USU and Community Join to Provide Protective Health Care Equipment | College of Engineering

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April 8, 2020 — The College of Engineering and the Center for Persons with Disabilities at Utah State University are collaborating to provide medical grade personal protective equipment to health care workers in northern Utah. Now they are asking businesses and individuals to join them.

While Intermountain Healthcare is not currently experiencing a shortage of personal protection equipment, the organization wants to be ready if the situation changes.

“We are preparing ourselves for a large surge of patients, if or when that happens,” said Sarah Fitzgerald, public information officer at Logan Regional Hospital. “We are so grateful for Utah State and their willingness to ensure that our health care workers are safe. We couldn’t do it without them, and we appreciate it.”

Mechanical engineering student Barak Stephens is part of a student team collaborating to build components for face shields for health care professionals.

Mike Stokes, a volunteer at both the Emma Eccles Jones College of Education and Human Services and the CPD’s Utah Assistive Technology Program (UATP), led the effort after working with his son to find a face shield for a relative who is a dentist. They found a design on an open source website and “remixed” it so it could fit easily over glasses. The headband and ear pieces can be 3-D printed, laser cut or cut on a CNC (computer numerical control) router. The shield portion is made from an overhead projector transparency sheet. The resulting design is lightweight and comfortable.

Once he posted the remixed design on the Thingiverse open source site, Stokes reached out to the Bear River Health Department and Intermountain Healthcare and received requests for at least 550 shields.

The Stokes design qualifies as medical grade, said Fitzgerald.

“The difference is the ability to clean it,” she said. “If you can clean it or wipe it with alcohol, that’s what makes it medical grade.”

Stokes asked USU’s College of Engineering and the UATP if they could lend their 3-D printers to the effort. UATP appealed to the community for help with the production of the face shields and set up a drop-off box where overhead transparencies and finished headbands and earpieces can be donated.

UATP and the College of Engineering’s Design Lab, Department of Mechanical Engineering and the Idea Factory have all started 3-D printing parts for the face shields.

The community is now joining in. Public school teachers and employees of USU have donated overhead projector transparencies. Juniper Systems of Logan is pitching in headbands and ear pieces from their 3-D printers, and USU and health officials are reaching out to other community members who might lend their expertise and equipment to the cause.

The final sanitization of the equipment will be done by health care professionals.

How you can help in Northern Utah

- To produce headbands and earpieces via 3-D printer, CNC router or laser cutter, download the design files from Thingiverse.
- To donate overhead transparencies for the face shields and finished headbands and earpieces, go to the nearest drop box. Drop boxes are on the west side of the UATP fabrication lab in Logan (here’s a link to the location) and at Utah State University in Brigham City, west entrance, 989 S. Main, Brigham City.
- For updated information on this project, visit the UATP blog.

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