

PA Project Firstline Great Escape from Infections

**Engaging Frontline Providers with
Interactive Infection Prevention
and Control Education**

Objectives

- **Describe** three of the challenges faced when providing infection prevention and control (IPC) education for various types of frontline healthcare workers (HCW)
- **Apply** two of the lessons learned in this presentation to their own settings
- **Identify** three potential ways Escape Rooms improve learning compared to traditional education delivery methods

Keywords

Nontraditional

Evidence-based

Education

Why Change IPC Education Delivery?

- Implementing evidence-based IPC practices is recognized as a national and global health priority
- Reaching all frontline HCW, including many of whom have not been focused on previously, can be challenging for facilities
- Addressing the needs of a target audience who may be suffering from information overload, physical exhaustion and mental fatigue requires a different approach towards education

Disseminating IPC Education

- Time for educational initiatives is limited as facilities experience staffing shortages
- Frontline HCWs require something to pique their interest
- Presentation methods need to be succinct and powerful
- Innovative approaches are needed



Learning Methods



Problem-based learning



Flipped learning



Gamification

Active Learning Tasks Benefits

Collaboration

Communication

Prioritization

Increased
Confidence

Enhanced
Knowledge

Critical Thinking

Enthusiasm for
Learning

Team-Based Learning

- Healthcare is a multifaceted environment where teams of varied HCW types work together in all aspects of clinical care
- Team-based learning can help engage all members of multidisciplinary teams
- Teamwork and communication are integral parts of simulation-based learning

Escape Room Concept

- The Escape Room format provides a supportive, safe, and dynamically engaging environment for developing attendees' knowledge related to IPC practices
- Participants learn how to use the Escape Room format in their facility to enhance and improve IPC foundational and practical knowledge

Escape Room Benefits

- Engages learners in the virtual and physical environment
- Can be adapted to be used within specific settings
- Can be used to evaluate a learning program

Increased Learning Motivation

Escape rooms are described as “live-action team-based games where players discover clues, solve puzzles, and accomplish tasks in one or more rooms, to accomplish a specific goal, usually escaping from the room, in a limited amount of time”. (Dugdol-Menéndez, et al., 2021)

Escape Room in Action (2021)

Who:

- Central Texas Veterans Healthcare System

Background:

- Escape Room introduced as a voluntary education to augment mandatory trainings

Results:

- Attendance increased from 20 to 189 participants

Conclusion:

- Escape Room offered a low-cost, high impact and effective tool for healthcare education

Scenario: Pandemic Novel Influenza

Select appropriate
personal
protective
equipment (PPE)

Collaborate with
team

Evaluate
environmental
surfaces

Identify three
hand hygiene
(HH) moments

Hypothesize how
role would change

▶ Planning

- **Goal:** Focus on HCW judgements using a problem-solving process that is goal-oriented and follows best practice
 - Design can vary
 - Limited cost
 - Easy to replicate and modify



Teamwork

Fun way for all
HCW disciplines to
work together to
escape before
time runs out



Determine Rules for Escape Room

- Number of players
- Time limit
- Deductions for hints
- Determine where to hide clues

In teams of four to five people, you will have 30 minutes to navigate Clutterbug's clever traps and unite with Captain Germ-B-Gone to proclaim victory. Get ready to shine!

You must complete each station as a team. If at any time during the exercise, the team breaks apart, a 10-second penalty will be added to your time. You are allowed two hints, but each one will cost you 30 seconds. Use the hints wisely!

