

UNDERSTANDING COVID-19

A graphic guide to understanding the disease

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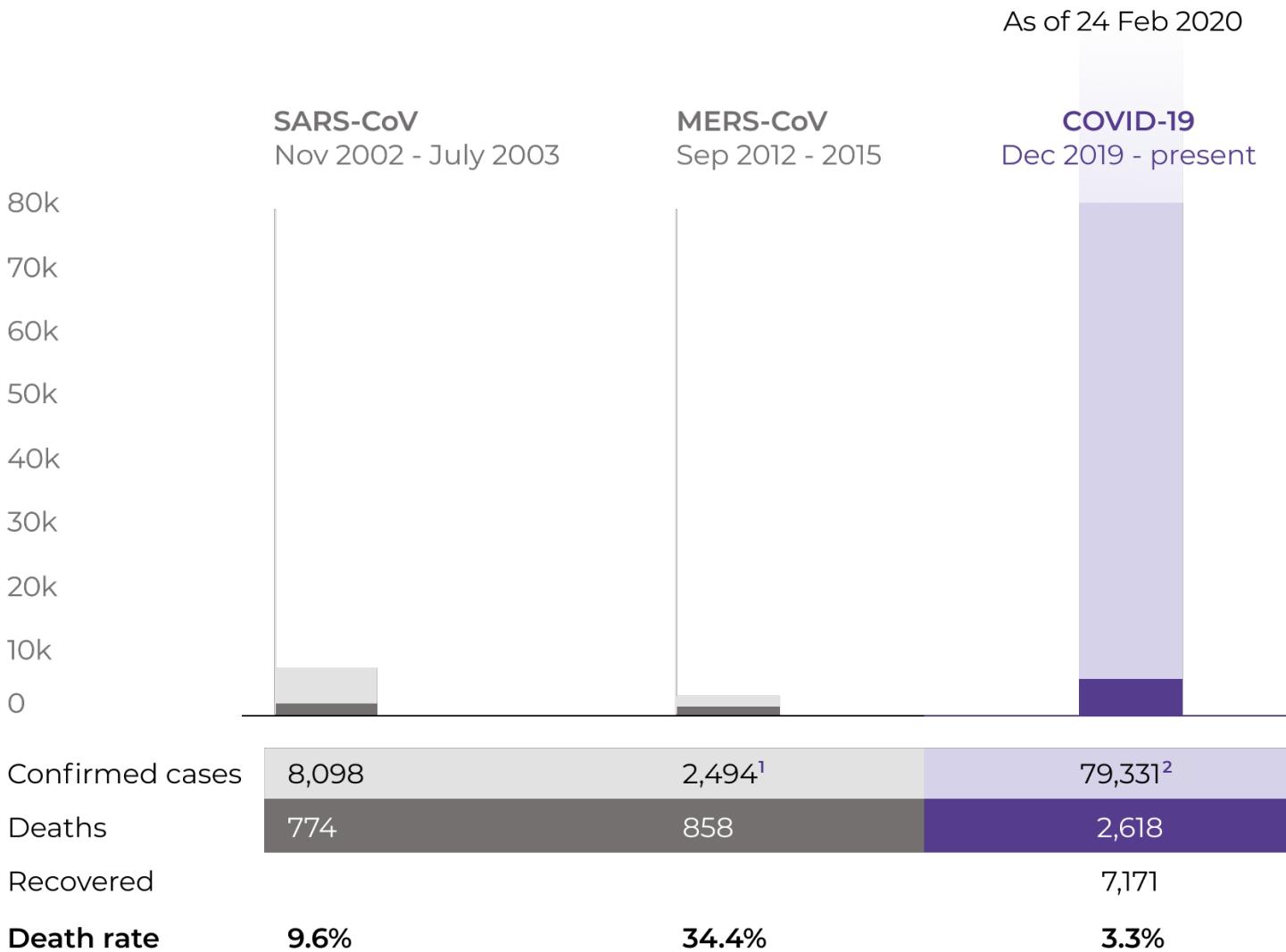
OVERVIEW

What is COVID-19?

The 2019 Novel Coronavirus, also known as **COVID-19**, caused an outbreak of respiratory illness in Wuhan, China and has since spread to other parts of China and the world. There is still a lot that we don't know about COVID-19 and the situation is evolving day-by-day.

However, this isn't the first time the world has dealt with a Coronavirus. Coronaviruses are a family of viruses that infect birds and mammals (this includes humans!). Typically, they cause mild respiratory symptoms similar to the common cold, but in some cases—like in SARS or MERS—it can lead to death, often in those that are already immunocompromised.

A quick look: How does COVID-19 compare to the other coronaviruses?



