



Battelle CCDS Critical Care Decontamination System™¹

Helping Frontline Healthcare Workers

About Battelle CCDS™

CCDS: Fast Facts

- The Battelle Critical Care Decontamination System™ is a self-contained, mobile decontamination system that uses vapor phase hydrogen peroxide (VPHP) to decontaminate N95 respirator masks
- The Battelle CCDS™ decontamination cycle successfully generates a micro-condensation through the dwell phase and provide > 6-log reduction as indicated by collocated chemical indicator.
- Battelle CCDS™ renders SARS-CoV-2 non-infectious on N95 respirators and enables up to 20 reuses without degrading filter performance to help address the current U.S. PPE shortage
- Battelle CCDS™ is effective against both viral and bacterial agents. Battelle tested VPHP decontamination efficacy against SARS-CoV-2 in our Bio Safety Level 3 (BSL 3) laboratories.
- Battelle is the largest, private, non-profit research and development organization in the world.

Battelle CCDS™ - The Mission to Help

- **2016 FDA study:** Proves Vapor Phase Hydrogen Peroxide (VPHP) process to decontaminate N95 respirators is effective in the event of a pandemic
 - [FDA Report on Decontamination and Reuse of N95 Respirators](#)
- **January 2020:** Battelle scientists begin research on the novel coronavirus (SARS-CoV-2)
- **March 6-22:** Battelle builds the first CCDS system, tests validity, proves capacity effectiveness on thousands of N95 per cycle
 - [Critical Care Decontamination System Tech Summary](#)



Testing Run Cycles

Zero Cost and Scaling Up Across the U.S.

- **March 29:** Awarded [FDA EUA](#) to decontaminate N95 respirators up to 20 times for each mask and deployment across the U.S.
- **April 9:** Federal Government contract awarded
 - Zero cost to healthcare providers
 - Rapid scale and deployment of 60 CCDS systems to regions across the U.S.



Battelle CCDS™ Process

HEALTH CARE PROVIDER SIGN-UP PROCESS Battelle CCDS Critical Care Decontamination System™

BATTELLE

1 Sign up with Battelle

- Visit battelle.org/decon to fill out the enrollment form
- Battelle emails enrollee links to the enrollment contract, instructions, and the Battelle POC

battelle.org/decon



2 Contact Us to Get Your Code

- Enrollee signs contract and contacts Battelle POC to receive their 3-digit codes for each facility



3 Properly Label Respirators

- Once the 3-digit codes are received from Battelle, enrollee collects N95 respirators
- N95 respirators must be unsoiled (free of blood, mucus, make-up, lip balm, etc.) and labeled with a permanent marker



4 Collect & Bag All N95 Respirators

- Enrollee collects all N95 respirators into a single plastic bag
- Once the plastic bag is filled, tie off the bag and put it into another plastic bag



5 Properly Package

- Clean the outside bag with disinfectant
- Shipping box must be labeled with the 3-digit code and a biohazard sticker



6 Ship to CCDS Site

- Enrollee contacts their chosen logistics provider to coordinate pick-up and delivery of their N95 respirators
- Enrollee can either use a logistics provider of their choice or Battelle's preferred logistics provider



7 Decontaminated & Returned

- Your shipments are barcoded to ensure chain of custody
- Your N95 respirators are processed and then verified to ensure they are free of decontaminant
- Your decontaminated N95 respirators are returned to your facility



CCDS: PPE Collection

Detailed information on the N95 collection process and how to prep N95s is included when healthcare providers enroll.

Instructions include:

- [Instructions for Healthcare Personnel](#)
- [Instructions for Healthcare Facilities](#)
- [HCP - Fact Sheet](#)

Important tip: All N95s must be labeled correctly and be free of blood, mucus, makeup etc.

Visit our FAQ page for more information: www.battelle.org/N95

CCDS: FAQs

Q: Does each system get its own N-95 respirators back?

A: Yes

Q: What are the PPE labelling requirements?

A: Each N95 respirator and external shipping boxes are labeled with a 3-digit Hospital Code that is assigned by Battelle

- Healthcare Systems can add 2-digits with additional identifying information (i.e. floor, department) – this is at the discretion of healthcare systems
- The number of decontamination cycles is marked by Battelle on each PPE to track the decon cycles of each respirator

Q: Is Battelle planning to decontaminate other types of PPE?

A: We are currently researching several other PPE items in our research chamber in Ohio (ventilator parts, face shields and others).



