

December 20, 2020

How to Allocate the Vaccine

The COVID-19 vaccine was rolled out in various locations this past week. Developed in record time, it stands as a testimonial to our ability to focus on a well-defined goal. It seems to work well. The side effects seem to be mild. We commend scientists of the pharmaceutical industry for this feat.

What can economists offer about how to allocate this new vaccine? The answer is at once simplistic and yet so very complicated. Economic theory suggests that we try to maximize the difference between the incremental (or marginal) benefits and the incremental (or marginal) costs. This algorithm suggests that we allocate it first to health care workers and workers in essential and critical industries. They must take care of the rest of us ... and they are easy to find. High marginal benefits, and low (we just take the vaccines to the health care settings) marginal costs. The workers will be at work tomorrow. They will be there three (or four, depending on which vaccine they are getting) weeks from now for the second dose. This one is easy.

Nursing home residents are apparently next. They are older and they have other illnesses, called *co-morbidities* by the professionals. Again, we know (largely) where they are. We don't know how well they will react if they are sick with another condition. Some nursing home residents have dementia problems. Will they have to be convinced, and can they be appropriately "consented" to take the vaccine?

Who next? We have picked the "low hanging fruit" already, in going to the places where those who need the vaccine either work or live. Now it gets much trickier because the beneficiaries are harder to define, and the locations are more diffuse. Your blogger (as is his partner) is 73 years old so he is (apparently) not in the highest risk elderly category (75 and over). The vaccines will be available at CVS and Walgreen pharmacies. In the Royal Oak neighborhood where YB shops, they are across the street from each other (as they are, seemingly, in many areas of Southeast Michigan). YB patronizes the Walgreen's – will that make a difference? Will CVS serve him?

How will he be notified as to where to go? How will they screen him? Will he be given an appointment, or will he wait in line? How will they follow up with him for the second dose and what if he doesn't come in for the second dose? This is not like the sugar cube Sabin vaccines that were given at Fairfax School (Cleveland Heights, Ohio) in the early 1960s, where we stood in line on a summer's day.

What kind of verification will YB get to assure others that he has been vaccinated? A gold certificate suitable for framing? YB has argued several times this past year for a card with a chip that could be scanned by those who care about whether he has had the vaccine. To get into a restaurant, stadium, or

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office building, we would scan the card. Are they ready to issue this kind of card? Will we have the machinery to read them? If not, how will we be sure?

To this point, we have discussed those who are *willing* to get the vaccine. Tens of millions of Americans are apparently not yet willing. Getting them vaccinated will incur even higher marginal costs, yet provide relatively high marginal benefits (from herd immunity). Here we move to two tools, the proverbial *carrots* and *sticks*.

The carrot – Pay them with gift cards of \$10 or \$25.

The stick – Employers are authorized to mandate vaccines. No vaccine, no work.

We must be prepared to use either, or both.

Most observers believe that it will take well into 2021 to achieve the appropriate vaccination levels to prevent the further spread of COVID-19. It may take much longer for vaccine recipients and the general public to start traveling, entertaining, or doing their normal lives again. YB and his partner have been invited to two weddings in the Western US at the end of Summer 2021. When or will they be able to plan to go?

So, blogger, you're an economist. Why aren't you advocating competitive markets? First, the externalities (incremental benefits far exceeding incremental costs) argue that the markets would provide an inadequate (not enough) amount of vaccinated people. Second, the markets do not address a myriad of equity-related issues. Health care workers may not have enough money to bid away vaccines from richer, less essential workers. Third, the provision of vaccines is anything but competitive. We have a very few suppliers, with precious licenses granted by the FDA. Markets, here, won't do it.

The roll-out thus far has been small, and not without problems (much smaller amounts than expected). Well under half a million Americans have received the first vaccine, and it is expected that over 200 million full vaccinations are required to get to herd immunity. We have a long way to go.

Allen C. Goodman
Professor of Economics