

# INFECTIOUS DISEASE OUTBREAK PREPAREDNESS

## STOCKPILING OF PERSONAL PROTECTIVE EQUIPMENT IN HEALTHCARE SETTINGS

As events of recent years have shown, it is difficult to predict when a pandemic or other threat of a widespread infectious disease outbreak will occur. The best strategy for any healthcare facility is to be prepared by stockpiling critical Personal Protective Equipment (PPE), to ensure an adequate supply from day one of the outbreak.

### PROTECTING HEALTHCARE WORKERS ON THE FRONT LINES

Whether you are facing a global pandemic such as the H1N1 virus event of 2009-2010 or a severe seasonal influenza epidemic such as occurred in 2012-2013, PPE is recognized as a critically important defense in helping prevent the spread of the virus.<sup>1</sup> Availability and appropriate use of a range of PPE including N95 respirators, face masks, gowns and gloves are crucial to protecting patients, hospital staff and visitors.

OSHA recommends that face masks be used on infected patients to limit the spread of infectious respiratory secretions to others; by healthcare providers to prevent accidental contamination of patients' wounds by organisms normally present in mucous and saliva; and by employees to protect themselves from splashes or sprays of blood or body fluids.<sup>2</sup> When such a pandemic event occurs, your facility must be ready to respond with enough PPE to continue to function at optimal levels while the healthcare industry as a whole adjusts to increased demand. A carefully planned stockpile of PPE and other essentials is key to effective infectious disease preparedness.



# PANDEMIC PREPAREDNESS

## Infectious Disease Outbreak

### OSHA GUIDANCE REGARDING STOCKPILING

OSHA encourages stockpiling as a method of being properly prepared when a massive infectious disease event occurs:

"Stockpile items such as soap, tissue, hand sanitizer, cleaning supplies and recommended personal protective equipment. When stockpiling items, be aware of each product's shelf life and storage conditions (e.g., avoid areas that are damp or have temperature extremes) and incorporate product rotation (e.g., consume oldest supplies first) into your stockpile management program... Examples of personal protective equipment are gloves, goggles, face shields, surgical masks, and respirators (for example, N-95)."<sup>2</sup>

Those who work closely with people known or suspected to be infected with pandemic influenza (either in contact with or within 6 feet) should wear<sup>2</sup>:

- Respiratory protection (N95 or higher rated filter for most situations) for protection against small droplets from talking, coughing, sneezing and from small airborne particles of infectious material
- Eye protection or face shields if splashes are anticipated
- Medical/surgical gowns or other disposable/decontaminable protective clothing
- Gloves to reduce transfer of infectious



### CDC GUIDANCE REGARDING STOCKPILING

The CDC recommends that healthcare facilities stockpile enough consumable and durable supplies for the duration of a pandemic wave which is estimated to be 8 weeks, with potential subsequent 8-week pandemic waves.<sup>3</sup>

#### These supplies include:<sup>3</sup>

- Personal Protective Equipment
  - Face masks
  - Disposable N95 respirators
  - Gowns
  - Exam gloves
- Hand hygiene products
- Intravenous pumps and ventilators
- Pharmaceuticals
- Diagnostic testing materials

### HALYARD\* PPE STOCKPILE CALCULATOR

We have made it easy for you to determine your PPE stockpiling needs, with this chart and a simple-to-use online PPE Stockpile Calculator available at:

[www.halyardhealth.com/stockpile](http://www.halyardhealth.com/stockpile)

When calculating your stockpile requirements, be sure to include all expected increases in usage consistent with your facility's infection control protocol for a seasonal influenza or pandemic influenza event. This may involve special populations such as healthcare workers who do not normally use face masks or other PPE, visitors, and pediatric patients who require special sizes of PPE.

Your Halyard Health\* sales representative can assist you with an analysis of how much PPE you will need to meet the CDC's recommendation of stockpiling an 8-week supply.

