FP95's A DIY Surgical Mask

First, although we feel confident with our design, we can make no safety claims. There are variabilities with construction, sizing and user handling.

We will repeat the statistic that wearing ANY mask will decrease the risk of exposure by 77%. If you add the layer of 100% polypropylene, that risk can be substantially decreased. Two-ply spun Polypropylene is surgical sheeting. It can be used to make Tyvek (has an added antimicrobial, not intended for mask/inhalation) and garden barrier (has an added herbicide, not intended for mask/inhalation) and Olyfun (a simple 100% polypropylene used for sewing grocery bags. No added chemicals). The polypropylene cannot be penetrated by water, bacteria or particles. Bruse Spiess, MD, a professor of anesthesiology in the UF College of Medicine made the calculation that 100% polypropylene was 4% more effective than N95s. at blocking particulate matter.

Our design uses an outside layer of cotton, an inside layer of cotton, and a lining that is either two layers of a non-woven interfacing, or one layer of 100% polypropylene. The difference is the non-woven fiber has a polypropylene mesh that bonds the fibers into a non-porous fiber, and it is a softer cup style that is less warm, and possibly more comfortable for the lay person. The 100% polypropylene is a stiff product that will feel like a softer version of an N95. It will be a little warmer, it will maintain it's shape, but best of all, both are fully washable.

We suggest a cup mask and have selected a template from a dust mask designer, it does have a center seam, but the seams are nestled, which means there are two layers going opposite directions behind the holes created from stitching. There are other templates that offer no center seam, but we did not feel they offered the same tight fit. If the mask fits snugly, and is worn properly, safety is achieved.

The issue with reusing the N95's is the risk of exposure thru contaminates. N95's are not washable. If each nurse has several FP95's, they can take them home and wash them with their uniforms and feel comfortable with a fresh start for each shift.

The masks should be washed in a washing machine, in warm water with soap, bleach and agitation. They can be put in the dryer, but, just like a bra, you will have a better fit if they are shaped and set out to air dry. This is not "sanitized" by hospital standards, but it is as clean as your uniform, and certainly 100% cleaner than the 3 day old N95 that has been sitting in a paper bag.

We suggest that each nurse have at least 8 that fit well. They can be changed out during the shift, with potentially contaminated masks going into a bag for washing. When the nurse leaves for home, s/he should put on a clean mask to wear to decrease potential risk to her/himself and others.

Our intent is to offer a solution for our frontline caregivers. While we wait for additional N95's to arrive, this is our best suggestion. Stay covered, stay safe. And most of all, quit handling and putting on those filthy N95's.

You can check out our Q&A page, and see construction details at www.fabricpatch.net.

We do not sell the masks, our pattern is free. This is not a business opportunity, it is an educated solution to a global crisis. We understand both healthcare, and fabric. Our intent is to mobilize community quilters and sewers to provide these DIY PPE's for their area hospitals, clinics, LTC facilities and more, and have made everything available to achieve this.