Rutgers-RWJMS Acute Care Surgery PPE 3d Printing Project

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THIS ITEM IS NOT COMPLIANT WITH ANSI Z87.1 STANDARD. IT WILL NOT PROTECT YOUR EYES/FACE FROM HIGH VELOCITY FRAGMENTS OR OTHER OBJECTS.

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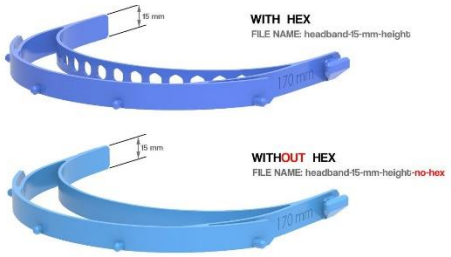
The following 3d designs have been successfully printed and used by faculty (*at their own risk*) providing direct care to COVID patients. Feedback from these providers on the front line has been positive.

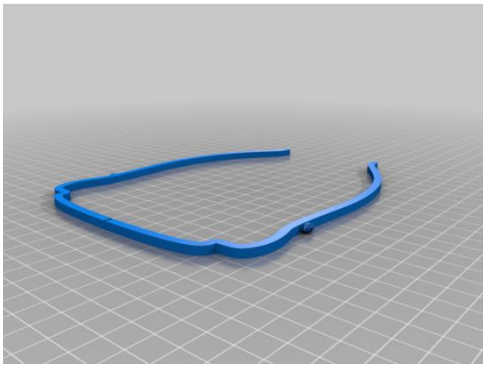
1. Modified Prusa Full Face Shield – Shorter FDM Print Time
2. Simple Eye Shield – EDSProductions



Headband for Protective Face Shield (RC2 type) : PrusaPrinters

This is a modification of the original design, with total height reduced from 20 mm to 15 mm for increased printing speed (You print 3 for the time of 2 before).

www.prusaprinters.org



Eye / Face Shield Frame for Glasses Wearer by EDSProductions - Thingiverse

In view of increasing threats from Wuhan Coronavirus (2019 nCoV) spreads, infection control at domestic level become crucial in stopping community outbreak. This is the second version of the 3D-printed frame for droplet precautions. This version comes with 2 stencils for eye shield and face shield in the .pdf file. The frame is also modified to fit glasses wearer. You may use any transparent ...

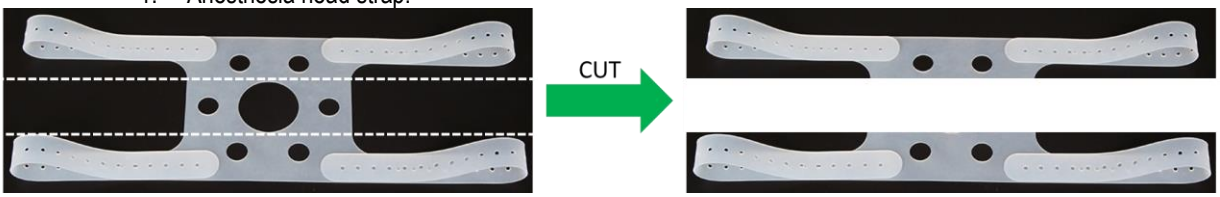
April 3, 2020

www.thingiverse.com

Although we have not trialed the following, the NIH has recently conditionally approved an alternative design which we are considering (consider significantly increased production time): NIH Recommended Full Face Shield

Process:

1. These designs have been successfully printed on a Creality CR-10s and Creality Ender 5 Plus using PLA (they may also be printed in PETG)
    1. Print times (CR-10s):
        1. Modified Prusa Shield – 2.25 hours, 42g PLA
        2. Eye Shield – 55min
2. **Fellowes Crystal Presentation Covers** are used for the clear component
3. Shields are sprayed with 95% ethanol prior to distribution
4. User assembles head strap with the following supplies:
    1. Anesthesia head strap:



    2. Alternatively, a phlebotomy tourniquet with 2 slits cut at either end may be used and secured to the tabs on the Prusa Shield