



# GET US PPE SHORTAGE INDEX

DECEMBER 2020

All information in this index is derived from Get Us PPE's database of requests for Personal Protective Equipment (PPE) unless otherwise stated.

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# Get Us PPE Shortage Index

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## ABOUT GET US PPE SHORTAGE INDEX

Founded by emergency physicians in March 2020, Get Us PPE is the largest national nonprofit getting personal protective equipment (PPE) to healthcare and other essential workers, free of charge. Our mission is to equitably provide PPE to the people most in need. To request PPE donations, frontline workers register their PPE needs on our site. This information has allowed us to amass the most comprehensive nongovernmental database of PPE shortages in the United States. The Get Us PPE Shortage Index is a monthly collection of proprietary summary metrics derived from this database.

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# SHORTAGE INDEX KEY TAKEAWAYS

## December 2020

**1** Requests for PPE rose **260%** between November and December

**2** **63%** of facilities had no supply remaining of at least one type of PPE in December

**3** Less than **1%** of December requests came from hospitals, with the other **99+%** coming from facilities such as nursing homes and clinics

**4** Requests for nitrile gloves doubled between November and December, reflecting the increasingly severe glove shortage

**5** Get Us PPE developed the first crisis-relief matching algorithm that optimizes efficiency and equity in distributing scarce resources



### CO-FOUNDER SPOTLIGHT: SHUHAN HE, MD

Dr. He is a co-founder of Get Us PPE, a clinical fellow at the Department of Emergency Medicine and Director of Growth at the Center for Innovation in Digital HealthCare at the Massachusetts General Hospital. Commenting on Get Us PPE's Fair Distribution Algorithm, Dr. He says, "Some people think of algorithms as sinister, but they can also be used for good, like Get Us PPE's technology that helps us equitably distribute PPE. Our algorithm maximizes the positive impact we can have for all, and not just those at the top."



# GET US PPE SHORTAGE INDEX

March — December 2020  
by the Numbers

**<15%**  
requests filled

**>85%**  
requests unfilled

**19,981**

**total individual requests** for PPE since late March 2020. Get Us PPE has only been able to fulfill <15% of requests due to the limitations of our supply

**87+ million**  
**6.5 million**

**pieces of PPE** requested to fill need for just **ONE WEEK**

**pieces of PPE** delivered to frontline workers

## NITRILE GLOVE SHORTAGE GROWS MORE SEVERE

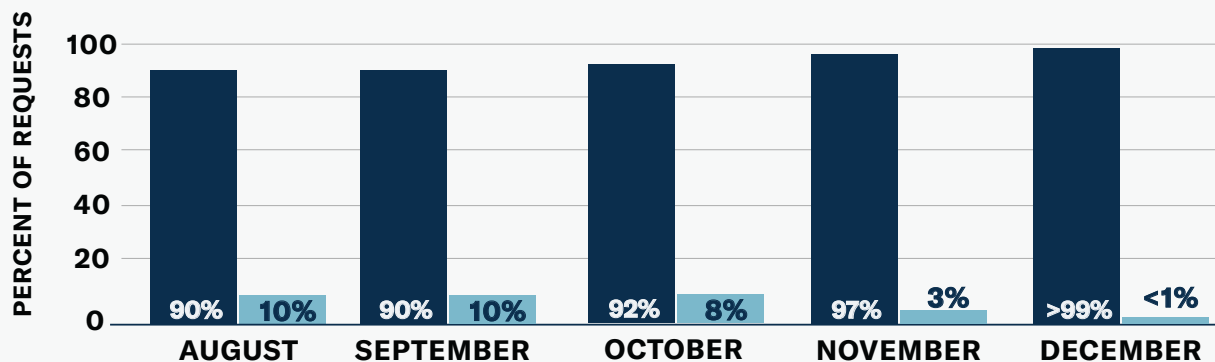
Requests for nitrile gloves doubled between November and December, and gloves are now the second most requested type of PPE. Get Us PPE expects demand to continue increasing due to the ongoing global shortage of nitrile gloves.

