As an ER Doctor, I Need You to Know These Things About Coronavirus
Doctor's Note

As an ER Doctor, I Need You to Know These Things About Coronavirus

We are willing to risk our own lives and safety, and those of our families, for the sake of yours.

By Darragh O'Carroll, MD

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The new coronavirus, aka COVID-19, has spread deeper and farther into our communities than currently known. It will infect a majority of Earth’s human population—many estimates say up to 70 percent of us. The pandemic will be akin to an extremely severe seasonal flu outbreak that will arrive in waves, in which a minority of young and healthy people will be adversely affected, but the elderly and those with pre-existing health conditions will be at real risk, as will the world’s healthcare workers.

Nurses, doctors, and hospital and clinic staff will be regularly exposed to patients with high viral loads, increasing our personal risk immensely. As an ER doctor, I am certainly in the highest-risk category for contracting this disease, with hundreds of infected people likely to come through my department’s doors in the coming months. It’s admittedly given me pause. I tend to contract the flu on a yearly basis, despite getting the flu shot and practicing correct precautions around my patients. COVID-19 has a transmissibility rate that’s more than double that of most influenza viruses.

I have accepted that my risk of death, if I were to contract COVID-19, is five-fold that of the flu’s extremely low rate of 0.06 percent. But according to China CDC, healthcare workers have a very sobering 15 percent risk of becoming seriously ill and hospitalized while caring for patients. Additionally, most patients sick enough to arrive at the ER will be elderly and frail, and will likely require intubation and breathing machines, a procedure in which my face, mouth, and eyes will be inches from theirs as I insert a breathing tube into their windpipe. It is the highest-risk procedure for contracting any respiratory virus.

This exposure is all but inevitable, as cases are continually and rapidly slipping through screening protocols. Public health departments, including the CDC, are having to adapt across the globe, and all of us will have to adapt, too.

**What’s happening now, and what’s to come**

On February 26th, the CDC made its largest change to date, expanding
testing criteria to include people who have visited all countries experiencing widespread or sustained community transmission, which now include China, Iran, Italy, Japan, and South Korea. More importantly, they have finally allowed us to test people who have had no exposure risk but nonetheless have the typical COVID-19 symptoms of fever, shortness of breath, and pneumonia.

Prior to this, if a case was suspected but the patient hadn't traveled to China, or hadn't had any close contact with a person under investigation, state departments of health and CDC refused to test our samples. It meant some suspected cases were never confirmed--but, importantly in the containment phase of an outbreak, also never refuted. This lapse in testing, due to a delay in reliable testing kits and lack of coordination from an absent pandemic response team, which was dismantled by the Trump administration in 2018, will prove to be a major cause of the pending outbreak in the United States. But it likely would have been inevitable anyway.

In the coming weeks, there will be a surge of infected people in the U.S., which will lead to the tightened governmental action modeled in China and currently occurring in Italy, Japan, and South Korea. The only reason COVID-19 did not explode out of China faster was the country's strict adherence to rapidly evolving and widespread containment measures, which, according to the WHO, “required a deep commitment of the Chinese people to collective action.” China has set a marvelous example for us to follow because at this point, believing coronavirus will not spread globally is as futile as believing seasonal influenza will not occur this year. Seasonal influenza occurs every year, and has so for the last two thousand.

While it's nowhere near the 10 percent mortality rate of its cousin SARS, or the 34 percent mortality rate of MERS, COVID-19 has an overall mortality rate of 2.3 percent, with 80 percent of deaths occurring above the age of 60. Almost 81 percent of all cases turn out to be mild, and children under ten seem to be unaffected, likely because they routinely catch and share benign types of coronaviruses that result in the “common cold.” Below are the most reliable mortality numbers from the first 44,672 infections in China, released by China CDC on Feb 14th, 2020, by age, and comorbidities.

**Age and mortality Rate of COVID-19**

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Mortality Rate</th>
</tr>
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<tbody>
<tr>
<td>0-9</td>
<td>0%</td>
</tr>
<tr>
<td>10-19</td>
<td>0.2%</td>
</tr>
<tr>
<td>20-29</td>
<td>0.2%</td>
</tr>
<tr>
<td>30-39</td>
<td>0.2%</td>
</tr>
<tr>
<td>40-49</td>
<td>0.4%</td>
</tr>
<tr>
<td>50-59</td>
<td>1.3%</td>
</tr>
<tr>
<td>60-69</td>
<td>3.6%</td>
</tr>
<tr>
<td>70-80</td>
<td>8%</td>
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</tbody>
</table>
Comorbid disease: Mortality rate of COVID-19

Hypertension: 6%
Diabetes: 7.3%
Cardiovascular disease: 10.5%
Chronic Respiratory disease: 6.3%
Cancer (any): 5.6%

What this situation looks like for healthcare workers

For many others on the front lines of healthcare work, the risk is much higher than mine, and their decision-making around this risk must be done imminently.

