

TATRC Rises Up and Aids the “Front Lines” in the Battle Against COVID-19

COVID-19 has spread rapidly across the world, leaving despair and isolation as a feeling that many are trying to grow accustomed to. However, with all trials that Americans have faced, we have risen up and shown the world there are always helpers standing by, waiting to assist.

MAJ Steven Hong, Chief of Head and Neck Surgical Oncology and Reconstructive Surgery at Walter Reed National Military Medical Center (WRNMMC), is a long-standing partner of TATRC's and has worked with us in developing Tele-Robotic surgery capabilities. MAJ Hong, having worked with TATRC in the past, turned to us in a time of crisis. WRNMMC, like so many other hospitals in the country trying to fight this pandemic, was faced with a shortage of face shields necessary for personal protection of healthcare professionals from droplets formed by patients with COVID-19 infection who cough and sneeze.

MAJ Hong reached out to Mr. Nathan Fisher, Program Manager within TATRC's Medical Robotics and Autonomous Systems Innovation Center, about WRNMMC's shortage. Mr. Fisher and TATRC's MEDRAS team went to work, partnering with Mr. Mark Brown from the U.S. Army Medical Materiel Development Agency (USAMMDA) and rapidly identified a publically available, open source design for 3D printing that was able to be tweaked to make it work with TATRC and USAMMDA's tools and materials. This allowed our team to get to work to make frames to which clear plastic shields could be attached. Once design specifications were finalized and a successful prototype printed, Mr. Fisher mobilized a network of friends who had access to 3D printers to rapidly produce nearly 250+ frames in less than 48 hours. These frames were then outfitted with



A healthcare provider at WRNMMC sporting one of the 3D printed face shields engineered in part by TATRC's dedicated team of volunteers!

plastic shields and hand-delivered to WRNMMC.

MAJ Hong stated, “these masks were put to immediate use so that we could continue to see and treat our soldiers safely.” Because these face shields are extremely durable and can be appropriately disinfected, they are reusable, which is huge during this time of limited materials for our healthcare workers. “To accomplish this in 48 hours’ time is the definition of going from bench to bedside in record time.”

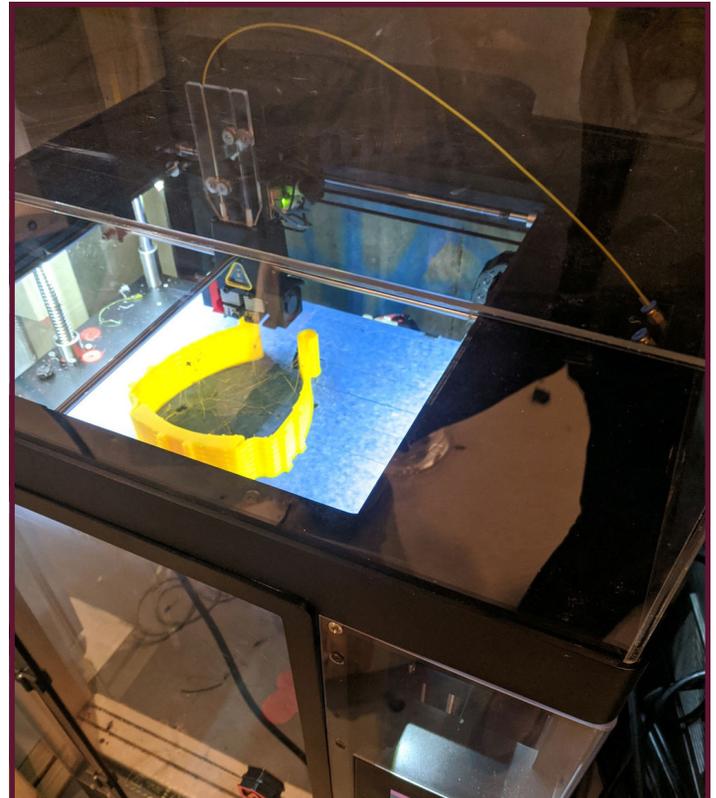
The majority of this work was performed from home and in off-duty, volunteer time. Mr. Fisher, Mr.

Brown, and Mr. Scott Walters from USAMMDA, manned the 3D printer at Fort Detrick, but there were also volunteers at home who stepped up to the call. Mr. Ken Wood, a TATRC Alumni, assisted with some of the printing, and a good Samaritan, Mr. William Fecke, provided almost 60! This was a tremendous effort from this community to support our healthcare workers at Walter Reed.

Dr. Dan Gallagher, Deputy Chief of Surgery at WRNMMC, remarked that this was an “Awesome job!” and said “Thanks very much Steve and kudos to the entire team at TATRC [and



Mr. Nate Fisher demoing a sample prototype of a face shield produced in-house.



Thanks to collaboration between multiple volunteers with personal 3D printers, TATRC was able to help get the job done!

USAMMDA] for coming together to help. This is great!”

MAJ Hong further commented by saying, “Thank you so much for your efforts in going above and beyond to help us out during this critical time period. This is a nationwide crisis and as such, critical shortage of supplies hit every hospital. The timing of your efforts in answering the call has saved lives. My colleagues and the leadership here at WR are beyond grateful.”

TATRC has a long standing reputation for building connections. Whether it’s connecting patients to providers via mobile health, or ensuring our Warfighters are connected to surgeons and medics wherever they may be, TATRC has shown that connection is vital, and has done as much as possible to ensure it exists everywhere it can. As our role of connecting people comes into the light in the battle against COVID-19, it is a privilege to see our organization using its extensive network of partners to join the fight and be part of the solution, as TATRC has done so many times before.

Through this pandemic, it’s easy to be reminded what kind of social creatures we are. Even though some of us may

be introverted, others extroverted, we thrive on interaction with each other. Our connections to each other when we need assistance, when we need strength, those things can keep us going, and ultimately save lives.

On a more personal note, MAJ Hong added, “Once the dust settles and we have won the fight against COVID-19, you will be considered one of the heroes in this battle. You gentlemen are certainly one of mine.” To MAJ Hong and the rest of the hard working staff at Walter Reed, we at TATRC say that you are our heroes. You, and every healthcare worker involved in this grueling fight across the country are showing us what bravery and heroism truly is. We thank you for your heart, your dedication, and your spirit keeping us all safe, and as healthy as possible.

TATRC was proud to answer the call and step up to aid WRNMMC as they battle hard against COVID-19. Together, we can achieve anything and together, we will overcome this latest war against our well-being both at home, and in the world. ■■■