

COVID-19 Update

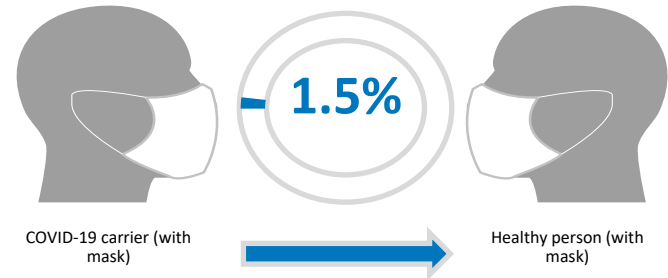
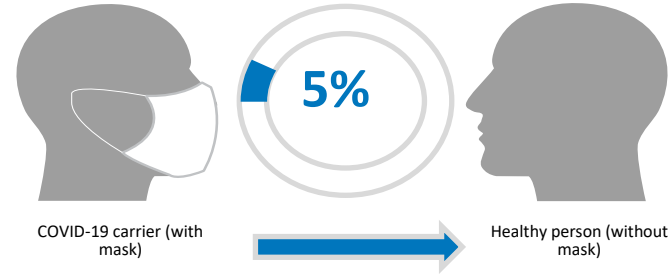
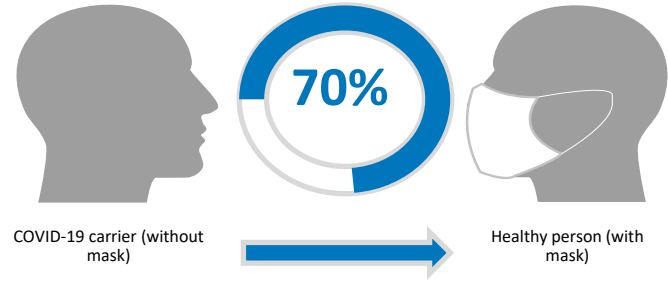
Dr Mark Cunningham-Hill
Medical Director NEBGH

Monday September 14th 2020

Variolation



POSSIBILITY OF
TRANSMISSION



Source: Johns Hopkins University



Masks and Disease Severity

- Principle that severity of disease is proportionate to the viral inoculum received
 - Studied in animal models including with SARS-CoV-2
 - Lower inoculum = less severe potentially asymptomatic disease
 - Strong cell-mediated immunity results from even mild or asymptomatic SARS-CoV-2 infection
- So can facial masks reduce viral inoculum?
 - Asymptomatic rates in:
 - US and EU asymptomatic rate estimated at 40-50%
 - Cultures with history of widespread masking – asymptomatic rate is 80%
 - Supported by animal models



Defeating SARS-CoV-2

Driving down both transmission rates and severity of disease

Transmission Rates

- Physical distancing
- Masks
- Test and isolate
- Vaccines

Disease Severity

- Physical distancing
- Masks
- Vaccines



NEWS

HOT
OFF
THE
PRESS

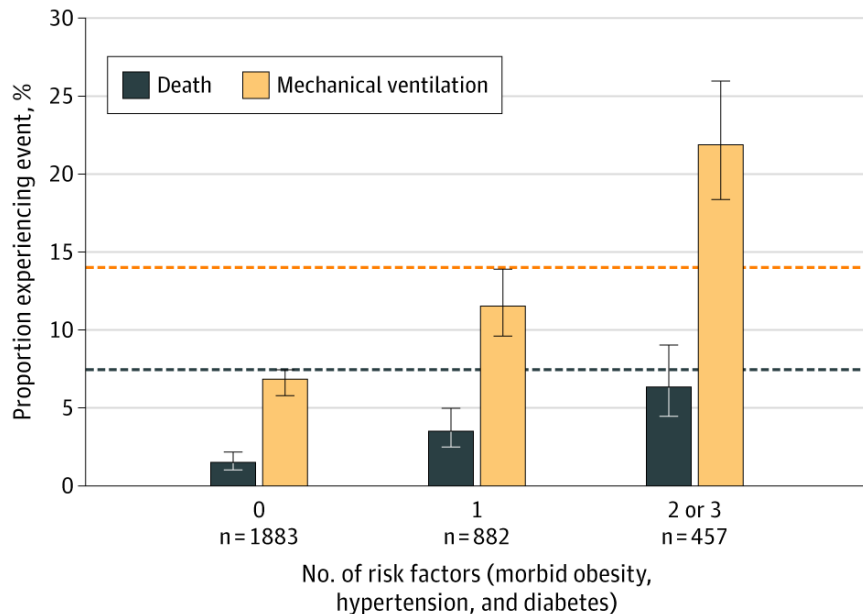


Vaccines

- Of the leading contenders:
 - 3 in Phase 3, 2 in Phase 2, 3 in phase 1, and 8 in preclinical
- AZ/Oxford
 - Stage 3 clinical trial was stopped because of a serious neurological condition
- 9 CEOs signed a pledge stating that any vaccine developed will meet “High ethical standards and sound scientific principles.”

