

# the Pulse



Hackensack  
Meridian Health  
Hackensack University  
Medical Center

Today we honor all of our Clinical Partners who help create an incredible community of caring for our patients.

Monday, June 8, 2020

## New Face of Front Line Protection

Written & Submitted by Sujan Munver

I first learned about altruism through my grandparents who founded and actively participated in several philanthropic organizations throughout their lives. They imparted their values onto my parents, and collectively they have taught me about putting others before myself. Over the past few years, I have become involved in charitable organizations and have tried to live up to the standards of such great role models.

The COVID-19 pandemic is like nothing that we have ever experienced during our lifetimes. I have heard about teachers, friends, acquaintances, and patients that have passed away from this viral illness. It has affected all of us in numerous ways from home schooling to social distancing to quarantining. I really noticed the impact when my father was deployed to take care of COVID-19 patients and how he self-quarantined himself afterwards, missing the opportunity to celebrate my birthday with me.

I wanted to help, but since I am only a freshman in high school, I obviously could not do so as a first responder. As a member of the robotics team at my school, I knew how to use a 3D printer and researched ways that I could help the community.



Sujan Munver with his 1st set of face shields



Drs. Koo, Munver, Basralian, Degen from HMH-Urology wearing their face shields



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I wanted to help, but since I am only a freshman in high school, I obviously could not do so as a first responder. As a member of the robotics team at my school, I knew how to use a 3D printer and researched ways that I could help the community. I learned that face shields were in limited supply, were only single use, and were not as comfortable as one would think.

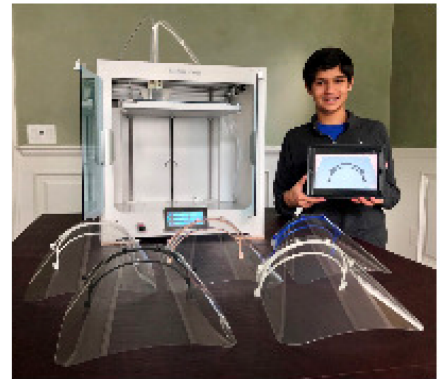
I contacted one of my robotics coaches and was surprised when my school, Dwight-Englewood School, generously loaned me their high-quality 3D printer and donated raw materials. I investigated various reusable, cleanable face shields that could be manufactured at home. I took the best components of different models that I found on the internet and designed a face shield that would meet the needs of medical providers, while also using the least amount of plastic to be environmentally friendly. My father tested the prototypes before I finalized the design.

I first reached out to the mayor of my town who immediately requested 75 face shields for the police department and first responders. Shortly afterwards, my father's urology office, Hackensack Meridian Health – Urology, asked me to produce face shields for all of their staff to support the in-office procedures they perform.

The feedback was so overwhelmingly positive that other physicians from anesthesia, gastroenterology, and rheumatology requested these face shields. I then received communication from Mr. Larry Reznik, Director of Practice Operations Physicians Services Division, to provide face shields for additional team members within the Hackensack Meridian Health system. At this point, I have produced nearly 700 face shields and have also expanded to printing hundreds of ear savers that provide comfort when wearing masks for extended periods of time.

I have been asked how long it takes to create a face shield. The process involves 3D printing the headband or visor component, using a CO<sub>2</sub> laser to precisely cut the clear shield plastic, and assembling the full shield with elastic head bands. On average, it takes 1-2 hours to produce, assemble, and clean each face shield. I am so grateful for the outpouring of gratitude that I have received. But in the end, the greatest satisfaction is in doing my little part in this global effort to protect physicians, nurses, and all medical/administrative staff as they have continued to provide patient care.

Health is our most valuable asset, and members of our medical community are the true heroes during this unprecedented time. I often think about a quote by Winston Churchill, "We make a living by what we get, but we make a life by what we give."



**Sujan, Hackensack University Medical Center thanks you for your ingenuity, your tenacity and your commitment to the community.**