Extending critical PPE for essential research activities

The United States is facing critical shortages of personal protective equipment needed to protect health care workers, first responders, and COVID-19 patients. The acquisition and distribution of high priority items in short supply such as N95 respirators, surgical masks, face shields, isolation gowns, and Tyvek suits are being managed centrally through the UW-Madison Emergency Operations Center. These items may be requested through an online form at https://shopuw.wisc.edu/eoc-ppe-request-form/. All other PPE may be procured through normal channels.

If ongoing essential research activities in your laboratory require the use of critical PPE, here are measures you can take to extend existing stocks:

- Do not resume non-essential research activities.
- Reduce the number of staff performing essential activities that require critical PPE.
- Stop any voluntary use of surgical masks and N95s not required for protection from biohazardous materials.
- Do not allow personnel to take surgical masks or N95s for personal use.
- If available, consider alternative respiratory protection such as use of a powered air purifying respirator (PAPR) instead of an N95 with approved reuse of PAPR hoods.
- Under some circumstances, stocks of critical PPE may be extended through limited reuse.

Before changing or reusing PPE used for research, please consult with the Office of Biological Safety for approval and directions on amending your biosafety protocol. Please submit inquiries to biosafety@fpm.wisc.edu.

The following are some general guidelines for PPE reuse. The Office of Biological Safety will work with you to determine how these guidelines apply to your research.

When can an N95 respirator NOT be reused?
- If an N95 is being used for aerosol generating activities involving infectious materials (e.g., viruses, bacteria, fungi, parasites, prions) outside of containment
- If an N95 is being used to clean up a spill outside of containment involving infectious materials
- If an N95 has become contaminated or visibly soiled

When CAN an N95 respirator be reused?
- If an N95 is being used as a secondary precaution in case a spill outside of containment should occur
• If an N95 is being used for work with human materials that have no known pathogens or toxins outside of containment
• If an N95 is being used to clean up a spill outside of containment involving human materials that have no known pathogens or toxins

How do I reuse an N95 respirator safely?
• Care should be taken not to contaminate the N95 when doffing. Put on clean gloves and do not touch the front when removing. The CDC has a helpful video on how to properly doff an N95: https://www.cdc.gov/vhf/ebola/hcp/ppe-training/n95respirator_coveralls/doffing_16.html
• N95 respirators must not be shared.
• The N95 should be placed in a paper bag for reuse by the same individual and marked with the user’s initials and an end of use date.
• End of use date will depend on level of use:
  o Light use – less than 1 hour total per week: discontinue use after one month and store for possible future disinfection
  o Moderate to heavy use – over 1 hour per week: discontinue use after one week and store for possible future disinfection
  o Do not don an N95 more than five times unless a higher number of maximum donnings is specified by the manufacturer
• Care should be taken to store the masks such that the inside portions of the masks are not touching the outside portions. Masks should be handled only by the straps.
• Hands should be washed immediately after handling a used mask.

Can used N95 respirators be safely decontaminated?
• **Laboratories should not attempt to disinfect respirators themselves.**
• Environmental and Occupational Health (EOH) is working on developing protocols for respirator disinfection. Laboratories should consult with EOH at eoh@uhs.wisc.edu if they are interested in pursuing respirator disinfection. EOH staff will discuss current N95 availability, the appropriateness of disinfection based on specific use, and the protocols for arranging respirator disinfection.

What other disposable PPE can I reuse?
• Tyvek may be autoclaved and reworn if fully intact with no rips or tears
• Disposable paper gowns and some disposable lab coats (depending on material) may be autoclaved and reworn if fully intact with no rips or tears
• **NEVER** reuse disposable gloves

For guidance on reuse of PPE in animal facilities, please contact Janet Welter, Chief Campus Veterinarian: welter@rarc.wisc.edu.