Timeline of the Outbreak³

Dec 1 2019
First patient confirmed in Wuhan, China

Dec 31 2019
China sends urgent notice to WHO of unknown pneumonia cause

JAN 7 2020
• New virus identified as a coronavirus
• Europe's first case confirmed in France

JAN 11 2020
First death announced in China

JAN 21 2020
First case in the US confirmed;
Snohomish County, Washington

JAN 23 2020
Wuhan is under quarantine

JAN 24 2020
First confirmed case of human-to-human transmission outside of China in Vietnam

JAN 30 2020
• World Health Organization declares the outbreak a global public-health emergency
• The United States reported the first confirmed instance of person-to-person spread

JAN 31 2020
• HHS Secretary declared a public health emergency (PHE) for the US
• President Trump enforced a 14-day quarantine preceding the entry of travelers from mainland China into the US

Feb 11 2020
WHO announced a new official name for the disease as "COVID-19"

Feb 14 2020
Africa's first case confirmed in Egypt

Feb 25 2020
CDC warns community to prepare for the spread of COVID-19 in the US

The COVID-19 outbreak is rapid, but not yet considered a pandemic

How is it spreading?⁴

Human-to-human transmission is possible

The virus first came from an animal source, but it is now able to spread from human to human.

It's an airborne virus

It can infect humans through...

...close contact of 6 feet or less, which includes touching, and shaking hands



It is still unclear if you can get the COVID-19 by touching an object or surface contaminated by the virus, then touching your mouth, nose, or eyes

...and the air by coughing and sneezing. People nearby may inhale droplets from coughs and sneezes into their lungs



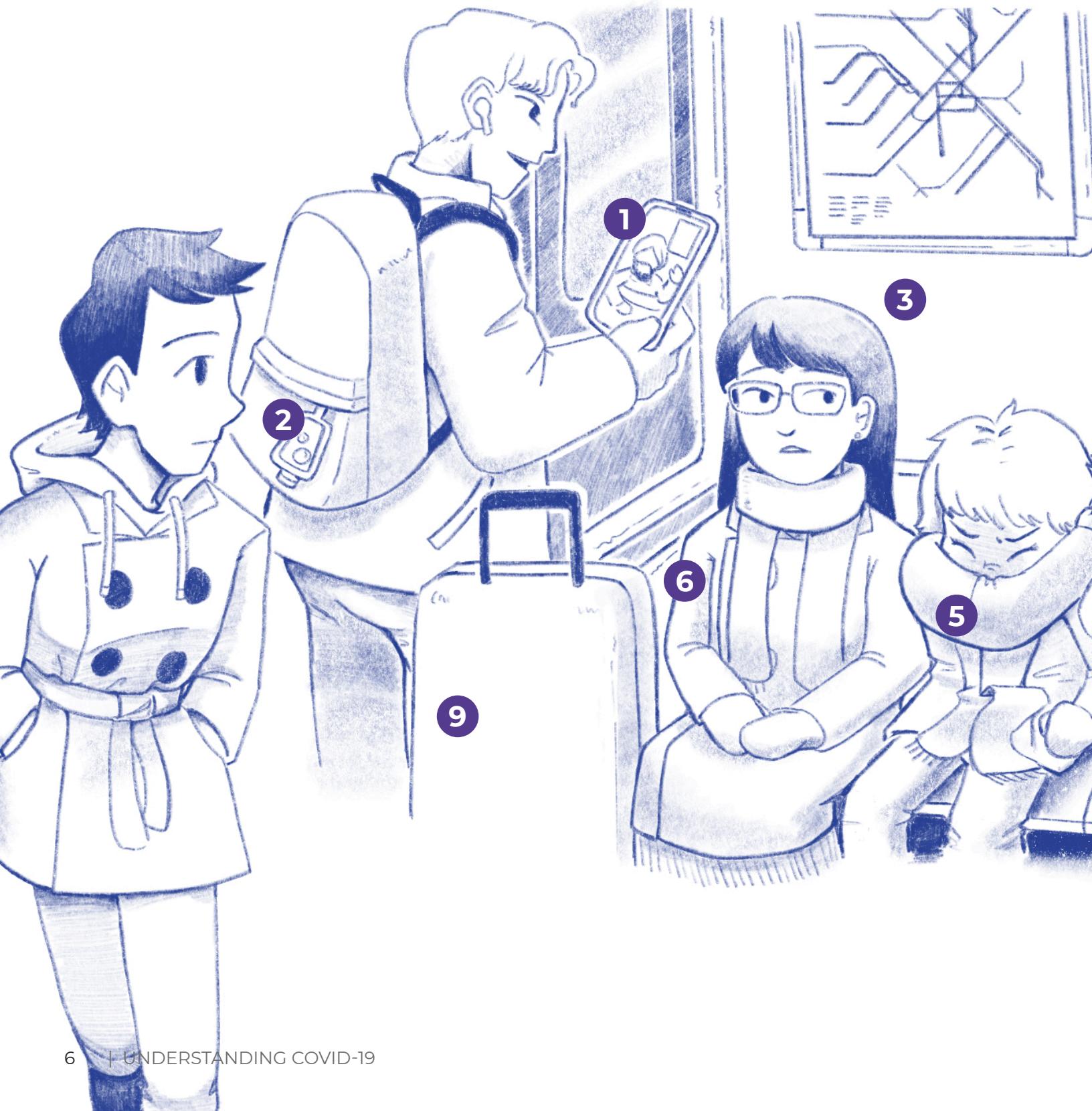
Incubation Period⁵

It takes 5.2-12.5 days for COVID-19 to cause symptoms. To be safe, make sure to monitor your health for 14 days after coming into contact with someone who is confirmed to have, or is suspected of having COVID-19. If you experience the COVID-19 symptoms (see *Close Contact* section), call your doctor ahead of your visit.

