

## Episode Summary

### Rural Health Voice # 34 – Mask maker, Mask maker, Make me a Mask

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Interview with Wendy Welch, Executive Director, Southwest Virginia Graduate Medical Educational Consortium (GMEC)

Q-What is PPE

A-It's the equipment people wear to protect themselves from others' bodily fluids, in short. PPE is most associated with healthcare workers, but also used by construction workers, nail salon operators and tattoo parlor staff.

Q-Masks, gloves, surgical gowns, shoe covers can be PPE. How can individuals best protect themselves if they don't wear PPE (wash hands, limit number of trips away from home, limit number of businesses visited, don't gather in groups, favor businesses that encourage separation)

A-Stay home when you can, that is the number one way. When you do go out, get orders from your neighbors so one person can limit visits to once every 3-4 times, instead of three to four people all going out weekly for an item. Practice good hygiene. There's a lot of talk about gloves spreading things around, so treat them like you would your hands. Wash them after use. Particularly wash out for gas pumps, and whether you use gloves or bare hands, wash them or use sanitizer after touching this surface, before you touch your steering wheel. Remember to wash your hands when you get home.

Q-If I use gloves, I don't touch the shopping cart and then, wearing the gloves, pick up the oranges or other produce, contaminating it possibly.

A-Have a plan where there is 'clean', 'suspect', or 'dirty'. A grocery shopping cart is particularly 'dirty' as a surface. The oranges, if not touched after the shopping cart, would be 'suspect'. Be aware of what touched 'what', last. Be safe by being aware. It's not about the gloves so much, as being aware of what you touched last.

Q-Think about a toddler, whatever they touch that's sticky, anything else they touch later is contaminated.

It's hard to not touch your face.

A-Homemade masks are not the most effective thing against the virus. They do remind you not to touch your face, though. Also, the virus is very small and can go between fibers of a mask. Think of a fish swimming around a fishnet. It could go between the holes, if it's too small, or it could hit the fibers and bounce off. It's better than nothing when you go to the store, but not effective enough for healthcare workers.

Q-Yes, it makes you more aware to wear a mask. It's easy to fall into a routine again, forgetting about the danger in a grocery store. But if I'm wearing something to help me remember... there's a concept in sports psychology, if you do something that you wouldn't normally do the day of a game, it helps you keep the game in your mind all day long. So many sports teams, for instance a NCAA game, beforehand, you may see the players wearing suits and ties as they get off the bus for the game. They do that to keep

that in mind the entire day before a game. Wearing a mask can force one to remember, and not 'space out', keep our social distance, not touch multiple fruits.

A-The MCAT, GRE, LSAT exams is a corollary to that, where students do that sort of thing. A third benefit of wearing a mask is abstract, but it's a mental health thing. It means someone wants you to be safe, whether you know the mask maker or not. You realize we're all in this together.

Q-The less we spread, we aren't just protecting ourselves, but our friends, neighbors and community are being protected.

A-Exactly.

Q-Some businesses have put up sneeze guards, so it would be good to support such businesses.

A-Smaller stores have worked faster to get such measures in place (over larger businesses). They are protecting their employees, which is good for them.

Q-What's a respirator?

("A respirator is a device designed to protect the wearer from inhaling hazardous atmospheres, including particulate matter such as dusts and airborne microorganisms, as well as hazardous fumes, vapors and gases.") Fancy ones can have replaceable filters.

A-3D printers are putting out face shields. There are three masks: Hand-sewn masks, surgical masks, and N95 mask. Surgical masks may be low-quality, paper masks, like for work in the garage or if you were preventing allergies. They are the lowest form of protection that are still medical quality.

Q-Those are for one-time use, right?

A-Used to be. Now some can be sprayed to preserve their life. N95 masks, though, should be discussed. Each organization is doing as they think is best. The CDC, NIH, FEMA, FDA have all in the past conducted tests on masks and their preservation in an emergency. In 2009, the N95 test was done. This is the 'gold standard' mask we're trying to get for healthcare workers. These were meant to be used once. Some hospitals now stretch that to three visits. Some places are telling their staff to take them home and re-wear them another day because it's the only one you'll get.