## % REQUESTS FROM HOSPITALS VS OTHER FACILITIES

Non-Hospitals\*

Hospitals

\*Such as nursing homes, home health aide agencies, clinics, group homes, shelters, and COVID-testing facilities. Some facilities fall into more than one category, and are therefore counted once in each category.



# TOP 3 MOST REQUESTED TYPES OF PPE NATIONALLY, DECEMBER 2020



DISINFECTING WIPES



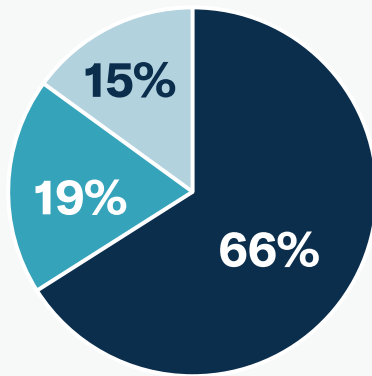
NITRILE GLOVES



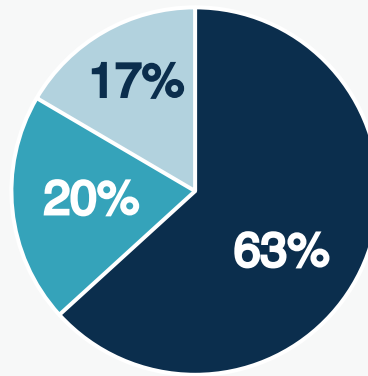
HAND SANITIZER

## REQUESTERS REPORTING NO SUPPLY REMAINING OF AT LEAST ONE TYPE OF PPE

Requesters with no supply remaining
  Requesters with < 1 week remaining
  Requesters with  $\geq$  1 week remaining



