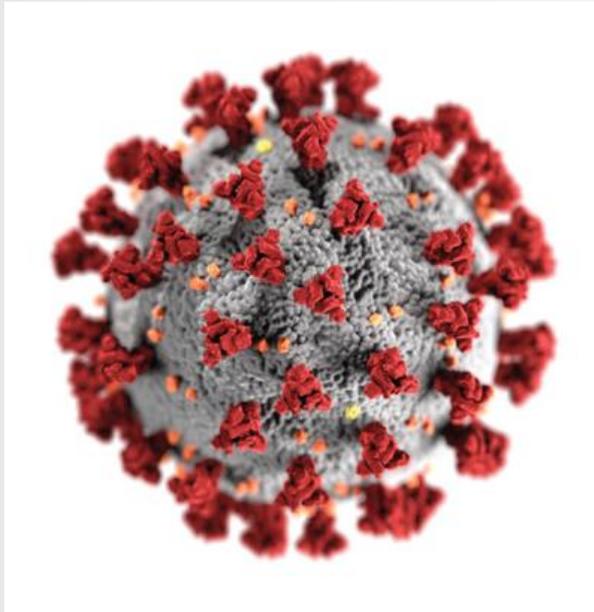




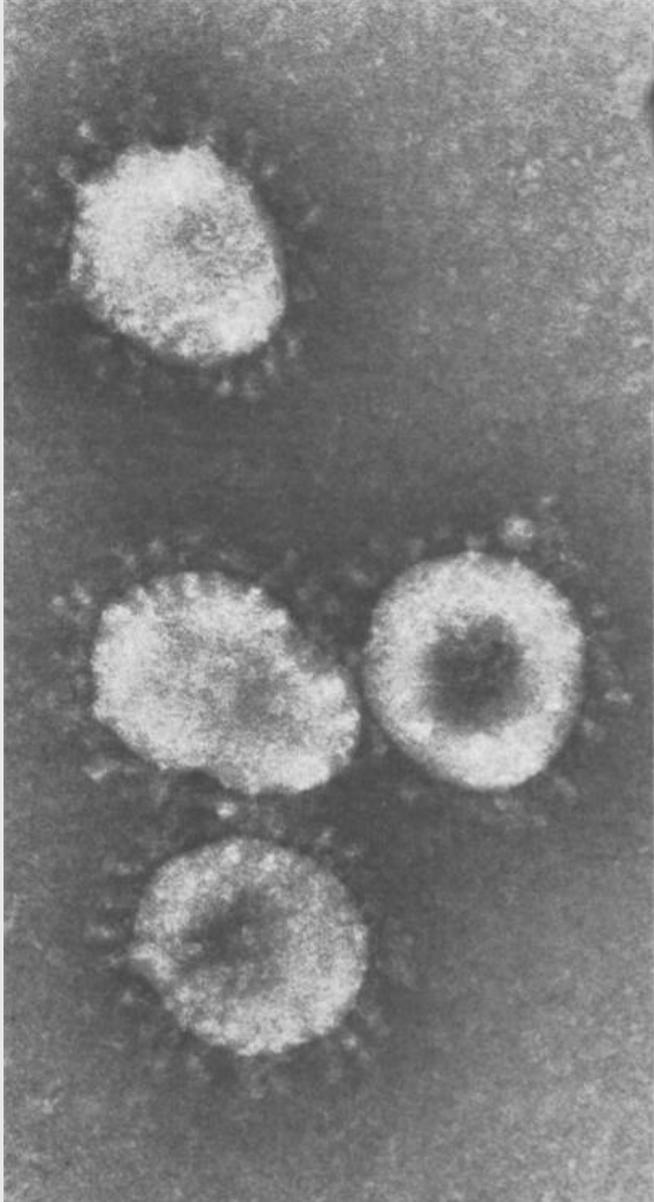
VICTOR-FARMINGTON
VOLUNTEER AMBULANCE



Learn about COVID-19

James J. Hood, President, Paramedic
Mike Carlotta, Chief, Paramedic
Jared Palmer, Deputy Chief, EMT
v1.0 March 2020