For non-COVID situations, you still want a N95, but your healthcare system may have a shortage and not have one. People are searching barns and attics for masks for providers. There are two approved ways to re-use them. One is to put it in the oven at 70 degrees Celsius, about 150 degrees Fahrenheit, for 30 minutes.

The other is to hold it over steam for about 10 minutes, so the steam, that is boiling temperature water, may sanitize the N95 mask for further use. Few people know this, and many hospitals are fearful to issue that directive to staff because it's not then the 'gold standard' of care. But in a crisis, this will prolong its use. People can do this at home, too. But do NOT use a microwave, under ultraviolet light. Do NOT spray them with Lysol or bleach; you will asphyxiate yourself!

Q-N95 masks, specifically for healthcare workers, are available for other uses. For instance, my husband uses N95 masks for preventing small particles for woodworking, buying them at Home Depot or similar stores. Are those the same N95's?

A-N95's and N100's come in different grades. Some have a tiny valve in the middle, and some don't. A KN95's will fold, as it is more flexible. But standard N95's are shaped like a cup. These donations from barns, and renovations of houses, and tattoo parlors are useful to medical workers. Other businesses, like kitchens, nail salons, tattoo parlors, construction... the smaller the business is, the less likely it has already been asked by a large corporation, to donate, and may have not been thought of. You can contact the Virginia Rural Health Association, or contact a clinic in your community, to donate.

Q-Even opened boxes are welcomed, even if just one N95 mask.

A-It is important to donate, because it makes the new doctors feel valued.

Q- The healthcare providers receiving the donations will determine where they can be used.

A-Residents are happy with these used masks.

Q-Surgical masks are floppy, but N95's have a metal strip along the top to create a seal that helps protect people. The floppy masks will work for trips to the grocery store, but it's important to save the N95 masks for healthcare providers.

A-Any masks you wear should go over the nose and mouth, and leave little space as possible around your chin and cheeks. Some people just put hand-sewn masks around their mouth, but it is necessary to also go over your nose to protect people correctly. Shave beards off, and create a good seal against your face.

Q-Check your barn, your workshop, your local nail salon, tattoo parlor, caterers in your area, and even local museums that may have masks, gloves or other protective equipment, and we will forward them to the healthcare providers in need.

A-Another mask to talk about is one with a design shared widely by its creators for a 3D N95. The problem is, it takes 10 hours to make, and the fiber is heavily needed to create them. Face shields are better made with a 3D printer. Another design going around that is hand-sewn is good enough for medical providers. It uses surgical fabric from the bottom of a dentist or doctor's tray, a little blue liner that sits onto a tray. Those are good for masks.

Q-That's a great resource.

A-You can find it online, <https://swvagmec.com/2020/03/31/donate-your-ppe-to-gmec-and-vrha/>, to get the details of this kind of mask pattern and materials.

Q-Hand-sewn masks... There are teams of people sewing masks: over 1,000 made for VRHA member Harrisonburg Rockingham Free Clinic already along with other groups like the NRV mask makers. This is a great community effort.

A-We've encouraged people to go online at 5 p.m. to give a shout-out to medical providers. In Spain, and so on, people are going outdoor on their patios and clapping for healthcare providers. This model doesn't work as well in the U.S., so a shout-out at 5 p.m. daily to healthcare providers, and mask makers, to thank them for their efforts. This is very moving to the heroes.

Q-Hand-made masks can be made for running errands, by hospital and clinic staff at lower-level risk, and also are great for clinics to hand out to high-risk patients, such as elderly or who have compromised immune system. Or you can make them for your own family members.

A-If you're sick and can't get a COVID test, or if you think you have it, it's okay to use a cloth masks because you are using it to protect others from you. N95 masks are good for protection from infected by non-infected people.

mask maker guidance document

<https://www.cdc.gov/niosh/topics/hcwcontrols/recommendedguidanceextuse.html>

link to mask maker page:

[https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2781738/?fbclid=IwAR1t\\_IgJ8eaU3\\_BP0p\\_bfkam4nBA\\_OFvuJeolUolNIip498Jlaqjf7LkFAT4](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2781738/?fbclid=IwAR1t_IgJ8eaU3_BP0p_bfkam4nBA_OFvuJeolUolNIip498Jlaqjf7LkFAT4)