NOVEMBER



DECEMBER

## TOP 3 TYPES OF PPE REQUESTED IN 3 KEY STATES

### CALIFORNIA



DISINFECTING WIPES  
FACE SHIELDS  
N95 RESPIRATORS

### ILLINOIS



N95 RESPIRATORS  
HAND SANITIZER  
GOWNS

### PENNSYLVANIA



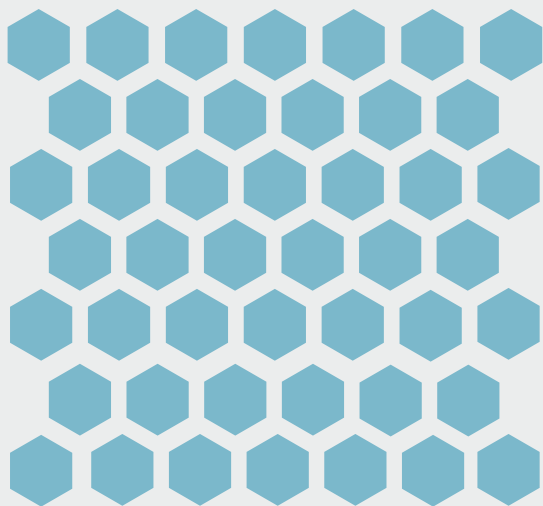
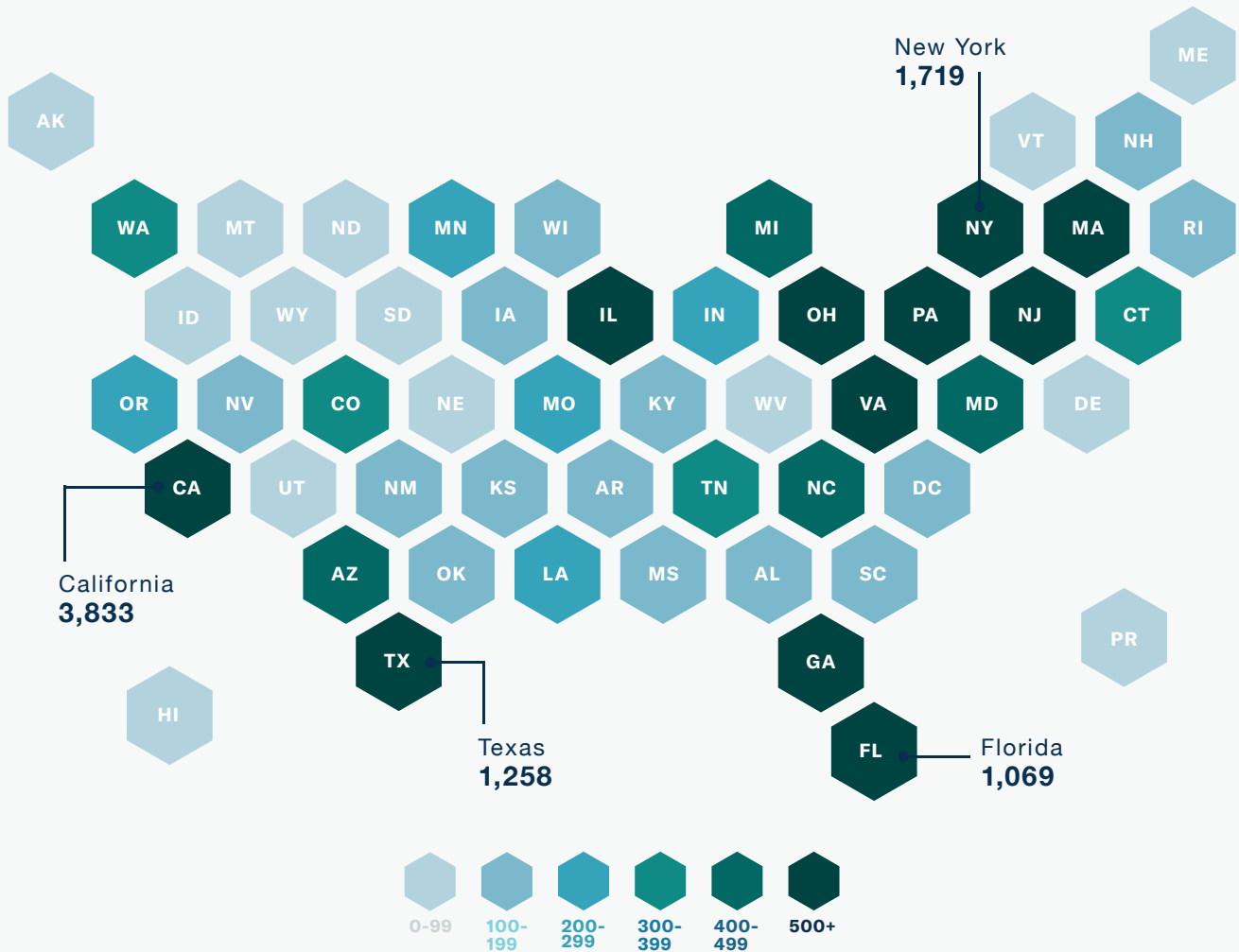
SURGICAL MASKS  
N95 RESPIRATORS  
DISINFECTING WIPES



# TOTAL REQUESTS FOR PPE BY STATE

as of December 2020

Since March, Get Us PPE has received requests from all 50 states and some US territories.



In December, we received requests from

**46** states +  
Washington, D.C.



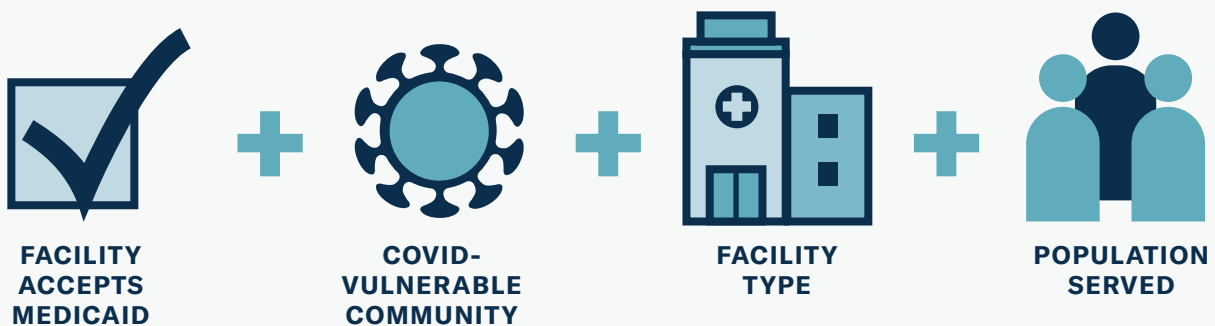
# GET US PPE'S FAIR DISTRIBUTION ALGORITHM

