



VIEWS AND REVIEWS

To control the covid-19 outbreak, young, healthy patients should avoid the emergency department

Young, healthy people with symptoms of covid-19 can help to prevent outbreaks in emergency departments where our society's sickest will be seeking care, says **Abraar Karan**

Abraar Karan *internal medicine doctor*

Brigham and Women's Hospital and Harvard Medical School, Boston, MA, USA

The situation with covid-19 is quickly evolving and coming to a critical point. As public health experts and doctors, it's been worrying to see the rapid spread of the virus and the relatively high hospitalisation rates—especially of those needing to be admitted to intensive care units. In these early phases of the epidemic, the case fatality rate is turning out to be much higher than seasonal flu. As we begin to see bigger outbreaks in more major cities, we are going to need a smart, systems level response, particularly while we don't have a vaccine, cure, or rapid diagnostic tests available.

One critical action will be for young, healthy patients with mild symptoms of fever, cough, and shortness of breath, who may have covid-19, to avoid going to the emergency department.

From early studies of China, we know that around 80% of cases are mild and most healthy young adults, children, and infants only have mild symptoms. This group of patients will often not need hospital care and will get better on their own at home. If they come to the emergency department, they will end up spreading the virus to those who are at serious risk, notably older people and those with other medical conditions such as diabetes or heart disease. These vulnerable groups have significantly higher rates of hospitalisation and death from covid-19. This is not to say that a young person could never get severe disease—they certainly can, and in that case they would need to be seen in a hospital—but the vast majority will not.

Young, healthy patients should instead call their primary care doctor or nurse to discuss symptoms and will likely be recommended to self-isolate. In some parts of the world, including the UK, people with suspected covid-19 are being tested in their homes as part of efforts to stop unnecessary ambulance use and hospital visits. Current estimates suggest that this period of self-isolation should be for around 14 days from the onset of symptoms. This simple action could help prevent community spread but, most importantly, prevent outbreaks in hospitals where our society's sickest will be seeking care for both covid-19 and other medical conditions.

Aside from preventing transmission, self-isolating will help to ensure that our healthcare professionals are able to focus their

limited resources on those who need them most. From the Chinese data, we are seeing a significant proportion of those who are sick requiring hospitalisation (15-20% from early estimates), and many of those requiring intensive care in critical care units (5-26% based on recent studies from *JAMA* and the *New England Journal of Medicine*). Our healthcare systems, even in wealthy countries, don't have the capacity to handle this level of hospitalisation. The hope is that these rates will turn out to be much lower, especially because early on in an epidemic, reporting mechanisms tend to catch more severe cases and undercount mild or asymptomatic ones. We need, however, to prepare for the worst.

Health systems will need to employ large scale channels of communication, likely mobile based, by which they can easily contact people and carry out remote screening. This will allow healthcare professionals quickly to decide who needs to be evaluated in person and who should remain at home.

One obstacle is that many people don't have access to primary care doctors, especially in the US. To overcome this barrier, health systems need to have call lines so everyone can reach a physician, nurse, or other healthcare professional to begin screening. Community home testing will be an important step if initial screenings are suspicious for covid-19.

Another concern is that self-isolation for 14 days puts people out of work—an impossible prospect for the many who can't afford this luxury. The economic consequences will be severe if a large proportion of any society cannot work, and this is something that political and economic leaders need to tackle.

We need many things right now—rapid diagnostics, vaccines, antivirals with proved benefit—but these could take months to materialise. We must now rely on what we do have, which is our ability to communicate effectively at scale, to minimise the spread of disease by self-isolating appropriately, and the ability to free up valuable medical resources which can then be focused on those who will need them most. Let's make sure we do this right.

The views expressed here are Abraar Karan's own and do not represent those of his employers

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