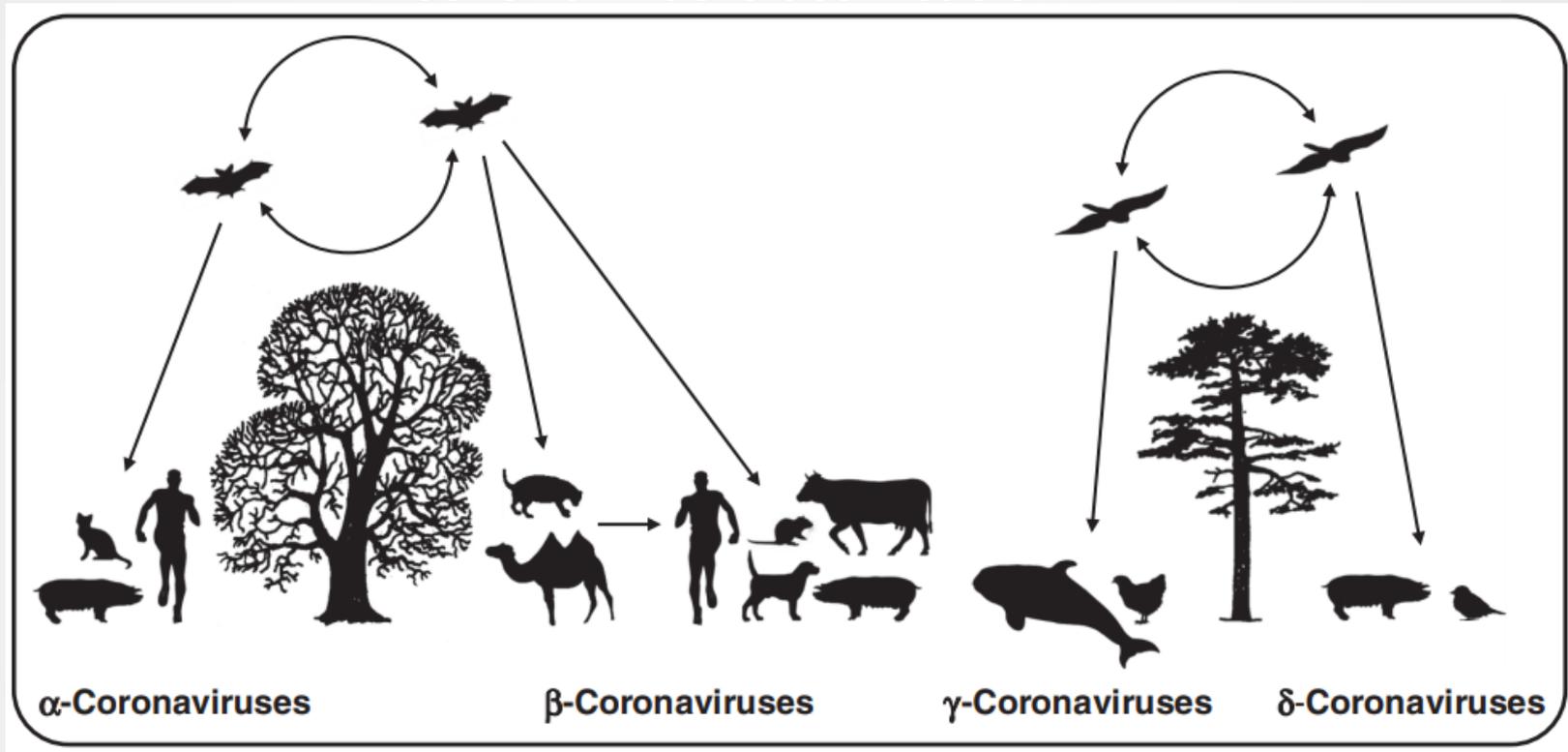
What are Coronaviruses?