Young adults age 18 to 34 years hospitalized with COVID-19

- 21% required ICU admission
- 10% required mechanical ventilation
- **2.7% died**
- 57% were Black or Hispanic
- Morbid obesity, hypertension, and diabetes were associated with greater risks of adverse events



<https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2770542>

Eating in Restaurants

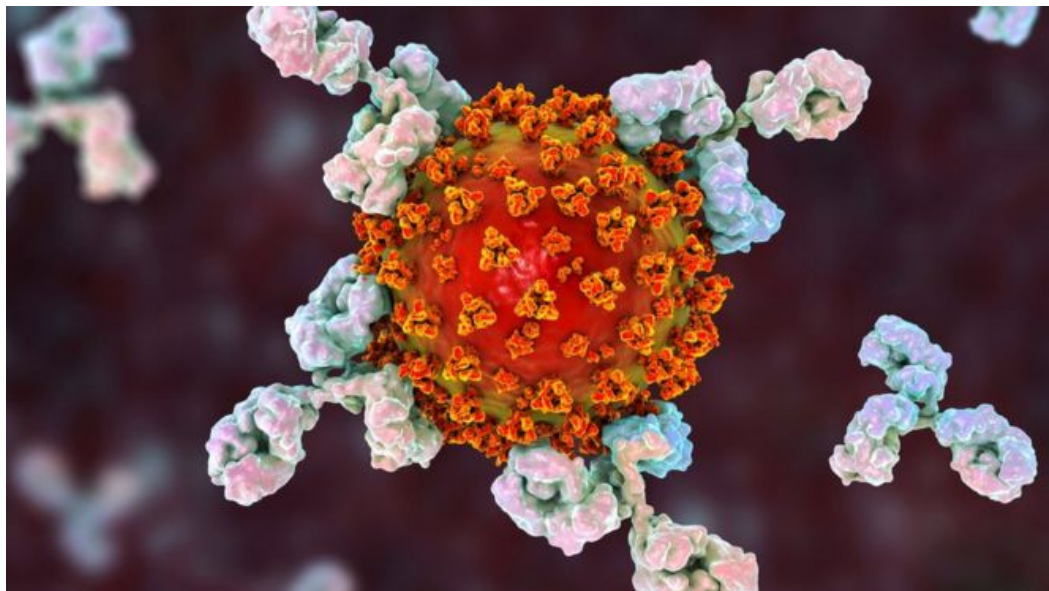
Small
numbers



- Symptomatic COVID+ outpatients were approximately twice as likely to have reported dining at a restaurant than were matched controls with negative SARS-CoV-2 test results
 - Cases were 2.8 times more likely to have dined at a restaurant
 - 3.9 times more likely to have visited a bar or coffee shop.

Monoclonal Antibodies (MAb)

- 70 antibody therapies are being developed to treat and prevent COVID-19
- The UK trial will test a mixture of 2 Mab's made by the US biotech company Regeneron
- South Korea's Celltrion passed safety test
- Complex to manufacture and therefore higher cost



Weekly Dive into the Data



307,930 new cases yesterday

Americas 14,815,178 confirmed

South-East Asia 5,475,657 confirmed

Europe 4,796,426 confirmed

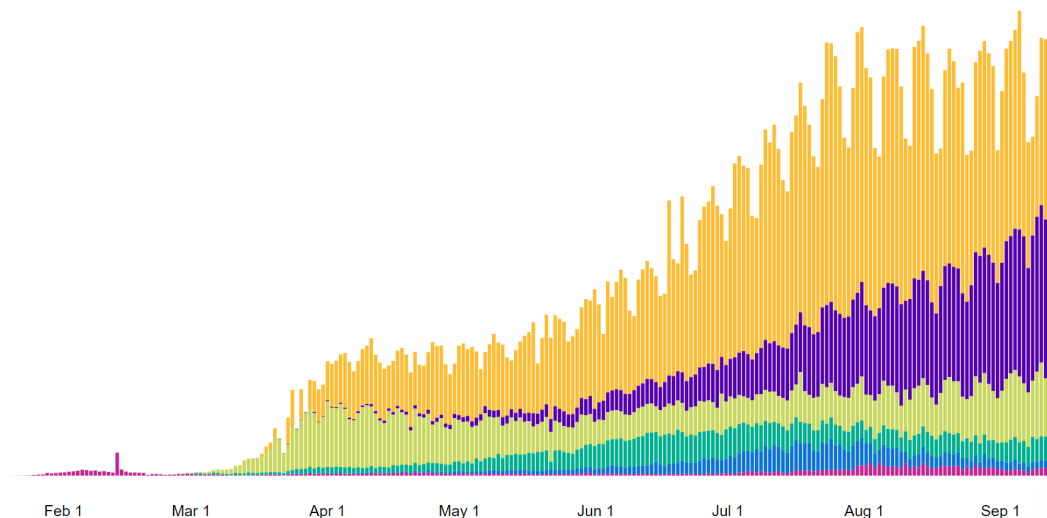
Eastern Mediterranean 2,116,189 confirmed

Africa 1,116,321 confirmed

Western Pacific 550,664 confirmed

Source: World Health Organization

▨ Data may be incomplete for the current day or week.







Questions