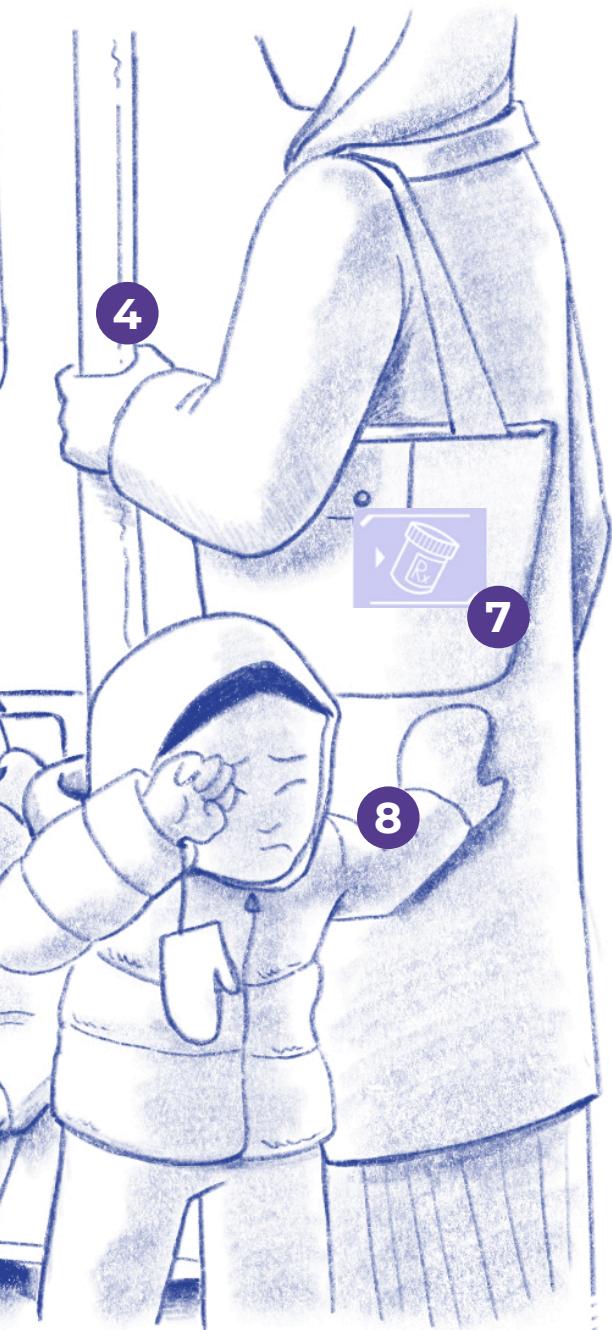
YOUR PART

Outbreaks at this scale can be scary, but besides staying up to date on the news, there are still a lot of things that you can do to stay healthy and help stop the spread of disease!

Prevention⁶



COVID-19 has not become an epidemic in America yet; **here's what you can do to prevent it from becoming one:**



- 1 Stay home** when you are sick.
- 2 Wash your hands** often with soap and water. If unable to wash your hands, use alcohol-based hand sanitizer.
- 3 Avoid close contact** with people who are sick.
- 4 Clean and disinfect frequently touched objects** and surfaces.
- 5 Cover coughs and sneezes** with your elbow or a tissue. Throw tissues in the trash.
- 6 Get your annual flu vaccine**
- 7 Take flu antivirals** if prescribed
- 8 Avoid touching your eyes, nose, and mouth** with unwashed hands
- 9 Check CDC's COVID-19 travel health notices often** and **avoid nonessential travel** to China

Close Contact⁷

If you come into close contact with someone who is confirmed to have COVID-19, **here's what you can do to stay well:**

- **Monitor your health** starting for at least **14 days** after your last contact with the infected person
- Watch for signs and symptoms; **contact your healthcare provider right away if you notice these signs:**

- 1 Fever
- 2 Coughing
- 3 Shortness of breath

If you feel unwell within 14 days of close contact, ***call your doctor ahead of time** to tell them...

- ...you've had **close contact** with someone confirmed to have COVID-19
- ...to call the **local or state health department**

