Smart Healthy City Alliance (SHCA)

COVID-19 Response

PPE Catalogue

April, 2020

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SHCA PPE Marketplace

SHCA was founded in 2014 with members such as Genesis Rehabilitation Services, Johnson and Johnson, Orchestrall Inc., National Board of Medical Examiners and others.

In response to the COVID-19 pandemic, SHCA is leveraging its infrastructure and network in China and in the US to provide a SHCA PPE Marketplace. This Marketplace is intended to address the Personal Protective Equipment (PPE) needs of SHCA members* providing the healthcare services in the US.

* All healthcare companies can join SHCA with membership fee waived during the COVID-19 period before or at the time of filling out the first order.





SHCA Marketplace Requirements

SHCA Marketplace has validated a set of vendors and manufacturers to ensure PPE supply quality, competitive prices, reliable logistics, and prompt delivery times**.

SHCA Marketplace also ensures the PPE products that are "intended for medical use" meet the required registrations or licensures from each agency listed below. In particular, for the 2 respirators and surgical masks that are intended for medical use, we only source from those which have received FDA Class II device approval unless explicitly mentioned otherwise. The rest are Class 1 device and we only source those which have FDA and CFDA registration.

Product Type	FDA	CFDA	Test Report	Business License
N95 Respirator	√		$\sqrt{}$	$\sqrt{}$
KN95 Respirator	√	√	$\sqrt{}$	$\sqrt{}$
Surgical Masks	√	√		
Face Masks	NA	NA	$\sqrt{}$	√
Protective Glasses/Goggles	V	√	V	V
Face Shield	√	√	√	√
Gloves	√	√	√	√
Gown	√	√	√	√
Coverall	√	√	$\sqrt{}$	$\sqrt{}$

^{**} The operation of the SHCA Marketplace is managed by its member Orchestrall Inc., a Philadelphia 100 © company in 2013 and 2014.





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PPE (Personal Protective Equipment)

Infection Control

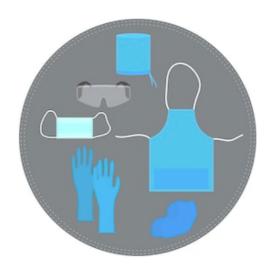
2. PRODUCTS

- N95/KN95 Respirators
- Surgical Masks or Facemasks
- Protective Glasses or Goggles
- Gloves
- Gowns and Coveralls
- Face Shields

3. LOGISTICS

- Shipping
- Pricing and Costs

4. REFERENCES



PPE for Infection Control

Personal protective equipment (PPE) refers to protective gowns, gloves, face shields, glasses or goggles, facemasks and/or respirators or other equipment designed to protect the wearer from injury or the spread of infection or illness.

PPE is commonly used in health care settings such as hospitals, doctor's offices and clinical labs. When used properly, PPE acts as a barrier between infectious materials such as viral and bacterial contaminants and your skin, mouth, nose, or eyes (mucous membranes). The barrier has the potential to block transmission of contaminants from blood, body fluids, or respiratory secretions.

When used properly and with other infection control practices such as hand-washing, using alcohol-based hand sanitizers, and covering coughs and sneezes, PPE minimizes the spread of infection from one person to another.

Effective use of PPE includes properly removing and disposing of contaminated PPE to prevent exposing both the wearer and other people to infection.

The PPE for infection control includes:

PPE	Protection Areas
Facemasks, N95/KN95 Respirators	mouth and nose
Face Shields	face
Protective Glasses or Goggles	eyes
Gloves	hands
Gowns & Coveralls	body



Products

USERS	Healthcare Professional (daily care)
OVERVIEW	 A mouth and nose protective device designed to protect healthcare professionals from job related risks of exposure to infectious respiratory illnesses. A very tight facial fit type mask To protect wearer from sprays, splashes and large particle droplets To catch bacteria shed in liquid droplets and aerosols from wearer's mouth and nose such as sneezes, coughs A very efficient filtration of small airborne particles.

Comparison	N95	KN95
Product Standards	NIOSH N95	GB2626-2006
Non-oil Filtering Efficiency	≥95%	≥95%
FDA Approval	Yes	Yes
FDA Device Class	II	II
FDA Regulation Number	878.4040	878.4040
FDA Product Code	MSH	MSH
CFDA Approval	No	Yes
Sales Territory	USA	China and USA

1. The N95 and KN95 share the same production standard, the only difference is the respirator is called N95 based on the US regulation from NIOSH N95 and the respirator is called KN95 based on China's GB2626-2006 regulation.