Supply List

PROJECT FIRSTLINE ESCAPE ROOM MANUAL

SUPPLIES

CHECKLIST

STATION ONE:

- Figure 1 (One puzzle piece)
- Clues A, B, C1, C2 & D (Red Herring)
- Sign 1
- Sink & Hand Soap (Hand sanitizer can be subbed in)
- Glo Germ and Light
- Lock Box or Bag that can be Locked
- Combination Lock Set to *9-1-2*

STATION TWO:

- Figure 1 (One puzzle piece)
- Figure 2 & 3
- Lock box
- Combination Lock set to *M-A-S-K*
- Black light
- Invisible ink pen
- Handheld mirror
- Tape

STATION THREE:

- Figure 1 (One puzzle piece)
- Mannequin
 - If no mannequin is available, alternatives include: a foam rambler dressed in PPE, a white board with markers to demonstrate proper donning and doffing sequencing, or Figure 4 provided in the manual.
- PPE
 - One mask
 - One gown
 - One pair of gloves
 - One face shield
 - Unused PPE that is expired and/or near expiration should be considered to prevent wasteful usage of critical resources.
- Lock box
- Combination Lock Set to *G-L-O-V-E*
- One Container of Cleaning & Disinfecting Wipes
- One copy of the CDC PPE Sequence:
www.cdc.gov/hai/pdfs/ppe/ppe-sequence.pdf

STATION FOUR:

- Figure 1 (One puzzle piece)
- Clue 4A, 4B, 4C and 4C Answer Key & 4D
- Disposable Glove
- Cereal Box
- Ketchup Bottle
- An empty container of EPA-registered hospital-grade disinfectant wipes (necessary to have 15 second contact time to match Clue B)
 - (Decoy item)
- Empty Mr. Clean Sponge Box
- Four digit lock

Attached you will find the necessary printouts and signage to set up each station. It is recommended that you print the figures, clues, and signage on cardstock for easier use!



1

Use a Fun, Engaging Story

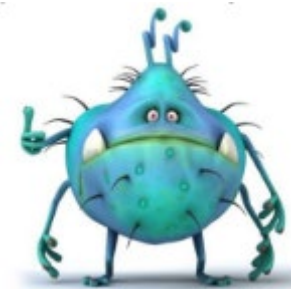
GERMS THREATEN THE UNIVERSE!

We are in desperate need of your help! Our beloved superhero, Captain Germ-B-Gone, is fighting the never-ending battle to protect our world from the devastating power of the FLU, but he can't do it alone! He needs you, the REAL heroes in this story, to help outwit his arch-enemy, Clutterbug, and stop his evil germ-spreading deeds right at the source.

Do you have what it takes to unlock the clues without catching the flu? It's all up to you!