## OPTIMIZING BOTH EFFICIENCY & EQUITY

Get Us PPE has developed the first AI matching algorithm that optimizes efficiency and equity in distributing scarce resources in a crisis. Demand for PPE is so high that Get Us PPE can only fill 15% of requests. Therefore, a team of supply chain management experts designed this algorithm to match PPE donations with the facilities most in need, using technology similar to Uber's rider-driver matching software.



### PRIORITIZES HEALTH EQUITY THROUGH METRICS INCLUDING:



## CHANGING THE FUTURE OF CRISIS RESPONSE

Our highly customizable AI matching algorithm...

- allows for real-time integration and optimization of multiple user-generated objectives (e.g. equity, cost, time to delivery)
- could be the basis for a new generation of equitable crisis resource distribution systems that prioritize communities disproportionately impacted by disasters
- can be used to distribute other scarce resources like vaccines, food, and water in any future crisis scenario



# ABOUT THE DATA

Get Us PPE is driven by hundreds of dedicated volunteers, and though we maintain a commitment to equity as a central value, our perspectives are still limited. Here, we explain our methods for data collection, the limitations of the data, and the individuals involved at each step.

This data is derived from PPE requests entered into the request form on our website. We accept requests from a range of frontline organizations, including healthcare facilities and organizations, natural disaster relief groups, homeless shelters, social services organizations, and many more. On our request form, we capture information on the location, size, and scale of each requesting facility and the type of care provided there. This helps us deliver the most appropriate PPE for each facility and to prioritize the most underserved, in-need communities, while taking into account logistical factors for PPE deliveries. Finally, we collect information on need—types of PPE needed, amount needed per week, how the requester/institution is currently using PPE (normally? rationing?), and how long until PPE runs out.

We maintain a large store of need and supply-related data. This data is provided by individuals and institutions across the United States in critical need of PPE. In order to ensure we have the most up-to-date information, we clean the data by removing duplicate requests and ensuring requesting facilities are only counted once.

Sometimes, individuals filling out our request form make mistakes while entering their needs and information. They may not have exact figures, or may not know answers to specific questions on the form. Our Data Verification team works to verify requesting facilities and to ensure the information they're entering is accurate.

Get Us PPE was founded quickly and scrappily. We assumed we would not be needed long—two weeks at most—before another group would solve the PPE crisis. Yet we are still seeing PPE shortages across the country. Our original scope and mandate didn't demand sophisticated technological architecture, but we have since adjusted. We became the architects of our own technology solutions in order to meet the immense and continued need nation-wide. Over time, we have improved our request form and systems to ensure we are capturing all the information required to make the most equitable distribution choices possible. As a result, many data fields are absent from earlier requests. We are now working to fill those blanks wherever possible by retroactively providing more information about institutions requesting and their needs, allowing for improved visualization and analysis both now and in the future.

One of the largest factors driving the data we chose to compile and visualize in this index is the qualitative data obtained through numerous outreach projects to facilities nationwide. Hundreds of Get Us PPE volunteers called or emailed facilities, especially those in under-served communities and recorded their comments, many of which provide anecdotal evidence for types of shortages that may remain hidden in large datasets. The data in this document, pulled from our database, tells many of these stories quantitatively. As this crisis evolves, we will continue to employ this mixed-methods approach in order to tell the story of the PPE shortages frontline workers are experiencing on the ground every day.

This data is as accurate as possible at the time of publication.

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