CCDS Site Set-up

Overview

CCDS: Site Location and Set-Up

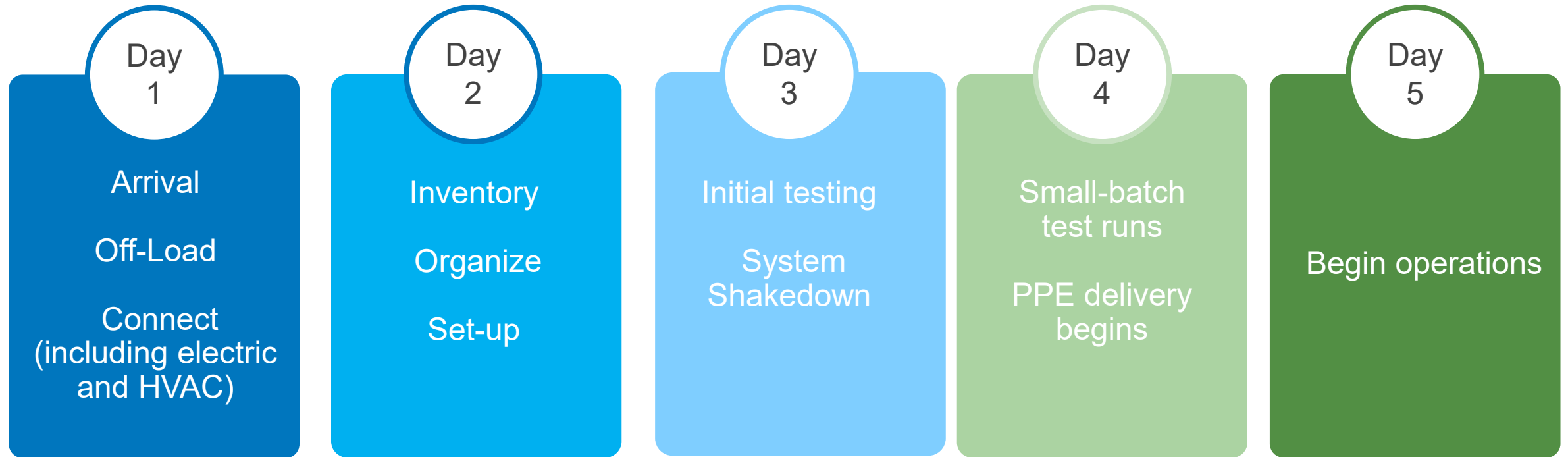
Site locations are determined by DHS and FEMA.

1. CCDS site set-up is coordinated between the Battelle operations team and the point-of-contact (POC) at the state
2. A Battelle site lead is assigned to the location by Battelle
3. Site requirements and logistics for the CCDS system is coordinated between Battelle operations team and state organization POC
4. Logistics include CCDS system shipping, site arrival, site set-up, required testing runs and the official launch of PPE decontamination process

Important tip: Healthcare providers who enroll in the CCDS system can begin collecting their PPE before a site is set-up. Learn more at: www.battelle.org/N95

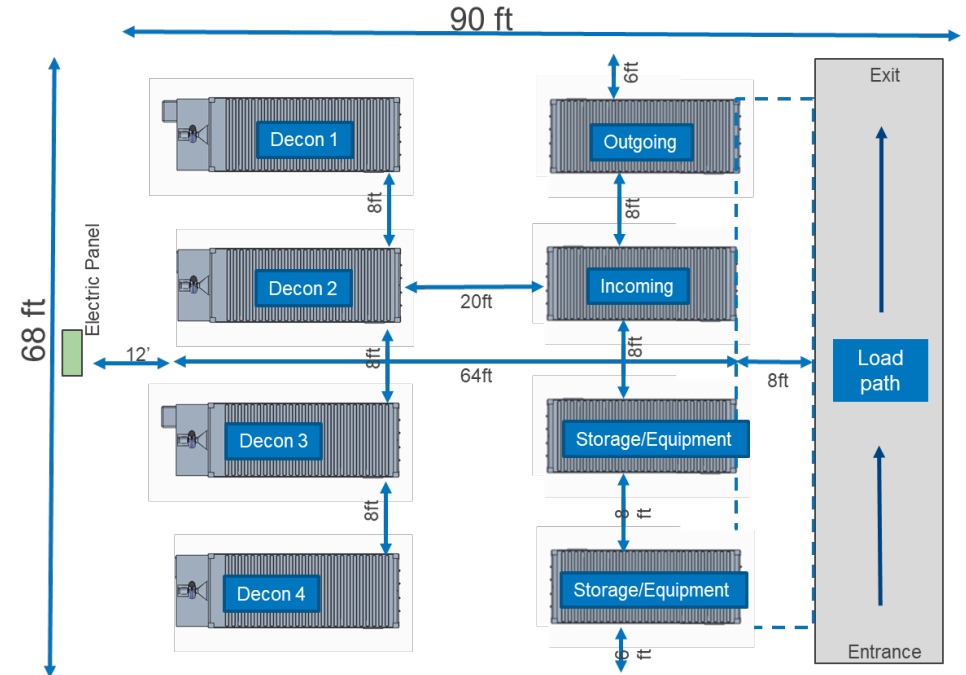
CCDS: Site Set-up Timeline

The First 5 Days



CCDS: Site Overview

- **20'x 8' x 8' Conex Containers (8 Total)**
 - 4 Decon Shelters, Incoming, Outgoing, 2 Storage
- **Decon Shelter**
- **Incoming/Outgoing Container** – Support workflow for N95 receipt and return
- **Storage Containers** – Support ancillary supplies and consumables

