



Strategies for Extending the Use Life of Respiratory Protection During the SARS-CoV-2 Pandemic (Quick Reaction Guide)

	Recommended Best Practice	Minimum Acceptable Protection	Last Resort
Phase 1 When Respirator Supplies are Available	<ul style="list-style-type: none"> N/R/P-100 filtering facepiece respirator (FFR) OR air purifying respirator (APR) or powered air purifying respirator (PAPR) with P100 canister Filters used once and replaced between patients 	<ul style="list-style-type: none"> N/R/P-95 filtering facepiece respirator APR or PAPR with chemical adsorption canister using a P100 pre-filter Interchange of filters and masks that are not certified together is not approved. 	Not Applicable
Phase 2 When Respirator Supplies are Low	<ul style="list-style-type: none"> Use a medical mask OVER the N95 to extend its use. Replace the medical mask between patients. Utilize emergency rule to allow for APR/PAPR canister interchangeability Use masks beyond their “expiration date” 	<ul style="list-style-type: none"> Consider reusing your FFR (store in non-plastic bag between uses) <ul style="list-style-type: none"> Static charge in plastic bags can remove the electret capability responsible for the small aerosol filtration Consider reusing your APR/PAPR canisters (wipe (not spray) down with disinfectant and store in humidity-free environment) <p>DO NOT SPRAY FILTER MEDIA</p>	<ul style="list-style-type: none"> Prioritize protection by exposure risk: <ul style="list-style-type: none"> > 6’ from patient = no mask 3’-6’ = medical mask < 3’ = N95 or greater
Phase 3 When Respirator Supplies are Depleted	<ul style="list-style-type: none"> Decontaminate FFPs and reuse (attempt to not share FFPs and APR/PAPR filters between people – maintain individual issue)* Field Methods <ul style="list-style-type: none"> Microwave Generated Steam for 1 minute on each side at 1100-1250W (2 min total) <ul style="list-style-type: none"> Place FFP on container containing 50 mL of water to generate steam Ultraviolet Germicidal Irradiation (UGVI) for 15 minutes on each side using a device fitted with a 40W UV-C bulb. Hospital or Laboratory Methods <ul style="list-style-type: none"> Vaporous Hydrogen Peroxide using 30% H2O2. Timing of gassing, dwell time, and aeration following exposure vary depending upon system utilized. Ultraviolet Germicidal Irradiation (UVGI) has also been used across a variety of lamp intensity and treatment times. 	<ul style="list-style-type: none"> Utilize medical/surgical face masks with priority given to those meeting ASTM F2100 Level 3 (then Level 2, Level 1, Surgical molded utility masks, and finally, utility masks) Consider adding reusable and cleanable faceshield to minimize direct exposure with droplets 	<ul style="list-style-type: none"> Consider homemade respiratory products using common fabric materials (note that the protection level will be minimal, at best) Requires the use of a reusable and cleanable faceshield to minimize direct exposure with droplets

*For details on each approach, see: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/decontamination-reuse-respirators.html>.