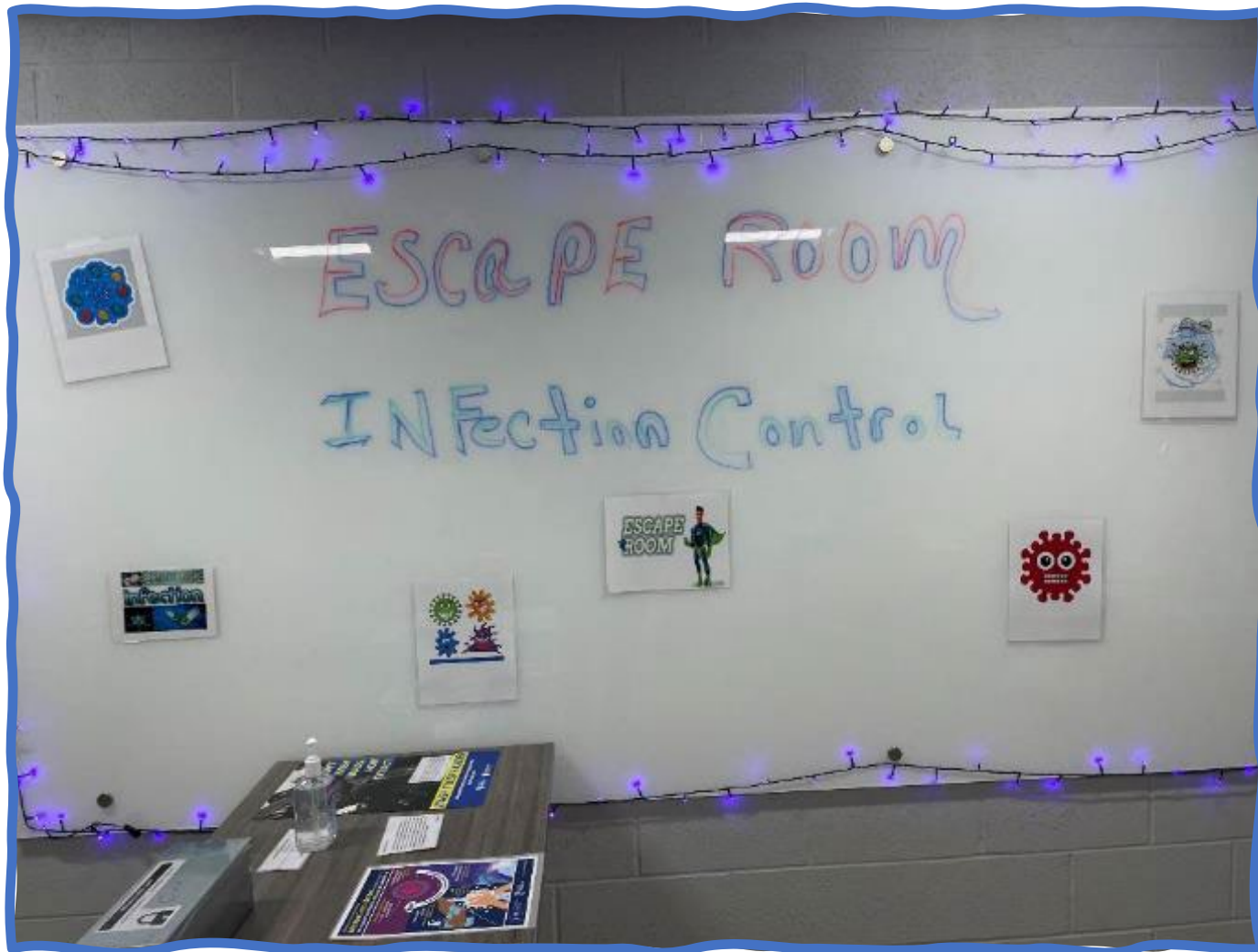
Thank you to New Jersey, New York, Wyoming
and Utah Project Firstline Teams for
Developing the Project Firstline Escape Room
Manual!



▶ Escape Room Entrance



Escape Room Entrance



Space Requirements



Station One – HH

Learning Objectives

- Describe when to clean hands for soap and water vs alcohol-based hand rub (ABHR)
 - Add a scenario to determine which type of HH is appropriate if both ABHR and Soap/Water available
- Observe demonstration of HH technique
 - Soap and water: Use soap and water with germ simulating gel
 - ABHR: Use if sink not available
- Complete puzzle (teamwork)

Tip: Add a scenario to determine which method to use for HH based on what the facility has available



▶ HH Station



▶ HH Station



Use of Simulated Germ Product



- Use of a simulated germ product with an ultraviolet flashlight allows participants to 'see the germs'

▶ HH Station



▶ HH in Action



▶ HH Poster

Follow these recommended healthcare **Infection Control Actions** to stop the spread of viral respiratory infections like influenza, RSV, and COVID-19.

Influenza, RSV, and SARS-COV-2 all have a **fatty envelope** that surrounds them.

Routine cleaning & disinfection work effectively to stop their spread.

How?

Hand Hygiene

Alcohol-based sanitizer dissolves the fatty envelope, destroying the virus.

Soap surrounds the virus, and water carries it off the skin.

Environmental Disinfection

EPA-registered disinfecting products dissolve the fatty envelope, destroying the virus.

The infographic features a central virus particle with a pink and purple fatty envelope. Three arrows point from this virus to three distinct action panels. The top panel, 'Hand Hygiene', is divided into two sub-sections: 'Alcohol-based sanitizer' and 'Soap'. The bottom panel, 'Environmental Disinfection', shows a hand using a spray bottle. The background is a gradient of purple and blue.