- Coronaviruses were first discovered in 1967 by June Almedia and D.A.J. Tyrrell in London England
- First imaged in 1970 by Respiratory Virology Unit, National Communicable Disease Center, U. S. Department of Health, Education and Welfare
- The first discovered Coronaviruses (CoVs) caused breathing illnesses in chickens and humans
- One of the first CoV discovered was the CoV that causes the common cold in humans!

Electron micrograph of 4400-fold purified OC 43 virus (X225,000) "Coronavirus" - 1970²

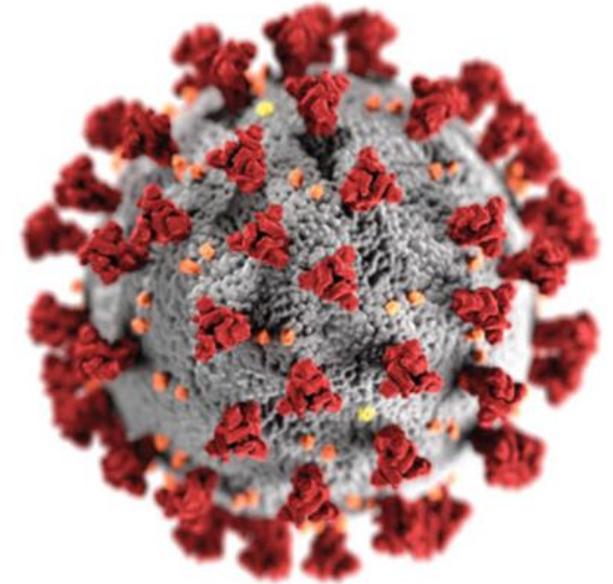
Coronavirus Classification



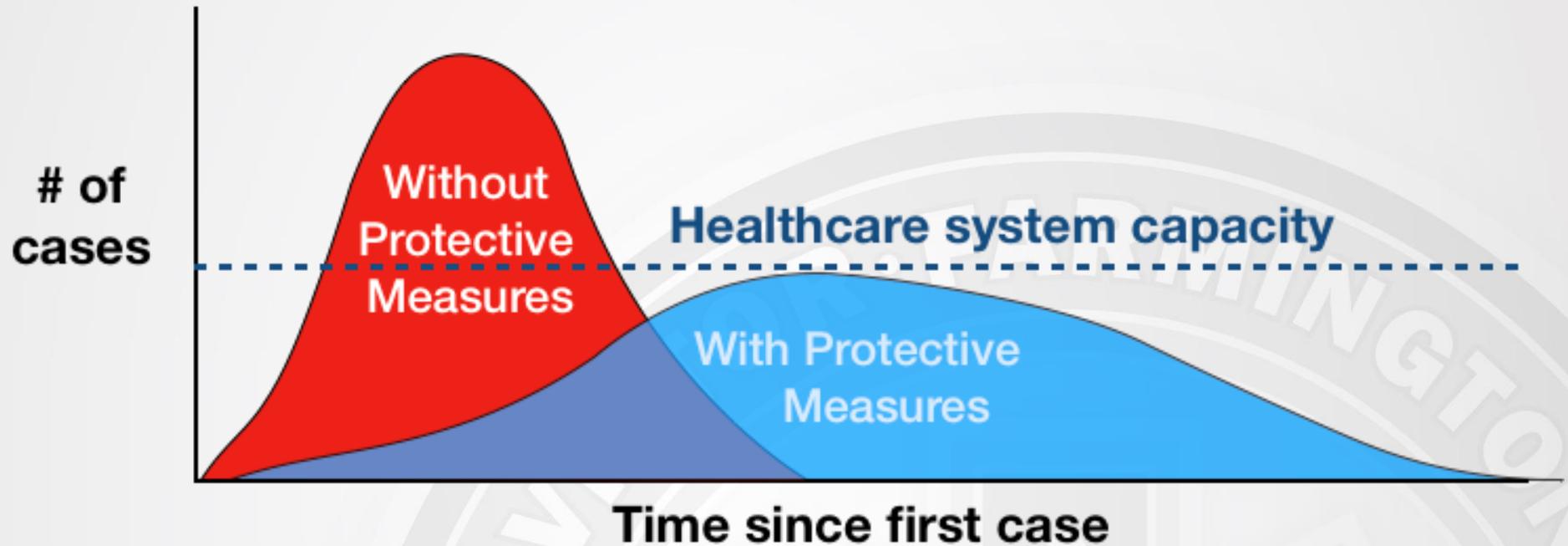
- Coronaviruses are classified in families, based on their specific genetic codes and the animals they can infect. (remember, humans are animals!)
- CoVs usually infect the upper respiratory tract (breathing) and gastrointestinal tract (stomach & intestines) of mammals and birds
- Like all viruses, CoVs can “mutate” or change their genetic code and can also trade genes if two different viruses infect the same animal!