This helps your provider prevent other people from being infected



STAY CALM, TAKE CARE

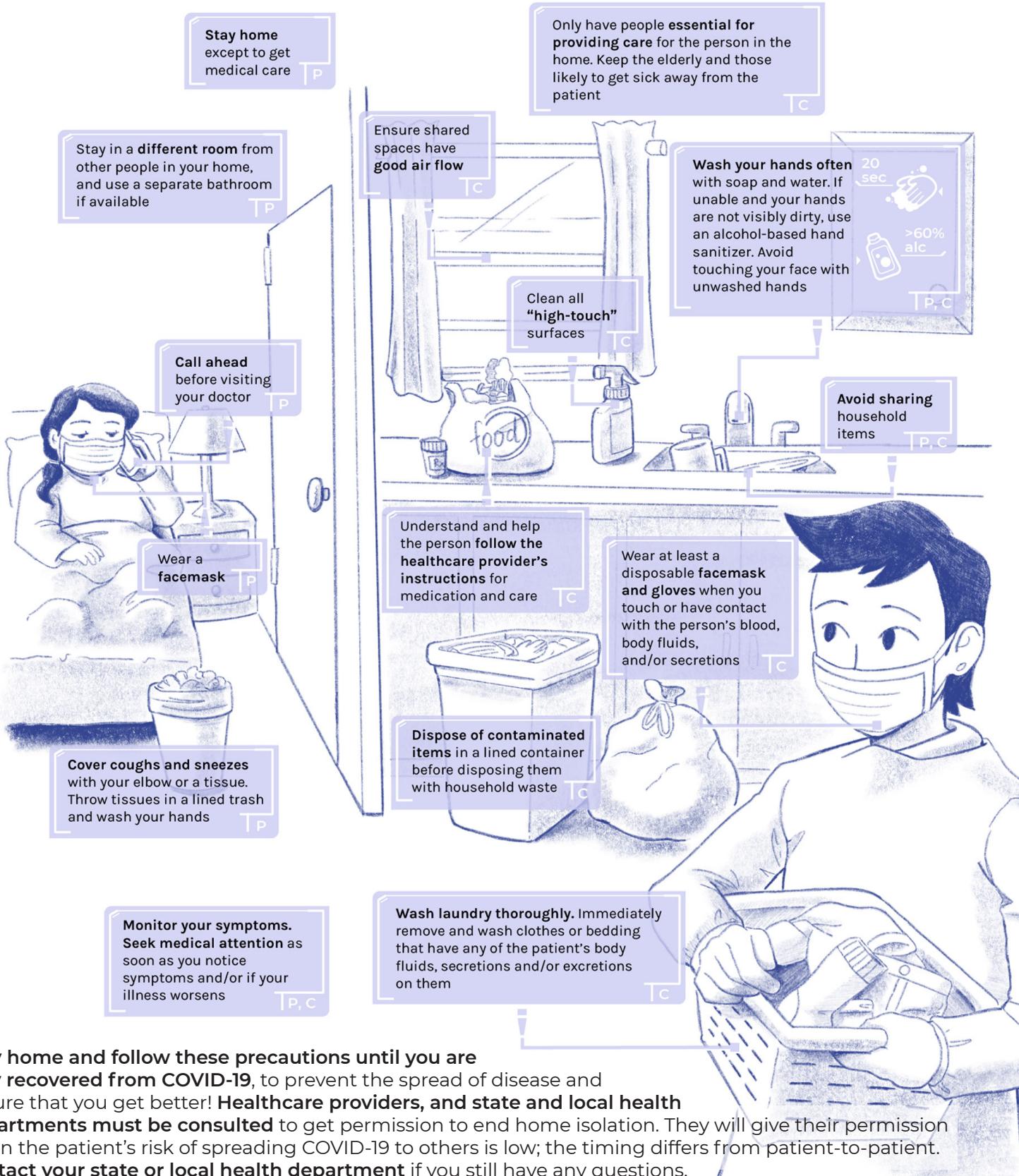
Remember, **don't panic!**

Before an announcement of an epidemic, take care of yourself **just like you would during the annual flu season.**

Stay on top of the news and other credible sources to keep updated on if you need to do anything different.

Patient Care⁸

If you/someone you know becomes sick with COVID-19 and does not require hospitalization or is determined medically stable to go home, **here's what you can do to take care and prevent further spread of the disease for patients (P) and for caregivers (C).**

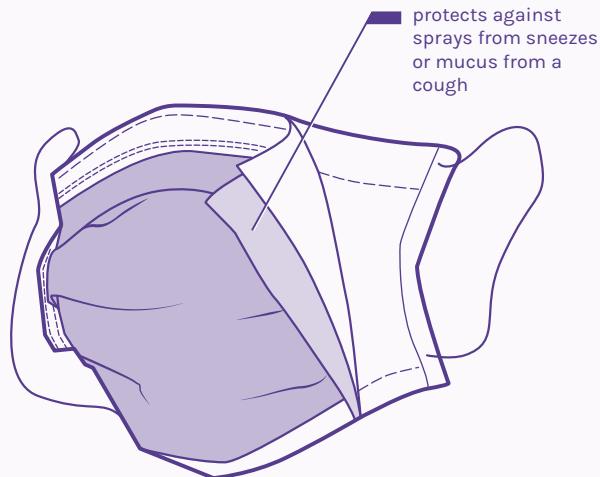


Stay home and follow these precautions until you are fully recovered from COVID-19, to prevent the spread of disease and ensure that you get better! **Healthcare providers, and state and local health departments must be consulted** to get permission to end home isolation. They will give their permission when the patient's risk of spreading COVID-19 to others is low; the timing differs from patient-to-patient. **Contact your state or local health department** if you still have any questions.

