Dr. Delgado COVID-19 Update 6-5-20

Too optimistic?

Consensus seems to be emerging that businesses can safely reopen by checking the temperatures of people entering them and by putting in place environmental controls — from social distancing and wearing masks to improved air circulation — to reduce the spread of Covid-19 in the workplace. This consensus is rational. It is convenient.

I worry that this consensus is built on optimism, and reopening in this way will provide people with a false sense of security and a false impression they are reducing their risk of infection that is not supported by the current evidence.

Measuring temperature to allow employees into the workplace has become a common strategy. This approach certainly has limitations. Temperature screening provides false assurance to employees entering the workplace. One recent study published in JAMA showed that about 70% of patients sick enough to be hospitalized for Covid-19 did not have fevers. Coupled with the fact that most people infected with the coronavirus do not have symptoms, screening for temperatures will miss at least 86% of infected individuals, and likely miss an even higher percentage.

A “barrier” that allows nearly 9 in 10 infected individuals to enter a workplace or business is not one that should be used to provide reassurance to employees.

A slightly better method for keeping infected individuals out of the workplace is daily symptom screening coupled with clear instructions to stay home if symptoms appear. The primary weakness of this method is that only a minority of individuals infected with Covid-19 develop symptoms.

If we use an optimistic scenario and rely on symptom screening done daily, this approach identifies only about half of infected individuals, though likely several days after they became contagious, allowing for workplace spread in the interim. More realistically, based on recent data outside of nursing homes, symptom-tracking will miss upwards of 80% of infections. This is further compounded by the likelihood of employees underreporting their symptoms if they are not paid when they cannot come to work.

The only approaches that can reliably reduce the number of people with active Covid-19 infections coming into the workplace involve testing. There has been a great deal of debate on the various tests and their accuracy.

While antibody tests may play a role in some settings, the greatest limitation to their use in risk reduction is that tests do not reliably turn positive in infected people until about a week after being infected (and thus missing a key window for transmission risk). Tests that look for the virus acutely, typically via PCR (but also possibly other emerging modalities) are the most useful in reducing the spread of the virus in the workplace or locales where people gather.

Workplaces and public spaces across the nation were shut down to slow the spread of disease so it wouldn't overwhelm our health care systems. It was also done with the hope it would buy us time to develop at least one of three options that would enable the country to reopen safely: widespread testing so we could contain the virus, treatments that could sharply reduce the threat of the virus, and a broadly distributed vaccine that could limit infection with Covid-19.

While there is some early, though limited, promise in vaccines and treatments, they will take longer — and possibly be less effective — than we want to believe. Testing needs to be ramped up accordingly.

More on link to blood types

Another study has found a link between risks for severe coronavirus infection and Type A blood, and the

researchers think genetics may make six percent of people with the blood type more vulnerable.

Higher rates of severe illness from COVID-19 among people with Type A blood were first reported by scientists in China.

Now, a team of German researchers have performed genomic sequencing and analysis on 1610 patients who went into respiratory failure after contacting coronavirus and compared them to 2205 people who did not become severely ill.

They searched for patterns in these genomes, common themes in the genetic variation that might point a DNA basis for the predisposition of these patients to fall life-threateningly ill. They found two points along the genome of interest.

The more notable of the two gene areas they identified was one that codes for people's blood types. The variant that underlies Type A blood was much more common among severely ill COVID-19 patients. Type O blood, on the other hand, was linked to a lower probability of severe illness.

These patients were 50 percent more likely to need oxygen support or to be put on mechanical ventilators, compared to those with other blood types. Researchers

still don't know for sure what about this gene variant that leads to Type A blood would make someone more susceptible to coronavirus.

It could help explain why some people who are young, otherwise healthy and don't have risks like underlying diseases are still falling critically ill and even dying of coronavirus. According to the Centers for Disease Control and Prevention about 30 percent of patients hospitalized during the week ending in May 30 were between ages 18 and 49.

Herd immunity

Herd immunity is an important concept when it comes to stopping the spread of disease among people. It’s a situation where enough people in a population have developed immunity to an infection to be able to effectively stop that disease from spreading. This strategy has become the focus of intense debate during the coronavirus pandemic.

Sweden was hoping to achieve herd immunity before there’s a vaccine for COVID-19, resisting the kind of severe lockdowns other countries implemented as a way to slow down the virus.

Critics say Sweden is now paying a high price for that decision with one of the highest coronavirus mortality

rates in the world over the last several weeks. Their total mortality is more than three times the combined total of Denmark, Norway, Finland and Iceland, all nations with similar demographics.
The approach also appears limited in regard to immunity: Only 7% of people in Stockholm developed antibodies to the disease by the end of April.

The World Health Organization has warned against pinning hopes on herd immunity. It said last week global studies had found antibodies in only 1-10 percent of the population, results in line with recent findings in multiple countries.

Continue social distancing and use of masks

The Lancet just released an analysis that shows transmission risk was only 3% when people were at least one meter apart, then rose to 13% if within one meter. The risk of transmission roughly halves for every additional meter of distancing up to three meters.

This may seem logical, but provides scientific proof as to the benefits and the risk reduction in transmission with continued social distancing.

The researchers also found that both face coverings and eye protection significantly reduce the risk of spreading

the virus. Masks can cut the risk of infection from 17% to 3% while eye protection reduces it from 16% to 6%.

Why does this matter? It's clear from this peer-reviewed paper that keeping people as physically apart from each other as possible has to be at the core of any sensible strategy to inform anyone entering locations or situations where groups of people may congregate. Continued social distancing in conjunction with face masks, eye protection (if possible) and hand hygiene remain essential for reducing transmission of the coronavirus.

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