Unlike me, many of my colleagues have medical issues, are over the age of 50, or have young children or elderly family to care for. Those with vulnerable family members are taking precautions to quarantine themselves. Some of us are retrofitting our living situations, living in basements, shutting off parts of the house, and more. All are taking care to remove shoes, properly segregate our work garments, and shower immediately when entering the house. Last week I quietly told my family to stock up on non-perishable goods, and brought my girlfriend on an impromptu Costco run. I also ordered a two-month supply of freeze-dried meals, as I will likely be isolating myself and may not see them for a while.

My colleagues who were thinking about retiring are retiring, and those with health issues are facing a moral quandary. We are physicians, but are we willing to risk our own lives and safety, and those of our families, for the sake of yours? For most of us, the answer is yes, because we took an oath that puts us in harm's way. But I wouldn't blame my colleagues if the answer were no, because ultimately, this is a job. If going to work had a high risk of death for myself and for those I care about—if I were, say, diabetic or on immunosuppressants—I might not show up either. Some others are even contemplating asking for hazard pay.

But this is the ER, a place that fills the same societal need that Medieval churches once did, places that deliver solace for all. The 1986 Emergency Medical Treatment and Labor Act even legalized this sentiment, saying that nobody must be turned away from an ER regardless of race, color, creed, or ability to pay. This reverence for fair treatment above all else has given most
ER physicians, nurses, and paramedics a palpable sense of responsibility to our communities, but if our medical systems become overburdened, it will challenge us in ways we've only read about in books, seen in movies, and now, been warned about by our colleagues in China.

What you can do to protect yourself, and healthcare workers too

It will take the cooperation of all branches of society to weather this upcoming storm, including you. The best prevention for yourself, your family, and society are the same measures to prevent flu; wash your hands frequently and cough into your arm. Wearing a surgical mask if you are not sick is counterintuitively unhelpful because it will cause you to touch your face and eyes more, and being untrained, you will remove it incorrectly, all of which will increase your risk of contracting COVID-19. However, if you are sick, wearing a mask will contain the droplets propelled by coughing and sneezing from entering the environment around you.

There will be an incredible amount of misinformation spread, as this will be the first global pandemic in the social media era, and I urge people to listen to public health officials from your local health department, the CDC, and the WHO. They are the experts, not Joe from down the block.

Our ERs will have a massive surge of cases on top of our normal daily emergencies, so arriving at our doors with just a cough and fever is unwarranted. All fifteen of my patients who arrived worrying about the coronavirus in the last week turned out to have the flu. Additionally, because 81 percent of COVID-19 cases are mild, your next best action is to quarantine yourself at home, because traveling to us will put everyone you encounter, from your door to ours, at risk. However, if you already have a serious illness to begin with, or begin to develop shortness of breath or trouble breathing in addition to cough and fever, you should contact your nearest health facility or doctor. I also urge you to get the flu shot if you haven't already, as this is one simple way to prevent unnecessary visits to the hospital, where COVID-19 is increasingly likely to be waiting for you.

Ultimately, everyone's cooperation will help to prevent COVID-19 from sweeping the country and globe simultaneously, as when this happens, hospital beds, intensive care units, ventilators, medical supplies, and the number of well healthcare workers will become the limiting factor in our ability to provide adequate care, and the frequency of poor outcomes will rise. The only strategy the world has now is to slow the spread of COVID-19 and prevent everyone from becoming ill at once. Panicking will do no good either, but it's definitely time to prepare for you, your family, and your loved ones, in the same way you would prepare for a hurricane, ice storm, or a natural disaster. There is no cause for alarmism, as the vast majority of people in Wuhan survived, suffering only from weeks of boredom while on lockdown. Listen to your public health officials, because in order to avoid a healthcare system collapse, we must all act swiftly, and with unity.
Darragh O’Carroll is an emergency physician in Honolulu, Hawaii, and served as a medical consultant for Netflix’s recent medical documentary series “Pandemic: How to Prevent an Outbreak.”
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GAVIN BUTLER

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Reddit Can't Quarantine Coronavirus Misinformation

Reddit communities are at war over who controls the flow of information during a crisis.

By Matthew Gault

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