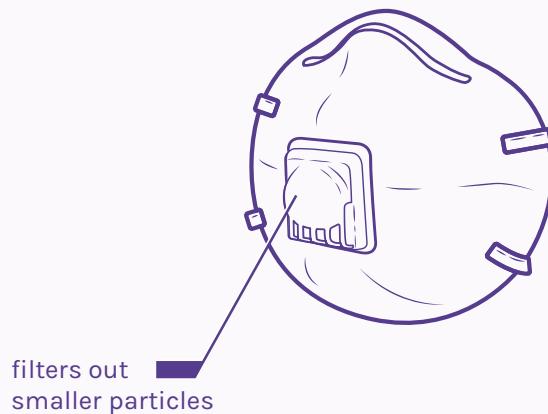
PHYSICIANS WEAR MASKS, BUT YOU SHOULDN'T HAVE TO!⁹

In light of the outbreak, two kinds of facemasks have been flying off American shelves:

Surgical mask



N95 Respirator



Helpful for preventing the sharing of germs if you are sick, but are **not completely effective** against airborne viruses that are transmitted through smaller particles

Filters out at least 95% of airborne particles, making it better at protecting against airborne viruses

However, the CDC does not recommend public citizens to wear either of these masks!

For now, the CDC recommends **only healthcare providers taking care of patients** known to be infected with COVID-19 to wear a N95 respirator.

END THE PREJUDICE!⁶

Asian people are not at a higher risk than other people from becoming sick with COVID-19.

Only people who have traveled to China, or been in contact with someone confirmed

or suspected to have COVID-19 in the last 14 days are at a higher risk of being infected.

Just because someone is of Asian descent does not mean that they have COVID-19!

ACTION PLAN

An epidemic in the world is pretty scary. But the good news is that we have a plan on how to deal with situations like these.

World Health Organization¹⁰

Primary role is to direct international health and provide global leadership and guidance on how to manage. Its headquarters are located in Geneva, Switzerland.

Each country has a Regional WHO office

In the US, our Regional in Washington, DC. Here, teams can communicate with the WHO headquarters and get up-to-date information about the emerging situation and consequently manage the outbreak response.

WHO uses its international network of collaborating centers to collect information

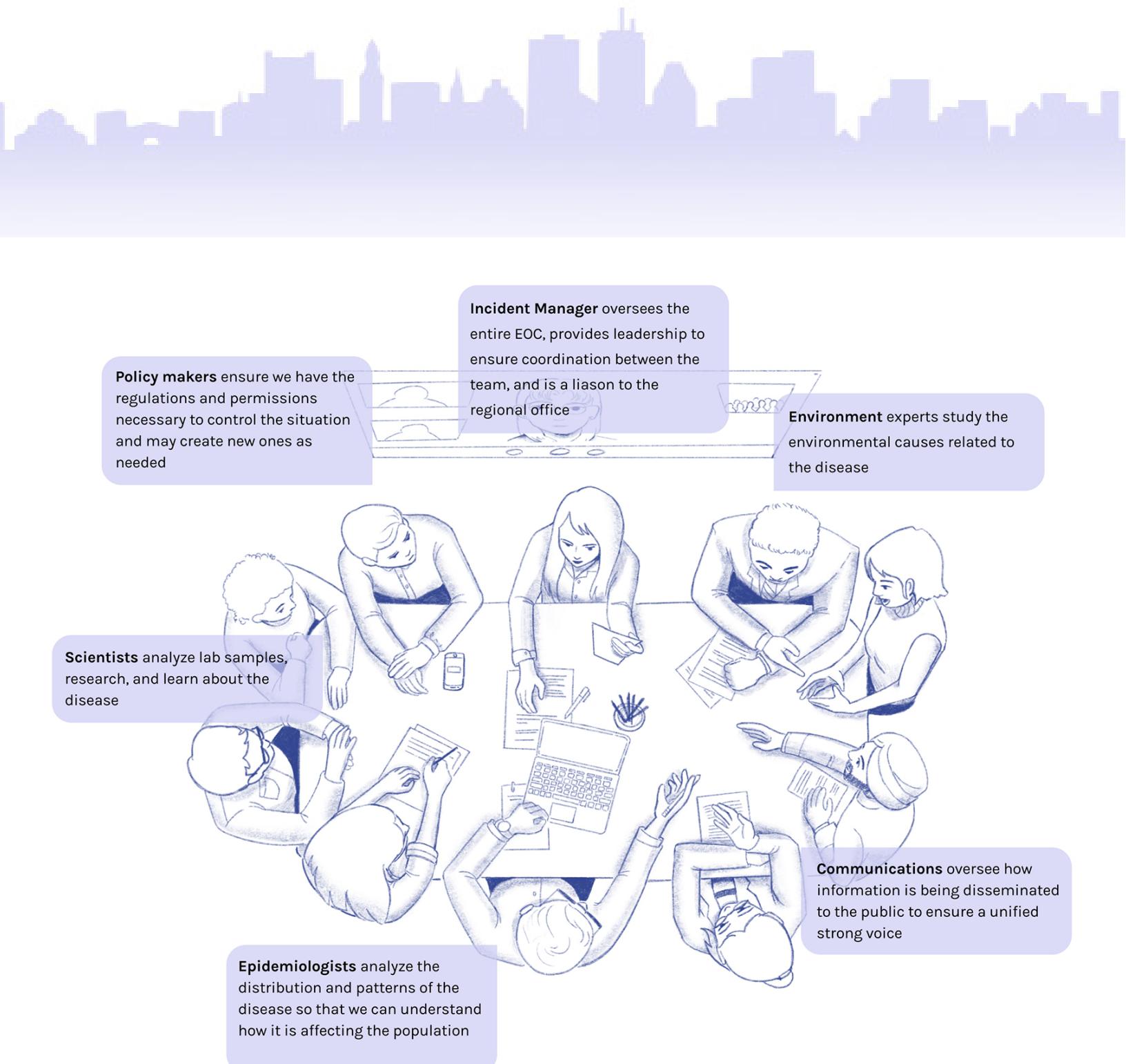
In the US, the Centers for Disease and Control in Atlanta, Georgia collects international and national data, analyzes, and synthesizes recommendations.

