



## The Medical View

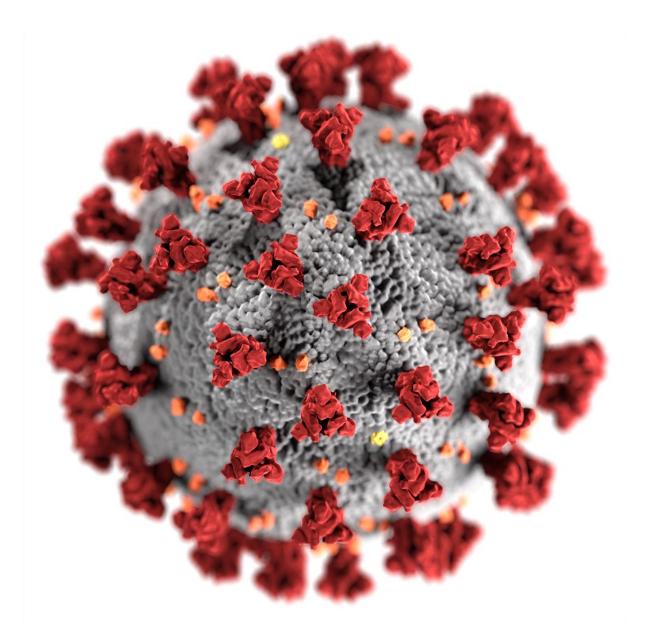
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#### The Medical View

- Epidemiology and Trends
- Prevention
- Clinical Manifestations
- Treatment
- Recovery and Immunity

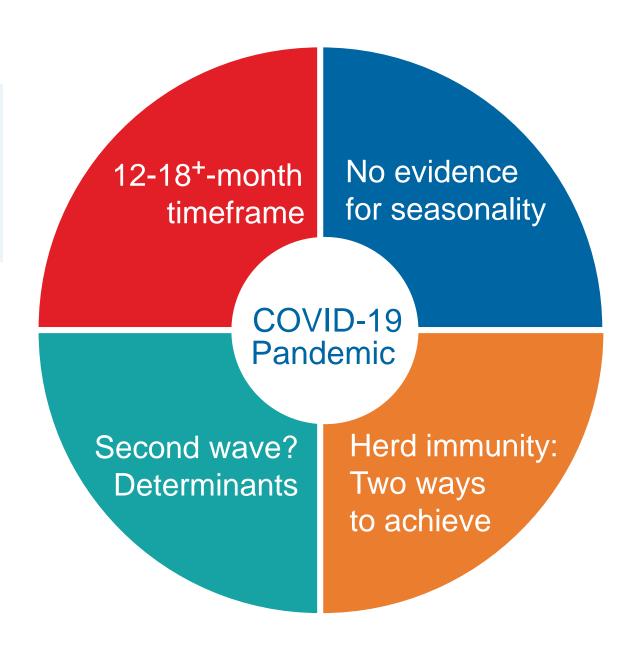


### **Epidemiology and Trends**

#### Terminology

SARS-CoV-2 – the name of the virus COVID-19 – the name of the disease caused by the virus

- Impact of social distancing
  - Differing strategies: Sweden
- Opening-up strategies
  - Testing and contact tracing
  - "Suppress and lift"
  - Mobile phone apps



#### Prevention

- Masks and face coverings
- Social distancing
- BCG vaccine protective?

#### **Coalition for Epidemic Preparedness Innovation**

- Created in 2017
- Stimulate and accelerate the development of vaccines against emerging infectious diseases and enable access to these vaccines for people during outbreaks
- Moving quickly to rapidly develop vaccines against COVID-19
- www.cepi.net

### Vaccine update

- Leveraging prior research
- Accelerating the timeline collaboration
- Many candidate vaccines and strategies\*
- Safety and efficacy
- Long-term protection needed
- Older individuals immune response
- Mass production
- Acceptance of vaccine by people?

\*virus, viral vector, nucleic acid, protein-based



#### **Clinical Manifestations**

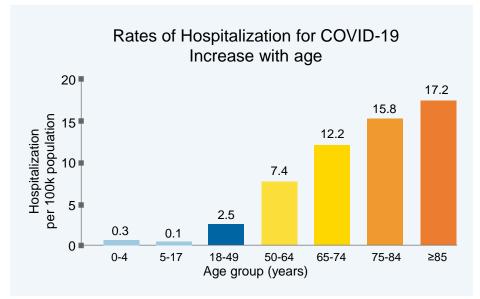
## Risk factors for serious disease

- Age 65 and older
- People in nursing home or LTC facility
- Chronic lung disease
- Serious heart conditions
- Immunocompromised
- Certain cancers
- Obesity, BMI >30
- Diabetes
- Chronic kidney disease
- Liver disease

## Unexpected consequences

- Kidney failure requiring dialysis
- Cardiac "injury"
- Neurological symptoms including stroke
- Abnormal clotting of blood
- Liver damage
- Children with emerging inflammatory condition

# Rates of hospitalization increase with age



CDC – adapted from U.S. Government Image – MMWR 17 Apr 20



#### **Treatment**

Remdesivir

Convalescent plasma

Other antivirals

Azithromycin

Monoclonal/polyclonal antibodies

Hydroxychloroquine and chloroquine (antimalarials)

Stem cells and other cells

 Use caution when reviewing and interpreting results of clinical trials

#### Longer Life Foundation

RGA collaboration with Washington University in St. Louis School of Medicine

Cutting-edge research

www.longerlife.org

LinkedIn/Twitter

Novel technologies being employed: cloning of SARS-CoV-2 proteins in human cells to identify how they interact to identify druggable targets



### Recovery and Immunity

A very complex issue...

#### More questions than answers!

- What is the correlation between resolution of symptoms and length of viral shedding?
- Could there be long-term health consequences in those who recover from COVID-19?
- Are antibodies protective?

- What if someone has a low or undetectable level of antibody?
- Is there a risk of reinfection?
- What is the quality of antibody tests now available?
- Will it be possible to issue "immunity certificates"?



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