2. Here the N95 is for civil care, not special for medical staff

NIOSH-Approved N95 Particulate Filtering Facepiece Respirators Manufacturers List can be checked at:

https://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/default.html







Size Adult (varies among manufacturers)

Color White PFE >=95% China

Standard NIOSH N95/KN95 (GB2626-2006)

- High-efficiency electrostatic filter cotton, small breathing resistance
- Filtration efficiency of non-oily particles is above 95%
- No welding seam for more comfortable wearing
- Unique design shape, with excellent nose clip and headband, to ensure a good fit on the face. Foldable design for easy storage and carrying.
- Extended and limited use (Note: please see CDC guidelines)



Surgical Masks or Facemasks

USERS	• Public
USERS	Healthcare Professional
OVERVIEW	 To help block large-particle droplets, splashes, sprays, or splatter that may contain germs (viruses and bacteria) Be effective in blocking splashes and large-particle droplets Suggested one time use, no more than 4 hours per piece
Example Subtypes	3 Layer Disposable Medical/Surgical Mask3 Layer Disposable Mask

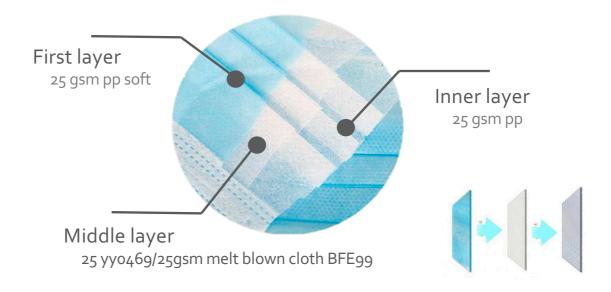
Dimension 17.5cm/6.89" x9.5cm/3.74"

Size Adult Color Blue

Materials 3 layers Material

Origin China





Goggles

Goggles provide barrier protection for the eyes. Goggles should fit snugly over and around the eyes or personal prescription lenses. Goggles with antifog features will help maintain clarity of vision.





Size Adult
Color Transparent
Origin China

- 360° anti droplets: protect eyes from sand and splash in all directions
- Ultra light, not pressing the nose: high quality materials, mirror frame surface smooth, light weight
- Super clear, anti-foggy: high transparent materials, "high-definition" does not fog
- Large mirror body design: it is suitable for most face types and can be worn together with myopic mirror

Medical gloves are examples of personal protective equipment that are used to protect the wearer and/or the patient from the spread of infection or illness.

Nitrile Gloves

Use during medical procedures and routine patient examinations.

Medical gloves are one part of an infectioncontrol strategy.



Size Adult (S, M, L, XL)

Length 220-230 mm

Color Blue Materials Nitrile Origin China

 As per American Society for Testing and Materials (ASTM) standard specifications for nitrile gloves, natural rubber gloves, and polychloroprene gloves indicate higher minimum tensile strength and elongation requirements compared to vinyl gloves



	Gown	Coverall
Pictures *color varies		
Description	Sufficient overlap of fabric to wrap around the body to cover the whole back area of body (including when wearer squats or sits down). Gown length covers to mid-calf.	Provide 36o-degree protection, fluid resistant and impermeable clothing. Coverall covers the whole body, including back and lower legs and sometimes head and feet as well.
Fabric & Clothing Properties	Selections vary upon • levels of "fluid resistance" against liquids and "impermeability" to blockage of microorganisms • Size • Facilities Use and Purposes • LOW heat stress level	Selections vary upon • levels of "fluid resistance" against liquids and "impermeability" to blockage of microorganisms • Size • Facilities Use and Purposes • HIGH heat stress level
Example of Subtypes	SurgicalSurgical IsolationNon-surgical	SurgicalNon-surgical
Settings For Use	Patient care activities – Dressing Bathing or showering Transferring Changing briefs Assisting with toileting Changing linens Providing hygiene care, Wound care Medical device care or use	Invasive exposures to blood or body fluids in direct contact transmission route (e.g. HIV, Ebola)



Face Shield

Using advanced environmentally friendly polymer materials, it can effectively isolate droplets, aerosols, dust, and liquid splashes at 180 $^{\circ}$





Size Adult

Color Transparent

Origin China

- Using advanced environmentally friendly polymer materials, it can effectively isolate droplets, aerosols, dust, and liquid splashes at 180°
- The lens is made of high-quality PET material with high transmission, high-definition light transmission, and no weariness and fatigue when worn for a long time;
- Advanced anti-fogging layer technology can effectively prevent lens fogging, high light transmittance and high definition
- Ergonomic design, light weight, free adjustment of tightness, suitable for all head sizes, easy to wear and comfortable



Logistics

SHIPPING

In order to deliver the ordered products quickly and safely, we are providing you the following general shipping options and delivery information guidelines.