Our world is more connected than ever

This means that there are plenty of ways for diseases to spread to other people and places. There is a fine balance between protecting borders by quarantine and overreactions (that cause panics).

Local Emergency Operations Centers¹⁰

Day-to-day operations are managed by a the local ground team. These centers have a set of experts that work together to control the local situation.



So what does this look like in practice?

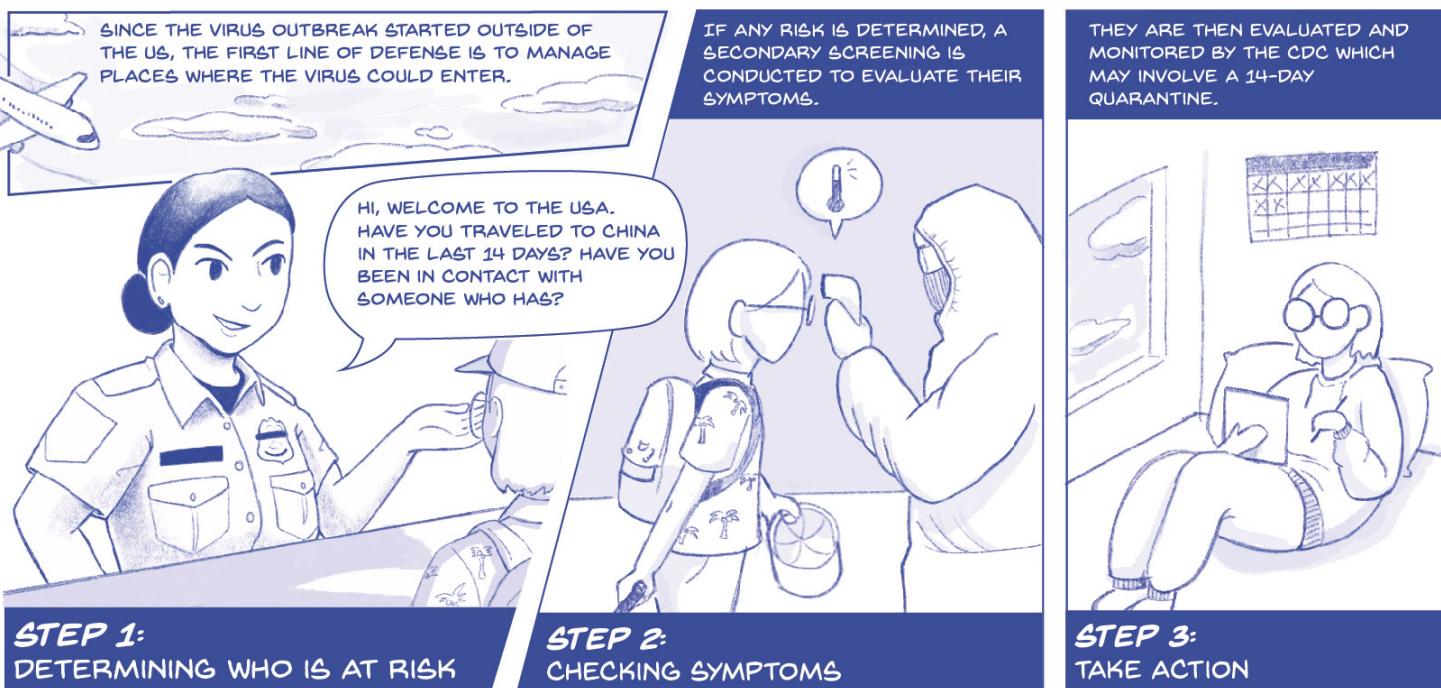
At the national level, our first line of defense is monitoring ports-of-entry^{11,12}

Since the virus outbreak began outside of the US, the first line of defense is to manage places where the disease could enter. The CDC has ordered airlines to find out which passengers have traveled to China in the last 14 days and major international airports to screen all incoming travelers.

The three-part process begins with Custom and Border Protection agents questioning travelers.

Next, those at-risk are sent to a secondary screening by health workers where their temperature is taken. Then, those showing symptoms are evaluated and monitored by the CDC—which may involve a 14-day quarantine. Travelers who have been to China in the last 14 days are advised to stay home and monitor their symptoms.

HOW DO WE PROTECT OUR AIRPORTS AND BORDERS?

