low	Medium	High
Fewer than 200	New COVID-19 admissions per 100,000 population (7-day total)	<10.0	10.0-19.9	≥20.0
	Percent of staffed inpatient beds occupied by COVID-19 patients (7-day average)	<10.0%	10.0-14.9%	≥15.0%
200 or more	New COVID-19 admissions per 100,000 population (7-day total)	NA	<10.0	≥10.0
	Percent of staffed inpatient beds occupied by COVID-19 patients (7-day average)	NA	<10.0%	≥10.0%



# Elective Surgery Testing Recommendations

- Test Sick Patients
- Test symptomatic/ suspected contacts 2-3 days prior
- No elective surgery within 10 days symptom onset
- No increased harm to vax'd patients





# Summary

- Wear an N95 w COVID positive patients- and have them do same
- Public Mask wearing does not prevent COVID spread
- US one of most unhealthy countries due to Heart disease, obesity, DM, bone health
- We Also have highest COVID deaths
- We were not prepared for pandemic, and not adequately prepared for next one
- We are >1 million orthopaedic surgical cases behind





**Thank you**

