

# COVID-19 Rapid Response

## Client Profile

- Type: Multi-location public research university health system
- Number of hospitals: 7
- Number of beds: 1100+

## Challenge

As the COVID-19 crisis emerged in March 2020, HDM's client, a multi-location public research university health system in California, identified rapid response projects to prepare for the influx of patients and a shortage of Personal Protective Equipment (PPE).

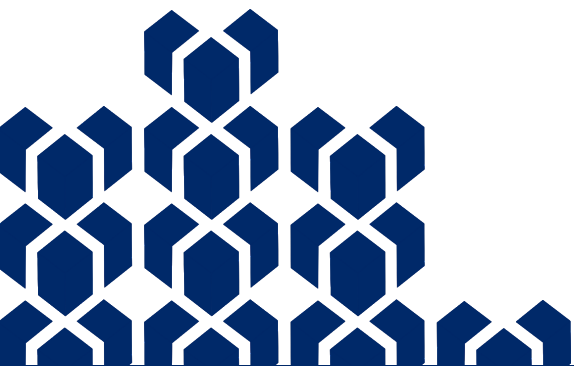
The client needed to renovate an old hospital to increase ICU bed capacity. However, the pandemic made rapidly procuring and deploying medical equipment and patient monitoring solutions an even more complicated project than usual.

Certain PPE items were difficult to purchase due to high demand, especially N95 respirators and face shields. The client needed a plan to operationalize the decontamination of N95 masks and make key decisions to operationalize 3D printing with limited time, supplies, and resources.

## Approach

When these issues were identified, Health Data Movers (HDM) already had a project management team at the client within the Clinical Technologies Division. The projects they were working on had been paused due to COVID-19. Therefore, when the client realized they needed

strong project managers to quickly scope, coordinate logistics, facilitate communication among a diverse interdisciplinary team, and execute the project, they turned to the HDM team. Christopher Wentland, Tania Williams, Joe Trucchio, and Greg



Georgatos quickly transitioned to focusing on three critical COVID-19 response projects:

- Re-opening an older hospital to increase COVID-19 bed capacity
- Launching a 3D face shield in-house manufacturing program
- Selecting and deploying an N95 decontamination solution

This team had extensive experience working within the client and across functional areas. Therefore, they were able to work with IT, Clinical Engineering, Clinical Operations, and the Makers Lab to quickly execute these projects.

## Results

HDM was able to achieve rapid, successful results in three areas:

- 1) HDM oversaw the deployment of all medical equipment at an older hospital in just 6 weeks. This deployment included 350 medical devices and 58 physiological monitors for 7 new ICU beds and 46 new acute beds. A deployment of this scale would usually take 6-9 months.
- 2) HDM oversaw project management and execution to go from a 3D-printed face shield prototype to a fully implemented production system working 24/7 and running 17 printers to generate up to 400 shields per day. The entire process to plan and implement this system took less than 8 days. Current market rates for shields were \$20 each and these could be manufactured in house for \$0.97 per shield, reducing turn around time and decreasing costs. These shields received approval by the FDA for sale and use. At this time, production has been shutdown. However, HDM delivered a 3D Face Shield Printing Playbook that included all the details for the client to restart manufacturing in under 48 hours and quickly scale to 400+ shield per day if needed for the second wave of COVID-19 patients.
- 3) To address the scarcity of N95 masks, HDM identified and developed 5 different internal and external decontamination solutions, produced a report highlighting the pros and cons of each and deployed an in house UV light solution, all in less than 6 weeks. The results of this work were also contributed to <https://www.n95decon.org/>.