COVID-19

- COVID-19 has a lot of names, but they all mean the same thing: novel coronavirus 2019, COVID-19, nCoV-19, SARS-CoV-2, hCoV-19
- Spread through droplets and contact
- It infects and multiplies in the lower lungs
- COVID-19 is big, for a virus. If you lined up a bunch of COVID-19 viruses you would fit about 5 million viruses in 1 inch!
- COVID-19 is an RNA virus. It invades cells in the lungs and the virus RNA “hijacks” the human lung cells and makes them build more viruses!!!
- COVID-19 attaches to the lung cells at a special “receptor” called the ACE2 receptor”
- The ACE2 receptor is mostly found in the lungs, so this is why COVID-19 is primarily a respiratory (lung) disease



Incubation



Adapted from CDC / The Economist

- There are 20 Million people in New York State and only about 50,000 hospital beds
- If too many people get sick at the same time, we won't be able take care of everyone
- This is why everyone is asked to stay home, stay away from others and wash hands frequently

“Herd Protection”

- Special Doctors, called “Epidemiologists” (EPI-DEE-ME-OWL-O-JISTS) study diseases
- Different diseases spread at different rates. The higher the “Ro” or “Reproduction Number” the faster the disease spreads
- Epidemiologists calculate a “Herd Protection Threshold” (HPT). This is the percentage of the population that has to be vaccinated or have had the disease to stop the disease from spreading any more

Infections	R ₀	HPT (%)
Diphtheria	6–7	84–85
Influenza	2–4	50–75
Malaria	5–100	80–99
Measles	9–18	83–94
Mumps	4–14	75–93
Pertussis	5–35	90–94
Polio	2–4 ^a , 8–14 ^b	80–86 (controversial)
Rubella	6–7	83–86
Smallpox	5–7	80–85

^aPopulations with good hygiene.

^bPopulations with poor hygiene.

HPT: herd protection threshold; R₀: reproduction number.

- The good news is that COVID-19 is not as bad as the Measles, Mumps or Smallpox
- COVID-19 has a low Herd Protection Threshold of about 55%. So after about ½ of the population has had the disease, the spread will slow dramatically. Remember, scientists are still learning about COVID-19, so these numbers could change.