## Estimate Your PPE Stockpile Needs Below:

| Product Category                  | <b>A</b><br>ENTER<br>Current Annual<br>Usage (Cases) | <b>B</b><br>ADD<br>Pandemic Usage<br>Increase (Cases) | <b>C</b><br>TOTAL<br>Usage (Cases)<br>(A+B) | <b>D</b><br>CALCULATE<br>Average Weekly<br>Usage (Cases)<br>(C÷52) | <b>E</b><br>DETERMINE<br>Number of Weeks to<br>Stockpile (Ex. 6, 8, 12) | <b>F</b><br>CALCULATE<br>Resulting Stockpile<br>(Cases)<br>(DxE) |
|-----------------------------------|--|---|---|--|---|--|
| N95 Respirators                   | <input type="text"/>                                 | <input type="text"/>                                  | <input type="text"/>                        | <input type="text"/>   | <input type="text"/>  | <input type="text"/>   |
| Face Masks - Fluid Resistant      | <input type="text"/>                                 | <input type="text"/>                                  | <input type="text"/>                        | <input type="text"/>   | <input type="text"/>  | <input type="text"/>   |
| Procedure Masks<br>(For Patients) | <input type="text"/>                                 | <input type="text"/>                                  | <input type="text"/>                        | <input type="text"/>   | <input type="text"/>  | <input type="text"/>   |
| Eyewear                           | <input type="text"/>                                 | <input type="text"/>                                  | <input type="text"/>                        | <input type="text"/>   | <input type="text"/>  | <input type="text"/>   |
| Isolation/Cover Gowns             | <input type="text"/>                                 | <input type="text"/>                                  | <input type="text"/>                        | <input type="text"/>   | <input type="text"/>  | <input type="text"/>   |
| Exam Gloves                       | <input type="text"/>                                 | <input type="text"/>                                  | <input type="text"/>                        | <input type="text"/>   | <input type="text"/>  | <input type="text"/>   |

Your Halyard Representative can lead you through a complete analysis to help you determine how much PPE to consider stockpiling. See our convenient online calculator at [www.halyardhealth.com/stockpile](http://www.halyardhealth.com/stockpile)

## THE BENEFITS OF BEING PREPARED

By having enough PPE on hand to support your facility's needs from the beginning of an infectious disease outbreak, you will help protect your employees and help keep them on the job; you will give your employees the confidence they need to perform at the highest levels of effectiveness and efficiency; and you will do your part to prevent the further spread of infection to patients, visitors, and staff.

You can count on us at Halyard to do our part in preparing to meet your needs during a pandemic event or infectious disease outbreak. We invest in proximate production capacity and work with our raw material suppliers and distributor partners to be able to meet current and future increased demand, with limited interruptions to our customers.

For more information on how Halyard can help you prepare for an influenza pandemic or seasonal outbreak, please visit [www.halyardhealth.com](http://www.halyardhealth.com) or contact your Halyard representative.

**In a recently published study, Halyard\* earloop face masks were found to produce a 3.4-fold reduction in viral aerosol shedding in subjects with laboratory-confirmed influenza.**

**"Surgical masks worn by patients reduce aerosol shedding of virus. The abundance of viral copies in fine particle aerosols and evidence for their infectiousness suggest an important role in seasonal influenza transmission."<sup>4</sup>**

**- Milton, et al, PLOS Pathogens, 2013.**

# HALYARD\* OFFERS A FULL RANGE OF PPE SOLUTIONS

| NIOSH Certified N95 Respirators |   | Eaches/Case |
|---------------------------------|---|-------------|
| 46727                           | FLUIDSHIELD* N95* Particulate Filter Respirator and Surgical Mask, Regular    | 210         |
| 46827                           | FLUIDSHIELD* N95* Particulate Filter Respirator and Surgical Mask, Small      | 210         |
| 46767                           | FLUIDSHIELD* N95* N95 Particulate Filter Respirator Safety Seal Film, Regular | 210         |
| 46867                           | FLUIDSHIELD* N95* N95 Particulate Filter Respirator Safety Seal Film, Small   | 210         |

| Level 3 Fluid-Resistant Masks   ASTM F1862 at 160mm Hg |   | Eaches/Case |
|--|---|-------------|
| 47107  | FLUIDSHIELD* Fog-Free Procedure Mask  | 400         |
| 47147  | FLUIDSHIELD* Fog-Free Procedure Mask with Wraparound SPLASHGUARD* Visor           | 100         |
| 48207  | FLUIDSHIELD* Fog-Free Surgical Mask   | 300         |
| 48247  | FLUIDSHIELD* Fog-free Surgical Mask with Wraparound SPLASHGUARD* Anti-Glare Visor | 100         |

