

# Optimal Action Delphi Process Summary Report February 2021

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## SUMMARY

Experts ranked increasing the availability of high-quality masks, both to essential workers and the general public, as the “most effective” intervention that public health officials can take in the coming weeks to reduce the spread of SARS-CoV-2 and the burden of COVID-19. Experts prioritized the distribution of effective masks due to the emergence of new variants of SARS-CoV-2 and the [CDC’s recommendation](#) to double mask. Distributing high-quality masks can help to limit surges of more transmissible variants as the public waits for COVID-19 [vaccinations](#) to be more widely available. Experts unanimously ranked this intervention as most effective, underscoring the important role it can play in controlling transmission.

Receiving a first-dose of a COVID-19 vaccine and increasing availability to rapid antigen testing, especially in schools, are indicated as the “second most effective” interventions. If combined, these interventions would focus on a targeted prevention strategy. The wide distribution of first-dose vaccinations increases the number of individuals with sufficient protection against the virus, while an increase in rapid antigen testing helps to prevent those without protection from spreading SARS-CoV-2 in public venues such as schools.

The “third most effective” interventions proposed by experts are accelerated testing and contact tracing as well as increasing sequencing capacity for new variants. Prioritizing testing, tracing, and sequencing, experts note, will keep the public informed and prevent an increase in risky behavior as incident cases, deaths, and hospitalizations decline.

The interventions proposed by these experts primarily focus on taking preventative actions against SARS-CoV-2 variants. The public should remain just as, if not more, vigilant about their actions as they have been throughout earlier stages of the pandemic despite the nationwide decrease in case incidence.

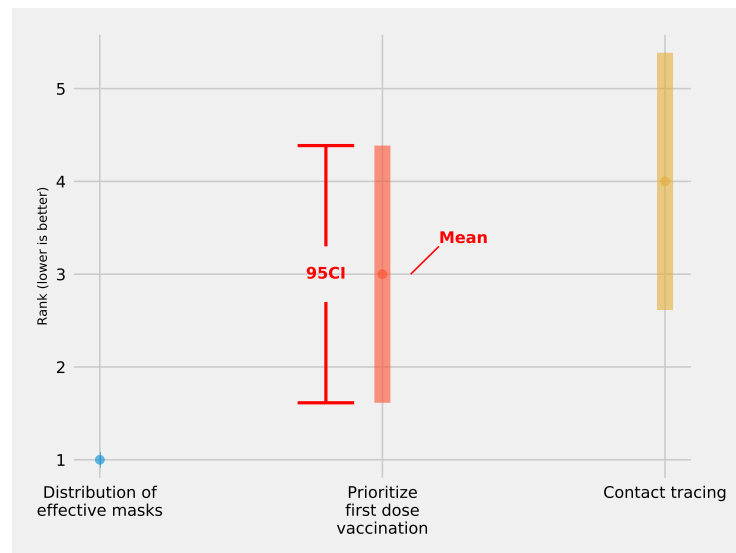


FIG. 1: Two experts participated in the February Optimal Action Delphi Experiment, proposing interventions in Phase I and ranking proposed interventions in Phase II which they thought would most effectively reduce the spread of SARS-CoV-2 and burden of COVID-19. The best possible rank is 1 and the worst possible rank is 5.

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## Methodology

Effective interventions were aggregated using the Delphi process—a technique to generate a behavioral (as opposed to a mathematical) consensus by allowing a group of experts to come to a consensus through iteratively proposing and revising ideas.

For this project, there were two phases to the Delphi process.

In Phase I, experts were asked to submit the top 5 most effective interventions and a rationale ranked from the intervention they felt was most effective (rank of 1) to the least effective (rank of 5). Experts were asked not to speak to other members who participated in the Delphi process, and they could submit interventions from 2021-02-12 to 2021-02-19.

After Phase I the interventions and their rationales were collected into a single document to present to experts in Phase II. Interventions and their corresponding rationales were kept anonymous and grouped by their rank. For each group of interventions the order they were presented in was randomized. This prevented a single expert's set of interventions from appearing in the same position. In addition to a document that listed all interventions ranked by effectiveness, we also created for each expert a document that listed the interventions they proposed in Phase I.

In Phase II, experts were presented with the document of all ranked interventions and their personal list of interventions, and asked to resubmit what they felt would be the top five most effective interventions and corresponding rationales. Experts were encouraged to read over the collective document and, if possible, to copy over the exact text from interventions in Phase I when appropriate. Experts were asked to submit interventions from 2021-02-22 to 2021-02-26.

The final set of proposed effective interventions were categorized into the following 6 topics: "Distribution of effective masks", "Prioritize first dose vaccination", "Rapid testing in schools", "Contact tracing", "Access to testing", and "Sequencing". This summary document was then produced based on the results.

An effective intervention was defined for experts as one that "requires few resources, can be implemented fast, and is most likely to lead to behavioral changes that reduces the incidence of cases and deaths due to COVID-19."