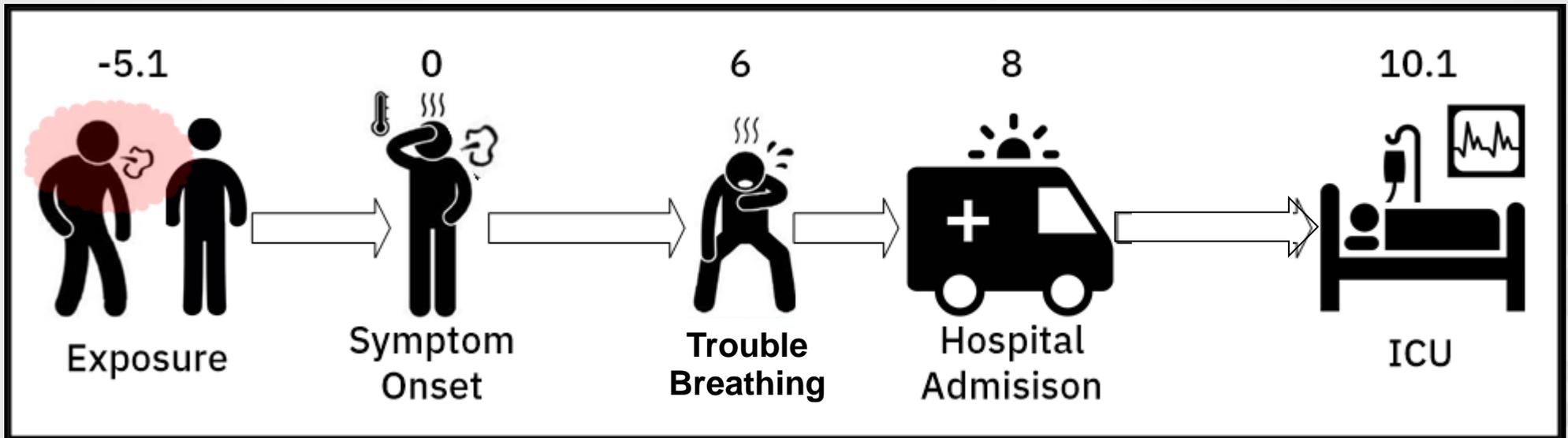
COVID-19

R₀ = 2.2

HPT = 55%

Severe COVID-19 Disease Progression

Median Days Since Symptom Onset



81% of Cases are Mild

14% are Severe

5%



Critical

- Most people who get sick get better after about one week of illness.
- However 1 out of every 5 people who get COVID-19 get severe illness about one week or so after they start feeling sick
- Sometimes severe trouble breathing occurs very suddenly
- COVID-19 can make ANYONE of ANY AGE very sick. EVEN 20-40 year-olds! Just because you are young doesn't mean you can't become very sick !!!