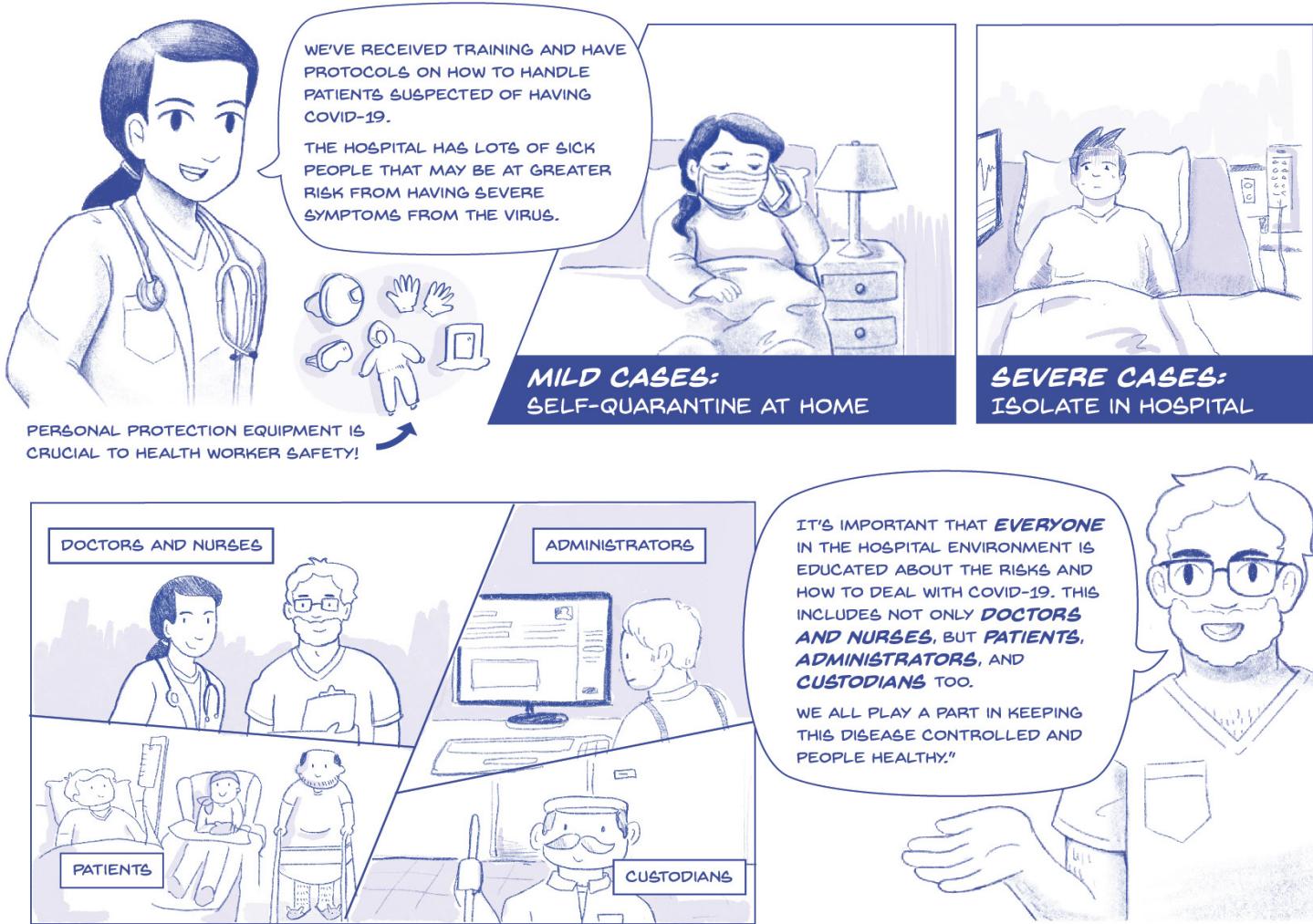


If the virus enters a state, hospitals need to be prepared to respond^{13,14,15}

If there is a suspected case of the COVID-19 in the region, hospitals and local clinics should be trained in how to deal with the virus. Mass General Hospital is 1 of 10 CDC designated “regional ebola and

special pathogen treatment centers” in the US—meaning that they have expert knowledge in how to deal with something like an outbreak. Many other hospitals have turned to MGH as they update their emergency plans.

HOW DOES A HOSPITAL RESPOND TO A QUARANTINE?



The US has already taken aggressive quarantine measures¹⁶

After closing its borders to China, the US took strict measures to prevent the spread of the virus. HHS has been allocated \$250 million in emergency funds to help prevent the spread of disease. The US has ordered all people who have traveled to China in the last 14 days to be quarantined for 14 days—this has led to 800 patients quarantined in 6 military bases across the States so far.