Shipping Types	Estimated Time "order-to- delivery"	Max. Weight (kg)	Cost*
Express	7-9 days	≤70kg/package	High
Air	15-25 days	No upper limits	Medium
Sea	40-60 days	No upper limits	Low

PRICING & COST

- 1. The online ORDERING FORM provides the most current product pricing and available products.
- 2. Delivery time and cost of products vary due to transportation policies, customs, freight prices, and product availability.





References

How to safely put on or remove PPEs

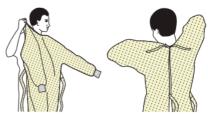
https://www.cdc.gov/niosh/npptl/pdfs/PPE-Sequence-508.pdf

SEQUENCE FOR PUTTING ON PERSONAL PROTECTIVE EQUIPMENT (PPE)

The type of PPE used will vary based on the level of precautions required, such as standard and contact, droplet or airborne infection isolation precautions. The procedure for putting on and removing PPE should be tailored to the specific type of PPE.

1. GOWN

- Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back
- · Fasten in back of neck and waist



2. MASK OR RESPIRATOR

- Secure ties or elastic bands at middle of head and neck
- Fit flexible band to nose bridge
- · Fit snug to face and below chin
- Fit-check respirator





3. GOGGLES OR FACE SHIELD

· Place over face and eyes and adjust to fit



4. GLOVES

• Extend to cover wrist of isolation gown



USE SAFE WORK PRACTICES TO PROTECT YOURSELF AND LIMIT THE SPREAD OF CONTAMINATION

- · Keep hands away from face
- · Limit surfaces touched
- · Change gloves when torn or heavily contaminated
- · Perform hand hygiene



 $\underline{https://www.cdc.gov/niosh/npptl/pdfs/PPE-Sequence-\underline{5}o8.pdf}$

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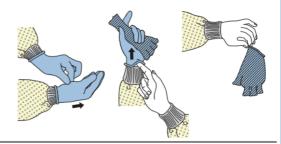


HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) EXAMPLE 1

There are a variety of ways to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. Here is one example. **Remove all PPE before exiting the patient room** except a respirator, if worn. Remove the respirator **after** leaving the patient room and closing the door. Remove PPE in the following sequence:

1. GLOVES

- Outside of gloves are contaminated!
- If your hands get contaminated during glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Using a gloved hand, grasp the palm area of the other gloved hand and peel off first glove
- · Hold removed glove in gloved hand
- Slide fingers of ungloved hand under remaining glove at wrist and peel off second glove over first glove
- Discard gloves in a waste container



2. GOGGLES OR FACE SHIELD

- · Outside of goggles or face shield are contaminated!
- If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Remove goggles or face shield from the back by lifting head band or ear pieces
- If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in a waste container

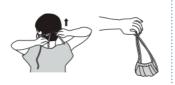


3. GOWN

- · Gown front and sleeves are contaminated!
- If your hands get contaminated during gown removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Unfasten gown ties, taking care that sleeves don't contact your body when reaching for ties
- · Pull gown away from neck and shoulders, touching inside of gown only
- · Turn gown inside out
- · Fold or roll into a bundle and discard in a waste container

4. MASK OR RESPIRATOR

- Front of mask/respirator is contaminated DO NOT TOUCH!
- If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front
- · Discard in a waste container





5. WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE



PERFORM HAND HYGIENE BETWEEN STEPS IF HANDS BECOME CONTAMINATED AND IMMEDIATELY AFTER REMOVING ALL PPE



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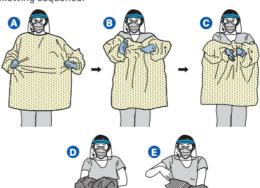


HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) EXAMPLE 2

Here is another way to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. **Remove all PPE before exiting the patient room** except a respirator, if worn. Remove the respirator **after** leaving the patient room and closing the door. Remove PPE in the following sequence:

1. GOWN AND GLOVES

- Gown front and sleeves and the outside of gloves are contaminated!
- If your hands get contaminated during gown or glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp the gown in the front and pull away from your body so that the ties break, touching outside of gown only with gloved hands
- While removing the gown, fold or roll the gown inside-out into a bundle
- As you are removing the gown, peel off your gloves at the same time, only touching the inside of the gloves and gown with your bare hands. Place the gown and gloves into a waste container



2. GOGGLES OR FACE SHIELD

- · Outside of goggles or face shield are contaminated!
- If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Remove goggles or face shield from the back by lifting head band and without touching the front of the goggles or face shield
- If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in a waste container



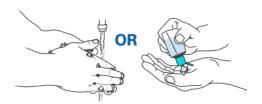
3. MASK OR RESPIRATOR

- Front of mask/respirator is contaminated DO NOT TOUCH!
- If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front
- Discard in a waste container





4. WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE



PERFORM HAND HYGIENE BETWEEN STEPS IF HANDS BECOME CONTAMINATED AND IMMEDIATELY AFTER REMOVING ALL PPE



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