0.7%-

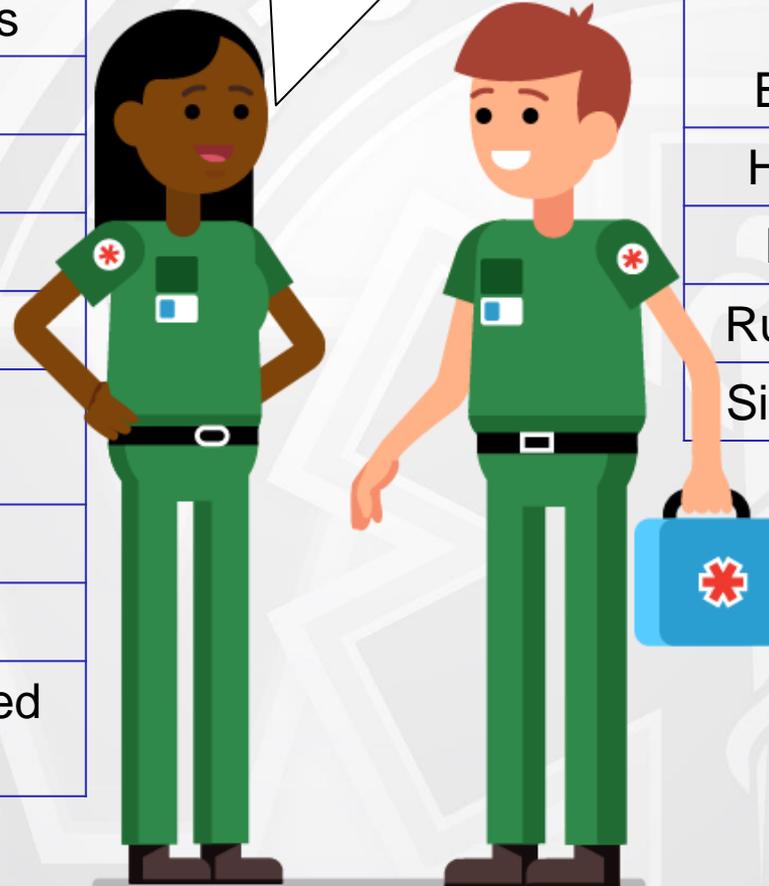
2.3%

Fatal

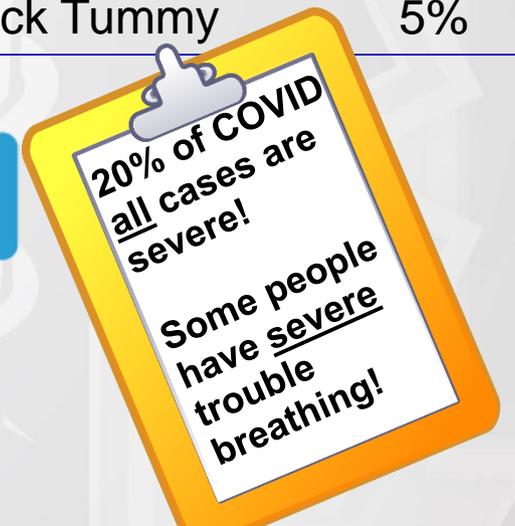
COVID-19 Risks & Symptoms

Risk	Prevalence
Male	69%
70-80 Yrs	8% of fatalities
> 80 Yrs	15% of fatalities
Comorbidities	30%
Diabetic	20%
Hypertension	15%
Heart History	15%
Smoking History	7%
Asthma	2%
Liver History	2%
Immuno-Compromised	Presumed risk

How risky is COVID-19 for you and are you sick?



Symptom	Prevalence
Fever	97%
Cough	87%
Feeling Sick	36%
Muscle Aches	
Trouble Breathing	20-50%
Headache	8%
Diarrhea	7%
Runny Nose	5%
Sick Tummy	5%



Children



- One bit of good news is that young children seem to be less likely to get sick compared with adults
- < 15 years old comprise only 2-13% of cases
- SARS and MERS, diseases related to COVID-19, had very few childhood fatalities
- Most children have mild symptoms which appear very similar to other childhood diseases such as:
 - Cough
 - Congestion
 - Runny Nose
 - Sore Throat
 - Mild fever in approximately half of the cases
- It is not known if children with underlying medical conditions are at increased risk of severe disease
- **If a child has trouble breathing or severe illness seek immediate medical attention!**

If You Feel Sick with COVID-19

- Stay away from other people and try not to get them sick too.
- Call your doctor and follow their advice!
- If you don't have a doctor call the University of Rochester COVID-19 support telephone at 1-888-928-0011.
- Visit <https://www.urmc.rochester.edu/coronavirus.aspx> for more information.
- You can also go to an Urgent Care Center if you don't have a doctor.
- **If you are having severe trouble breathing call 9-1-1 for an Ambulance and tell them you think you have COVID-19.**
- If you **can** say "I live in Victor, New York" or "I live in Farmington, New York" without gasping for breath consider saving the ambulance for someone who is sicker than you
- Please only call for the ambulance if you are very sick. We can't take care of everyone at once if we get too many ambulance calls. Help us to "Flatten the Curve"

Caring For Our Community



- Victor-Farmington Volunteer Ambulance is doing everything we can to prepare for COVID-19
- We are closely coordinating emergency plans with the Town of Victor, Town of Farmington and Village of Victor
- We have increased our supply of masks, equipment and medications as best as possible before this event
- Our staff of Paramedics and EMTs and our ambulances are ready to help in an emergency. We will probably be dressed funny-looking protective equipment, just to keep us safe!
- **YOU** can help us and your neighbors best by:
 - Staying Home
 - Social Distancing, especially from people who are at risk for COVID-19, like seniors
 - Washing Your Hands Properly
 - Wash Your Hands More (we're not kidding)
 - Avoid touching your face, eyes and nose

CREDIT: DREAMSTIME

FACTS
NOT FEAR
CORONAVIRUS