Get Us PPE

Our mission is simple: **get personal protective equipment to the frontline workers who need it most.**

Who We Are

- **Largest national non-profit getting PPE to frontline workers**
- Founded in **March 2020** by emergency physicians
- Started as craigslist-style posting board for PPE donations & requests
- Now we have the **largest non-governmental database** of PPE shortages nationwide
- We've delivered **millions of pieces of PPE** free of charge
- We're doing this in an entirely new way. New technology. **Changing the future of disaster relief.**

How Get Us PPE Works

Volunteer pilots delivering respirators to Native American territories

- ❏ Frontline facilities request PPE on our site
- ❏ We source PPE donations and fund maker-made PPE
- ❏ We match PPE with facilities in need
- ❏ Regional volunteer teams help with last-mile deliveries
- ❏ Our national team = 150+ daily active volunteers on slack. Never met in real life.

Our Innovation: 3 pronged system

We rapidly deployed digital tools

He, S. Ojo, A. Beckman, A. Gondi, S. Ranney, M. Betz, M. Faust, J. Choo, E. Kass, D. Raja, A. The Story of# GetMePPE and GetUsPPE. org-Rapidly Deploying Digital Tools for Better Healthcare. Journal of Medical Internet Research. June 2020.

JMIR Publications
Advancing Digital Health & Open Science

Collected mass PPE supply and demand data

Beckman, A. Gondi, S. Deveau, N. Raja, A. Ranney, M. Popkin, R. He, S. Personal Protective Equipment Needs During the COVID-19 Pandemic: Evidence from a Web-based Platform The Lancet. June 2020.

THE LANCET

Created a novel algorithm for matching

Bala, R. Lee, C. Pallant, B. Srinivasan, M. Lurie, D. Jacob, R. Bhagchandani, N. Ranney, M. He, S. Algorithmic Matching of Personal Protective Equipment Donations with Healthcare Facilities During the COVID-19 Pandemic. NPJ Digital Medicine. December 2020.

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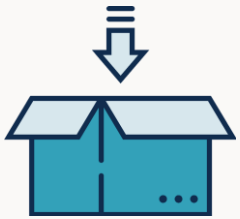
Our PPE Shortage Data

- **We've received over 19,800 individual requests for PPE** from frontline facilities since March
- We've seen a **240% increase in number of requests in December so far** compared to this time last month
- In recent months, over **90% of requests for PPE have come from smaller facilities** rather than hospitals -- places like clinics, nursing homes, home health agencies, group homes, COVID-testing sites, and others
- In November, we received requests from frontline facilities in **44 states + DC**

A Solution: Matching Algorithm

Like Uber!



Supply

Reallocation Algorithm

Gateway Application

Demand

“

Bala, R. Lee, C. Pallant, B. Srinivasan, M. Lurie, D. Jacob, R. Bhagchandani, N. Ranney, M. **He, S.** Algorithmic Matching of Personal Protective Equipment Donations with Healthcare Facilities During the COVID-19 Pandemic**. Nature Digital Medicine**. December 2020.

Algorithm by the Numbers

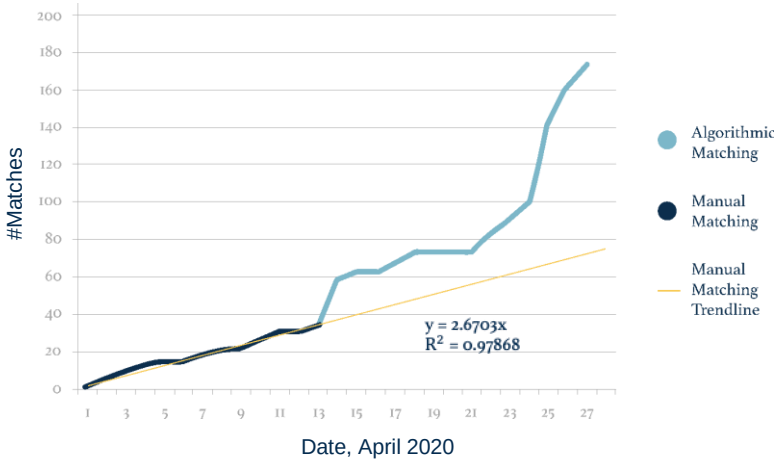
279%
increase in matches/day

46%
of matches traveled under 30 miles

Algorithmic Matching used to deliver **100%** of our supply

(+83,000 items matched in 2 weeks alone)

April PPE Matches



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Evolution of Matching Approach

Phase 1
Proximity Matching

- **“Craigslist” method**
- Match closest supply/recipient
- Manually feasible

Phase 2
Efficiency Matching

- **“Uber method”**
- Minimize delivery miles & cost

Phase 3
Interventional Matching

- **The Future: “Resources as Treatment”**
- Compute recipient priority scores, vulnerability, need
- Use data as training set
- Predict need and intervene/send resources BEFORE spread/need

The Future of Crisis Response

Our algorithm is highly customizable. Could be used for:

1. Vaccine distribution
2. Food shortages, community resources (homeless shelters)
3. Resource distribution in natural disasters, crises, future pandemics
4. A national strategic reallocation system for scarce resources at any time


Thank you.
Get Us PPE

Logistical Challenges We Face

- Many scattered PPE sources
- Fragmented, dispersed demand
- Rapidly changing PPE needs
- Volunteer turnover at Get Us PPE, need easy-to-deploy system
- Where to send our limited supply of PPE?

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Fairness Framework

- New version of algorithm based on equitable distribution
- Each facility that requests PPE gets a **facility equity score** based on factors like:
    - facility type, remaining PPE supplies, COVID-vulnerability of population served, COVID rates in community, low/no-cost treatment options, etc.

- Algorithm prioritizes high-need facilities by "moving" them closer to PPE sources in its calculations