NOVEL CORONAVIRUS (COVID-19)

Anthony Guan
PA-S

What is COVID-19?

* Coronavirus Disease 2019 is the name for symptoms caused by the SARS-CoV-2 virus.
* SARS-CoV-2 is a:
  * novel (it is new … we have not seen it before)
  * coronavirus (a family of viruses that include common cold viruses and animal viruses)
* Because the name is confusing with SARS, the CDC is using the term "COVID-19 virus"

Is this the same as SARS or MERS?

* SARS, MERS and COVID-19 are types of coronavirus.
* SARS stands for Severe Acute Respiratory Syndrome and no cases since 2004.
* MERS or Middle Eastern Respiratory Syndrome outbreak in 2012, only 2 pts in USA tested positive.

Is COVID-19 like influenza?

* Many of the symptoms are similar.
  * Fever and dry cough most common symptoms.
  * Runny noses very rare (less than 5%).
  * Average 2 weeks to recovery in mild to moderate cases.
* It is thought to be **transmitted** the same as influenza
  * **Close human to human contact**
  * **Droplets in the air**
  * **Droplets on surfaces**

How does COVID-19 spread?

* Most likely emerged from an animal source but now spreading human to human.
* Thought to mainly spread from people in close contact with one another (about 6 ft)
* Respiratory droplets when someone sneezes or coughs
* Touching a surface or object that has the virus then touching their own mouth, nose, or eyes
  * However not thought to be main way virus spread

What are the symptoms/ complications of COVID-19?

* Mild to moderate respiratory illness with symptoms of
  * Fever
  * Cough
  * Shortness of breath

  * M/C **complications** is Pneumonia in both lungs

What makes COVID-19 more dangerous than influenza?

* There are no treatments for COVID-19.
* There are no vaccines for COVID-19.
* Death rate of COVID-19 is 3.4%* versus 0.1% for seasonal influenza.

*www.cnbc.com/2020/03/03/who-says-coronavirus-death-rate-is-3point4percent-globally-higher-than-previouslythought.html

Why don't we all just wear masks?

* The average amount of times we touch our face is over **20** times per hour.
* Touching our face is a method of transmission.
* Only effective masks are N-95 respirators, which:
  * Require special fitting to be effective (must be snug and in contact with the face all the way around),
  * Are difficult to breathe through, and
  * With adjusting due to discomfort, it increases the risk of spread.

Who should wear a mask?

* Might be worn by ill persons during severe, very severe, or extreme pandemics when in contact with household members and when crowded community setting cannot be avoided
* Not recommended for use by well persons, except under special, high-risk circumstances*
  * • e.g., caring for ill family member at home

Who is most at risk of COVID-19?

* Those with underlying health problems appear to have an increased rate of death (up to 15% mortality).
* Death rate is under 0.5% up to age 49, greater than 3.5% 60 years and older, over 20% over 80 years old.
* Cancer, hypertension, chronic respiratory disease, diabetes, and cardiovascular disease increase risk of death from 5% to over 10%.

Who else is at risk?

* Close contact with known to have COVID-19
  * Healthcare workers
  * Household members

  * People who live in or have recently been in an area with ongoing spread of COVID-19

Why is incubation period a big deal with COVID-19?

* The longer the time people have the virus without symptoms, the greater the ability of people who unknowingly have the virus to infect others.
* Incubation period: the amount of time between exposure to an infection and appearance of first symptoms
* 2019 SARS CoV-2: 2-14 days (*up to 24 days)
* 2012 MERS: 5 days
* 2003 SARS: 2-7 days
* 2009 H1N1 (Swine) Flu: 1-4 days
* Seasonal Flu: 2 days

What has China done to decrease new cases of COVID-19 successfully?

* Built 2 dedicated hospitals in Wuhan in just over 1 week, and more than 1800 teams of five or more people traced tens of thousands of contacts.
* Aggressive "social distancing" measures included canceling sporting events, shuttering theaters, extending school breaks, closing businesses.
* 53 million people placed under mandatory quarantine since January 23, 2020. (Wuhan and nearby cities in Hubei province)

*www.sciencemag.org/news/2020/03/china-s-aggressive-measures-have-slowed-coronavirus-they-may-not-workother-countries

What do we know works to prevent transmission?

* Quarantine
* "Social Distancing"
  * Italy now on lockdown (over 9000 confirmed, 631 deaths)
* Enforcing those with symptoms of any illness remain at home.
* Hand washing with soap
  * >60% alcohol based hand sanitizer ONLY if no soap available
* Using paper towels as first choice to completely dry hands

*www.cnbc.com/2020/03/04/italys-death-toll-from-the-coronavirus-is-now-worse-than-iran.html

Will warmer weather make COVID-19 disappear?

* Short answer: we don't know yet, but probably not.*

* Longer answer:
  * In 2003, SARS did not go away on its own as the weather got warmer. It only went away with intense public health interventions that included isolation, quarantines, and other intensive efforts aided by a shorter incubation period with more severe cases.
* Seasonal viruses behave differently than viruses new to a population because no one has any immunity to the new viruses yet.

*www.ccdd.hsph.harvard.edu/will-covid-19-go-away-on-its-own-in-warmer-weather/

What's the Plan?

* **CONTAINMENT** (pre-pandemic): quarantine and isolation worked for SARS and the 2014-2016 Ebola outbreak. The U.S. is using this.

* **MITIGATION** (pandemic protocol): "social distancing" is what China and Italy have done in cancelling events.

* WHO feels both are important now, tailoring to local circumstances.

Containment

* Containment Strategies – Successful to Date
  * • Travel restrictions
  * • Airport entry screening
    * – Customs and Border Protection (CBP) and CDC screen passengers returning from China for symptoms, travel to Hubei province and close contacts
  * • Movement restrictions and monitoring of people at high andmedium risk
  * • Lab testing of symptomatic individuals at increased risk
  * • The goal of containment strategies is to rapidly identify new cases and limit secondary transmission to persons who are under isolation so exposures are limited and transmission chains are suspended

Protect Yourself and Stop Spread of Germs

* **Get the FLU SHOT!!**

* **Hand Outs**

Reputable Sources for Information

* WHO (World Health Organization)
* CDC (Centers for Disease Control)
* NYS DOH (New York State Department of Health)
  * https://www.health.ny.gov/diseases/communicable/coronavirus/
* NYC Health
  * https://www1.nyc.gov/site/doh/providers/health-topics/novel-respiratory-viruses.page

THANK YOU!!!

* Questions? ??