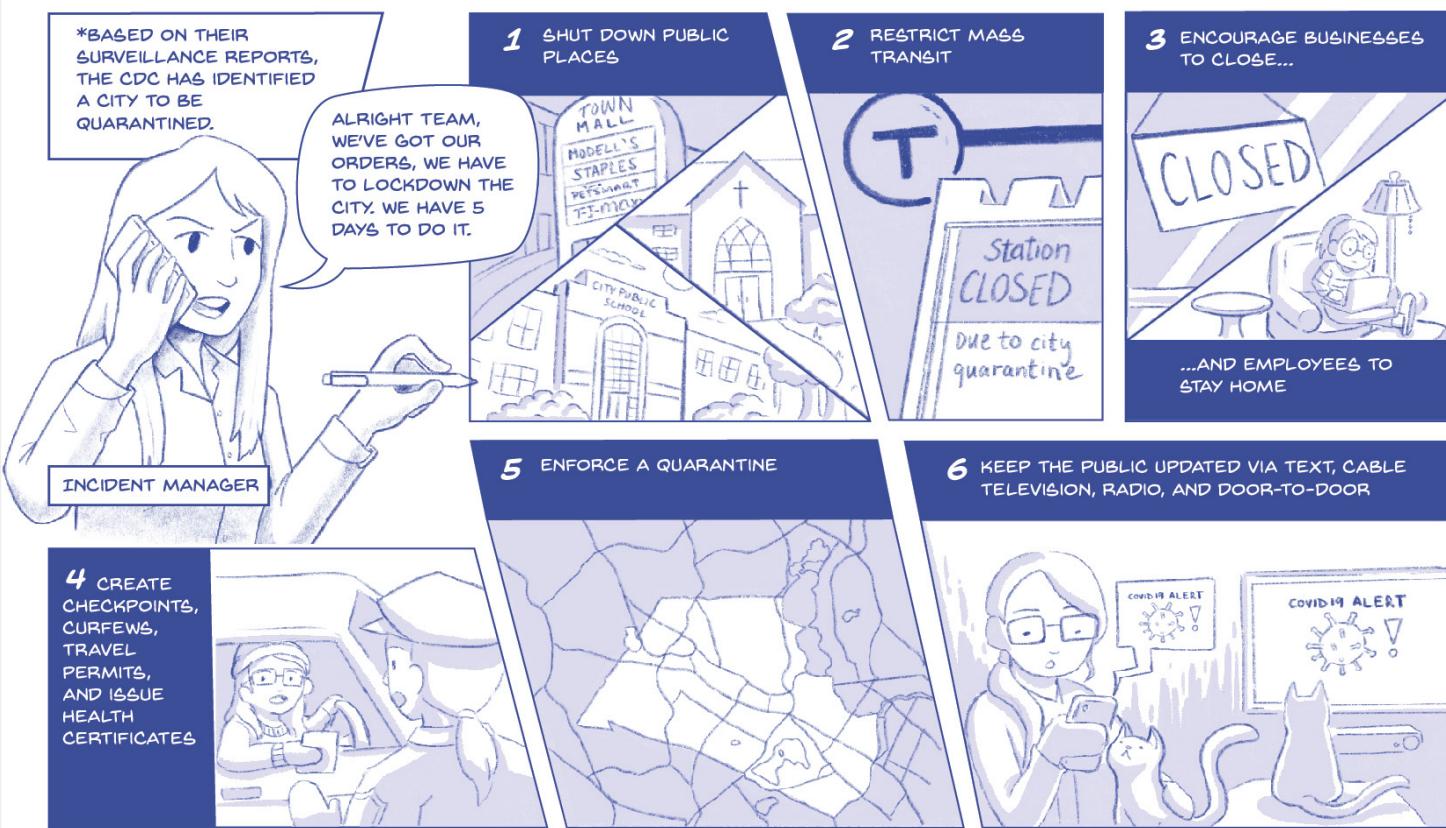
These military bases were chosen because they could comfortably house hundreds of people. Patients are served 3 catered meals a day and have access to a mental health counselor. They are encouraged to keep 6 feet of distance at all time with other people, and they regularly have their symptoms checked.

But what does happen when a city shuts down?^{17, 18}

In the US, it is very unlikely that the CDC would mandate an entire city be quarantined. US policy is actually to avoid place-based mass quarantines. Many experts have noted that the effectiveness of a mass quarantine for disease may not be worth the significant psychological and economic costs. However, in the case that a mass quarantine is ordered, cities have a plan manage the situation.

However, the situation is under control, and more extreme measures like this have not been required yet to deal with COVID-19 in the US.

HOW DOES A CITY RESPOND TO QUARANTINE?



*IT IS VERY UNLIKELY THIS WOULD HAPPEN IN AMERICA; U.S. POLICIES ACTUALLY ACT AGAINST ENACTING PLACE-BASED MASS QUARANTINES.

For now, **keep calm**, follow **regular flu season preventative measures**, and **keep up to date** on the news for updates on protocols and treatment development.

While you may not see it, a lot of people are working hard to contain this virus so you can stay well.

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IMPORTANT RESOURCES



World Health Organization

World Health Organization

Information and guidance for the general public

Live updates:

<https://www.who.int/emergencies/diseases/novel-coronavirus-2019>



Centers for Disease Control and Prevention

Information and guidance for the general public and healthcare professionals

Live updates:

<https://www.cdc.gov/coronavirus/2019-nCoV/>



National Institute of Allergy and Infectious Diseases

<https://www.niaid.nih.gov/diseases-conditions/coronaviruses>



US Food and Drug Administration

<https://www.fda.gov/emergency-preparedness-and-response/mcm-issues/novel-coronavirus-2019-ncov>

SPECIAL THANKS

Additional feedback provided by

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