| Level 1 Fluid-Resistant Masks   ASTM F1862 at 80 mm Hg |   | Eaches/Case |
|--|---|-------------|
| 25867  | FLUIDSHIELD* Level 1 Procedure Mask, Yellow   | 500         |
| 25868  | FLUIDSHIELD* Level 1 Procedure Mask, Lavender | 500         |
| 25869  | FLUIDSHIELD* Level 1 Procedure Mask, Blue     | 500         |

| Standard Masks |  | Eaches/Case |
|----------------|--|-------------|
| 47080          | Procedure Mask, Blue                           | 500         |
| 47117          | Procedure Mask, Yellow                         | 500         |
| 49700          | Standard Procedure Mask, Blue                  | 500         |
| 32856          | Child's Face Mask Featuring Disney® Characters | 750         |

| Eye Protection |  | Eaches/Case |
|----------------|--|-------------|
| 41204          | GUARDALL SHIELD* Face Shield, Fog Resistant, full length | 40          |
| SV50A          | SAFEVIEW* Eyewear Assembled Glasses                      | 50          |



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[www.halyardhealth.com](http://www.halyardhealth.com)



| Nitrile Exam Gloves   Natural Rubber Latex-Free |  | Eaches/Case |
|---|--|-------------|
| 50705   | STERLING* Nitrile Exam Gloves, X-Small | 2,000       |
| 50706   | STERLING* Nitrile Exam Gloves, Small   | 2,000       |
| 50707   | STERLING* Nitrile Exam Gloves, Medium  | 2,000       |
| 50708   | STERLING* Nitrile Exam Gloves, Large   | 2,000       |
| 50709   | STERLING* Nitrile Exam Gloves, X-Large | 1,700       |
| 52816   | LAVENDER* Nitrile Exam Gloves, X-Small | 2,500       |
| 52817   | LAVENDER* Nitrile Exam Gloves, Small   | 2,500       |
| 52818   | LAVENDER* Nitrile Exam Gloves, Medium  | 2,500       |
| 52819   | LAVENDER* Nitrile Exam Gloves, Large   | 2,500       |
| 52820   | LAVENDER* Nitrile Exam Gloves, X-Large | 2,300       |

| Cover Gowns |  | Eaches/Case |
|-------------|--|-------------|
| 69979       | Tri-Layer AAM12 Isolation Gown with Elastic Cuffs, Yellow, Large | 100         |
| 69600       | Impervious Comfort Gown with Knit Cuffs, Blue, Universal         | 100         |

| Headwear |                             | Items/Case |
|----------|-----------------------------|------------|
| 69088    | Spunbond Bouffant Cap, Blue | 500        |

| Hand Hygiene |   | Items/Case |
|--------------|---|------------|
| 34618        | KLEENEX* Ultra Moisturizing Foam Hand Sanitizer (70%), Bottle, 16 oz.                       | 6          |
| 32499        | MOD Electronic Touchless Skin Care Cassette, White  | 1          |
| 34643        | KLEENEX* Ultra Moisturizing Foam Hand Sanitizer Dispenser (70%), Electronic Cassette, 1.2 L | 2          |
| 91594        | KLEENEX* Antibacterial Foam Skin Cleanser (0.5% Triclosan), Electronic Cassette, 1.2 L      | 2          |

| Hoods |                                     | Items/Case |
|-------|-------------------------------------|------------|
| 44648 | Bloodborne Pathogen Protection Hood | 100        |

For a more complete list of available PPE products or to find out how Halyard can help your facility prepare for an influenza pandemic, please contact your Halyard Sales Representative.

Call 1-844-HALYARD (1-844-425-9273)  
 in the United States and Canada.

1. Goldfrank, Lewis R., and Liverman, Catharyn T., Preparing for an influenza pandemic; PPE for healthcare workers, National Academy of Sciences. Institute of Medicine, 2007.  
 2. Guidance on preparing workplaces for an influenza pandemic, OSHA, 2009.  
 3. Hospital pandemic influenza planning checklist, CDC, 2007. <http://www.flu.gov/planning-preparedness/hospital/hospitalchecklist.pdf>  
 4. Milton, Donald K., Fabian, M. Patricia, Cowling, Benjamin J., Grantham, Michael L., McDevitt, James J. Influenza virus aerosols in human exhaled breath: particle size, culturability, and effect of surgical masks. PLOS Pathogens, March 2013. <http://www.plospathogens.org/article/info%3Adoi%2F10.1371%2Fjournal.ppat.1003205>