Appendix information: re-sterilization of PPE

The following information was provided by Christian Daughton, PhD (recently retired researcher at EPA) and was shared with PSW by Waste Management Pharmecology.

https://twitter.com/Christi07017828/status/1240014928250978304

Since N95 masks (as well as gowns and other disposable PPE) could perpetually become in short supply, it's important that healthcare workers start to evaluate the feasibility of reusing PPE (after its sterilization). Note that I am referring to disposable fabric face masks - not to the fitted filtering facepiece respirators (FFRs).

The need to reuse N95 face masks was anticipated at least five years ago and resulted in what might have been the first research examination on the feasibility of reusing N95 masks:


https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4699414/

Their findings indicate that it seems possible that UV irradiation might serve to sterilize used N95 masks without adversely impacting their performance. I thought that there would have been some follow-up work that advanced upon this, but I could not quickly locate any.

Another publication two years later indicates that autoclaving might also be an option:


https://doi.org/10.1371/journal.pone.0186217

Healthcare professionals do not reuse PPE because of the obvious risks and liability. So reuse is a completely foreign idea. But if the choice is a "sterilized" used face mask versus no protection, the idea quickly becomes much more viable.