

Inquiring Minds - 16 October 2020

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To vaccinate or not to vaccinate, that is the question.

What is a vaccine? It is something injected into a person's body that will excite that person's immune system to produce antibodies to attack the intended target, which for this discussion is the covid 19 virus. Because we are each different the response of each of us to the vaccine will be unique. It may excite the desired antibodies. It may do nothing. It may cause a number of adverse reactions which could include an allergic one or the excitation of an autoimmune disease. Tests on very large populations of people are needed to determine what to expect. No vaccine yet has had a 100% positive reaction.

There are other issues. The immune system of some people is compromised so that it would be unsafe to introduce any challenge such as a vaccine. Some people will just refuse to take a vaccine. In a PBS/Marris poll released August 14, 35% of those asked said they would refuse vaccination.

So why try? The concept is that if a large portion of the population has the antibodies to the virus, the virus will not find enough hosts to perpetuate itself and will cease to infect more people. This is "herd immunity." This is the goal.

When a vaccine for Covid 19 becomes available a number of issues appear. This paper will attempt to set forth a non exclusive number of

them and invite discussion of who should make decisions and what those decisions should be.

1. National vs. International

- a. With a virus like Covid 19 for which humans have not developed natural immunity, the existence anywhere will result in a spread just as occurred when it first appeared in Wuhan, China.
- b. This requires provision of the vaccine to the entire population of the world to acquire “herd Immunity”.
- c. The stated policy of the US is to get vaccine for our population first. The politics of this deserve another paper as it will effect international relations for years.

2. Who should receive the vaccine first?

a. Health care providers?

b. First responders?

- 1, police
- 2. Firemen
- 3. Social workers
- 4. Others

c. Essential workers?

- 1. People who staff stores, which?
- 2. Government workers, which?
 - a. Military?
 - b. Presidential staff, congress and staff, agency personnel, which?
- 3. School staff?
- 4. Others I have not listed.

- d. People with health issues?
1. Elderly?
 2. Patients in health care facilities?
 3. People in retirement communities?

What if an eligible person refuses to accept vaccination? What should be done? (As noted above, the NPR/Merris poll released August 14 found 35% of respondents said they would refuse vaccination.) If this occurred it would mean the “herd immunity” level might not be reached.

All of this assumes that a vaccine can be identified as safe and manufactured at some reasonable cost so that it is available for delivery to some or lots of people. The problems become more challenging as the availability decreases. This could be because it is difficult to produce, it will not store readily or its cost is very great. In each of these scenarios the answers to the above questions may change your opinion. What is the role of our government in subsidizing these costs?

Should there be an identity card for those vaccinated? Should there be a penalty for those who refuse? Is this similar to refusal to admit non vaccinated children to school? Should there be a fine or a jail term? This may turn on the issue of how long the immunity caused by the antibodies may last. That appears to be a variable and may be different for each vaccine. Before you think this is only difficult, an article in the New York Times Sunday Magazine for August 16, 2020, entitled The Cytokine Mystery reviews experience of physicians treating Covid 19 patients who found the virus could cause an extreme immune reaction as a cytokine storm which would require tamping down the patients immune system. This results in a balancing act to maintain enough immune system to fight the virus with out the over reaction of the cytokine storm which can prove fatal.

Would a vaccine produce such a storm?

A drug or treatment for Covid 19 seems to raise the same questions. Would you treat that differently? If so, how?

Should we consider the costs of social isolation or business interruption if the virus is not dealt with? Do these questions effect any of your answers to the questions above?

