When Do We Mingle? The Tyranny of an 'Abundance of Caution'

By Chuck Dinerstein, MD, MBA — April 24, 2020

When it comes to unwinding the lockdown, we are faced with the urge to be social once again. And since we are also faced with huge uncertainty, what does "an abundance of caution" actually mean?

As we move towards reducing social distancing, the leading metric is the rate of new infections, hospitalization, and deaths that follow infection are lagging indicators. Can we all agree that we should not let the rate of new infections increase so that they overwhelm the capacity of our health system to treat these new patients? If that is true, which I believe it is, then any breakthrough in treatment to reduce hospitalizations, length of care, and poor outcomes serve only to increase our capacity and to tolerate higher rates of new infections.

Would it be fair to say that the rate of infection is related to the presence of an infectious agent and the susceptibility of the host? I would say yes, although we can all apply caveats and limitations. But thinking about these two variables can help us see a way forward.

The presence of an infectious agent

COVID-19 is not going back into Pandora's box. Our history with a range of disease, measles, and polio come readily to mind, which means that extinguishing COVID-19 is both challenging and a long-term task. A vaccine will reduce its presence by depriving the virus of a susceptible host, but that is only a possibility in the mid-term, it will not get us to social mingling before our economies
collapse. The ultimate in social distancing, isolation, would deprive the virus of a host, but is untenable. I conclude that efforts focused directly on reducing the global viral load will be insufficient.

**The susceptibility of the host**

There is no single metric for susceptibility. That is one of those caveats; susceptibility is a complex, entangled phenomenon. But can we simplify enough to suggest that susceptibility is a product of exposure and your body's ability to respond? The body's immunological response varies with a range of additional variables, co-morbidities, or risk factors. But here is the crucial point, our body's immune response is fixed in the short and mid-term. There is no vitamin, superfood, or chemical that will boost your immunity and make you less susceptible. Well, that may not be entirely true, there very well may be a chemical, we can call it a medication, that helps our immune system in its effort to save us. The global pharmaceutical and medical communities are searching for that now, and hopefully, it will be found and manufactured in amounts that prevent overwhelming our health system. It will effectively reduce the consequences of infection, allowing us to tolerate higher rates of new infection.

That leaves exposure as the remaining consideration. The difficulty with exposure is in the definition. We have few means to measure individual exposure and lots of possible ways to measure aggregate exposure – they are not the same. (I would be remiss in not thanking my friend, Dr. Lipfert, for teaching me about this distinction in considering exposure to air pollution). The default aggregate is population density – closer quarters creates more opportunities for exposure and infection of the susceptible. But population density fails to account for housing, the susceptibility, or number in each living space. And it certainly fails to account for the mobility of the occupants. Your exposure is the chain of connections within your social network – that is the underlying idea behind track and trace. So a grocery cashier may be more exposed than a grocery stocker or a warehouse worker. And a warehouse worker at Amazon may be exposed differently than a warehouse worker at a lumber yard. Is it a surprise that NY city's cases cluster near high-density housing like the NYCHA tenement system?

**Making a choice**

One of the phrases that you rarely hear these days is precision medicine. Long ago, say February, it was a buzz phrase; it is ironic that when we need precision medicine the most, it is no longer on anyone's lips. Today the expression of note is acting together, a one-size-fits-all solution that is modified from national standards to regional ones. There is no single solution because infectivity, susceptibility, and capacity vary across and within regions and cities. New York State presents its data with and without New York City, their statistical outlier. New York City breaks its data down by borough because each has different susceptibility and exposure.

I believe 30-years, as a vascular surgeon, makes me if not authoritative, then at least experienced and wise. In making life and death decisions, you gather as much information as time allows. It is never sufficient because you are looking for a guarantee, not a trend. But at some point, you have to act, based on the data, and your experience, and temperament. Acting out "of an abundance of caution" is as tyrannical as the beliefs of the "it's my body and I will do what I want" crowd. (Are
they volunteering to be the first to mingle without waiting for a means to reduce their chance of dying? How Darwinian of them.)

We will not have enough tests and the ability to track and trace for some time. In the meantime, we can begin to ease restrictions on the least susceptible, those without co-morbidities, and those with the lowest exposure. Those individuals will vary by locale, but those distinctions should be made as local as possible and then coordinated with more regional efforts.

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