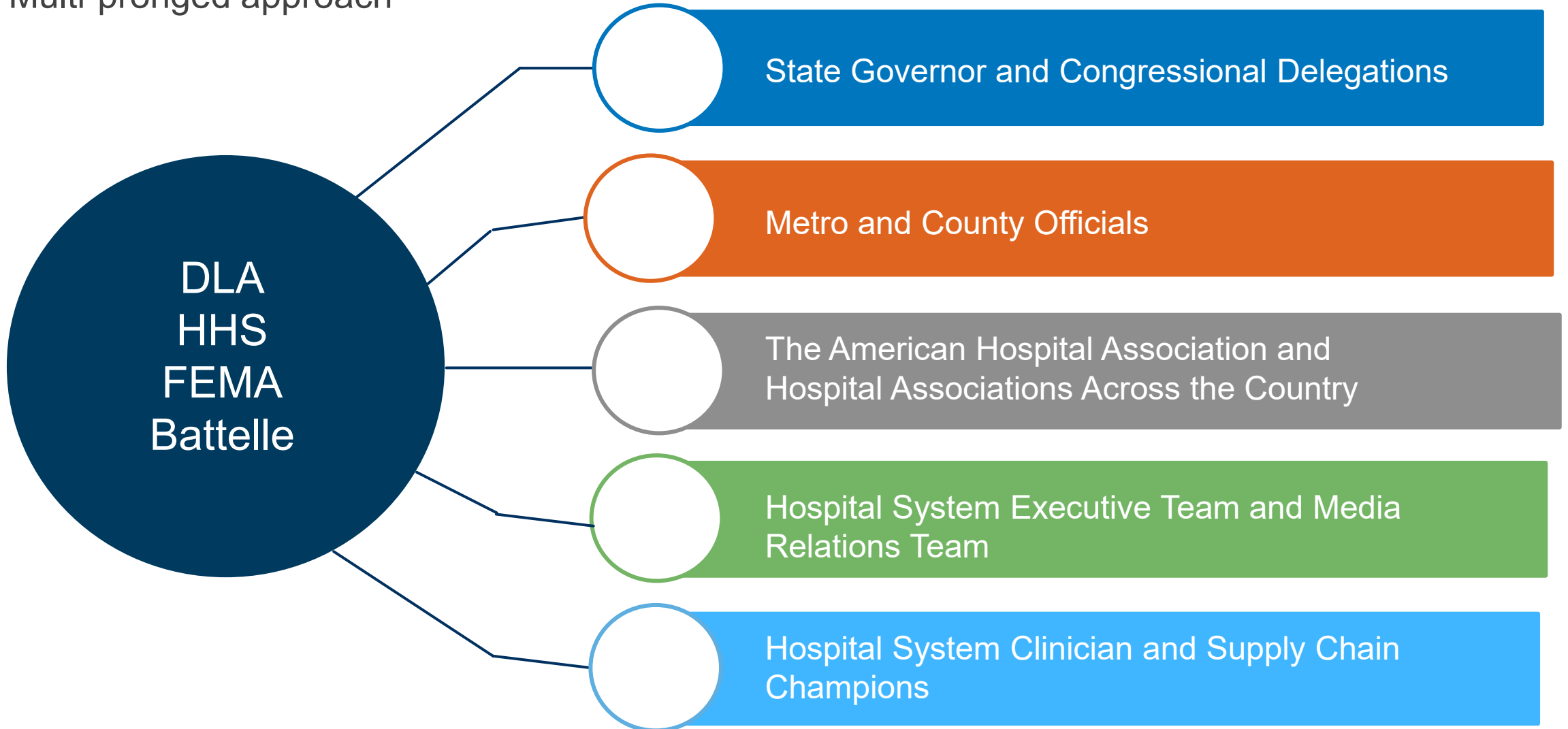


CCDS Communications Activation

Engagement and Reach to Drive Usage

CCDS: Communication Activation

Multi-pronged approach





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It can be done

www.battelle.org/N95 | www.battelle.org/decon