## Data

De-identified interventions, their corresponding rationales, the assigned topics, and their ranks for the two experts that participated in this Delphi experiment are in the supplement to this document, and also available in a dedicated GitHub repository, and on the Harvard dataverse at this URL = (coming soon) .

## PHASE II RESPONSES

### The most effective interventions and a rationale

#### High quality masks mailed/made available to every household

There is increasing discussion of using better quality masks and double masking to prevent surges especially due to the more transmissible variants. There is limited information for public on what are the most reputed sources to buy from and it might be incredibly difficult to educate them in this shifting landscape with multiple stakeholders. It would be better to send them good quality masks based on estimated members in the household (census information?) or at least make it available for easy low cost purchase (possibly billed to insurance) from trusted pharmacies

#### Distribute effective masks focusing especially on frontline/essential workers.

We're currently in a race against the emergence and spread of SARS-CoV-2 variants. Vaccination appears to be effective but we may not be able to vaccinate quickly enough to avoid surges of the variants. Effective masks can block transmission and protect those at high risk due to frequent interpersonal interactions. Distributing masks to the public and especially to those with public-facing jobs (teachers public transit workers etc) would be one of our best defences against the new variants.

### The second most effective interventions and a rationale

#### Prioritize first dose rollout

There is increasing evidence that first dose after a few days of delay gives sufficient protection especially for already seropositive individuals. Given the recent orders placed for additional vaccines and potential approval of JJ one should anticipate that there will be enough doses to give second shots with an appropriate delay. Also the earlier we get to general population rollout we will notice the bottlenecks of vaccine acceptance and can ramp up efforts to increase uptake. This is bound to be the bigger issue come spring/summer than the current supply constraints

#### Make rapid antigen tests publicly available especially in schools.

The documented spread of variant B.1.1.7 in UK schools shows that schools can be an important venue for SARS-CoV-2 spread and in particular for variants of concern. Frequent rapid antigen testing technology is developed enough and cheap enough to deploy to schools so that students and employees can test themselves 1-2x per week and thereby reduce the probability that infectious individuals arrive at school while avoiding full school shutdowns.

### The third most effective interventions and a rationale

#### Continued/accelerated testing and contact tracing

With decreasing case rates contact tracing may become increasingly more feasible and potentially impactful. While vaccination will get us to herd immunity eventually targeted contact tracing in neighborhoods could get us faster to a point where we declare individual counties or even states COVID-free.

### Ramping up sequencing capacity for new variants across the states

Given the case rate is currently decreasing rapidly it is possible for individuals to be lulled into complacency before large scale vaccine rollout. Detecting new variants especially clusters could trigger targeted contact tracing and preventing surges. The sequencing capacity is heavily biased towards California Florida and so it is unclear what the current national picture is.

### The fourth most effective interventions and a rationale

#### Prioritize first dose rollout

There is increasing evidence that first dose after a few days of delay gives sufficient protection especially for already seropositive individuals. Given the recent orders placed for additional vaccines and potential approval of JJ one should anticipate that there will be enough doses to give second shots with an appropriate delay. Also the earlier we get to general population rollout we will notice the bottlenecks of vaccine acceptance and can ramp up efforts to increase uptake. This is bound to be the bigger issue come spring/summer than the current supply constraints.

### The fifth most effective interventions and a rationale

#### Continued/accelerated testing and contact tracing

With decreasing case rates contact tracing may become increasingly more feasible and potentially impactful. While vaccination will get us to herd immunity eventually targeted contact tracing in neighborhoods could get us faster to a point where we declare individual counties or even states 'COVID-free'.

## PHASE I RESPONSES

### The most effective interventions and a rationale

#### High quality masks mailed/made available to every household

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## **The second most effective interventions and a rationale**

### **Make rapid antigen tests publicly available especially in schools.**

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### **Ramping up sequencing capacity for new variants across the states**

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## **The third most effective interventions and a rationale**

### **Prioritize first dose rollout**

There is increasing evidence that first dose after a few days of delay gives sufficient protection especially for already seropositive individuals. Given the recent orders placed for additional vaccines and potential approval of J&J one should anticipate that there will be enough doses to give second shots with an appropriate delay. Also the earlier we get to general population rollout we will notice the bottlenecks of vaccine acceptance and can ramp up efforts to increase uptake. This is bound to be the bigger issue come spring/summer than the current supply constraints.

## **The fourth most effective interventions and a rationale**

### **Continued/accelerated testing and contact tracing**

With decreasing case rates contact tracing may become increasingly more feasible and potentially impactful. While vaccination will get us to herd immunity eventually targeted contact tracing in neighborhoods could get us faster to a point where we declare individual counties or even states 'COVID-free'.

## **The fifth most effective interventions and a rationale**

### **Targeted containment through mixing restrictions**

While almost all states are experiencing sharp declines in case rates, it is still important to note several counties are at least above 50% of their peak (haven't climbed down halfway yet). These communities could surge back into peak territory if we experience surge due to variants. So, identifying the communities where case rate decline is slow and using targeted restrictions to accelerate its decline would be prudent.