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention



cdc.gov/ProjectFirstline

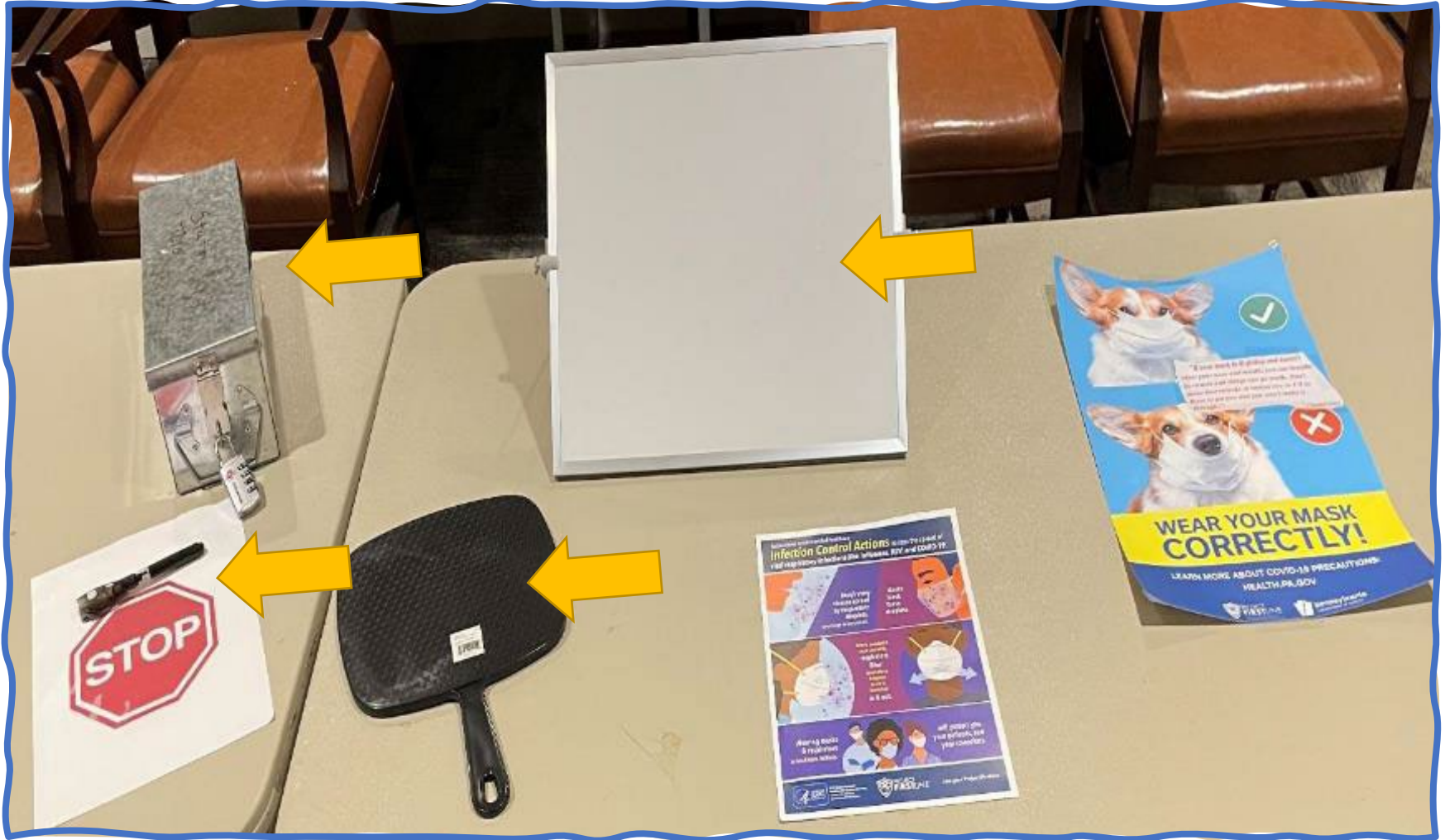
Station Two – Source Control

Learning Objectives:

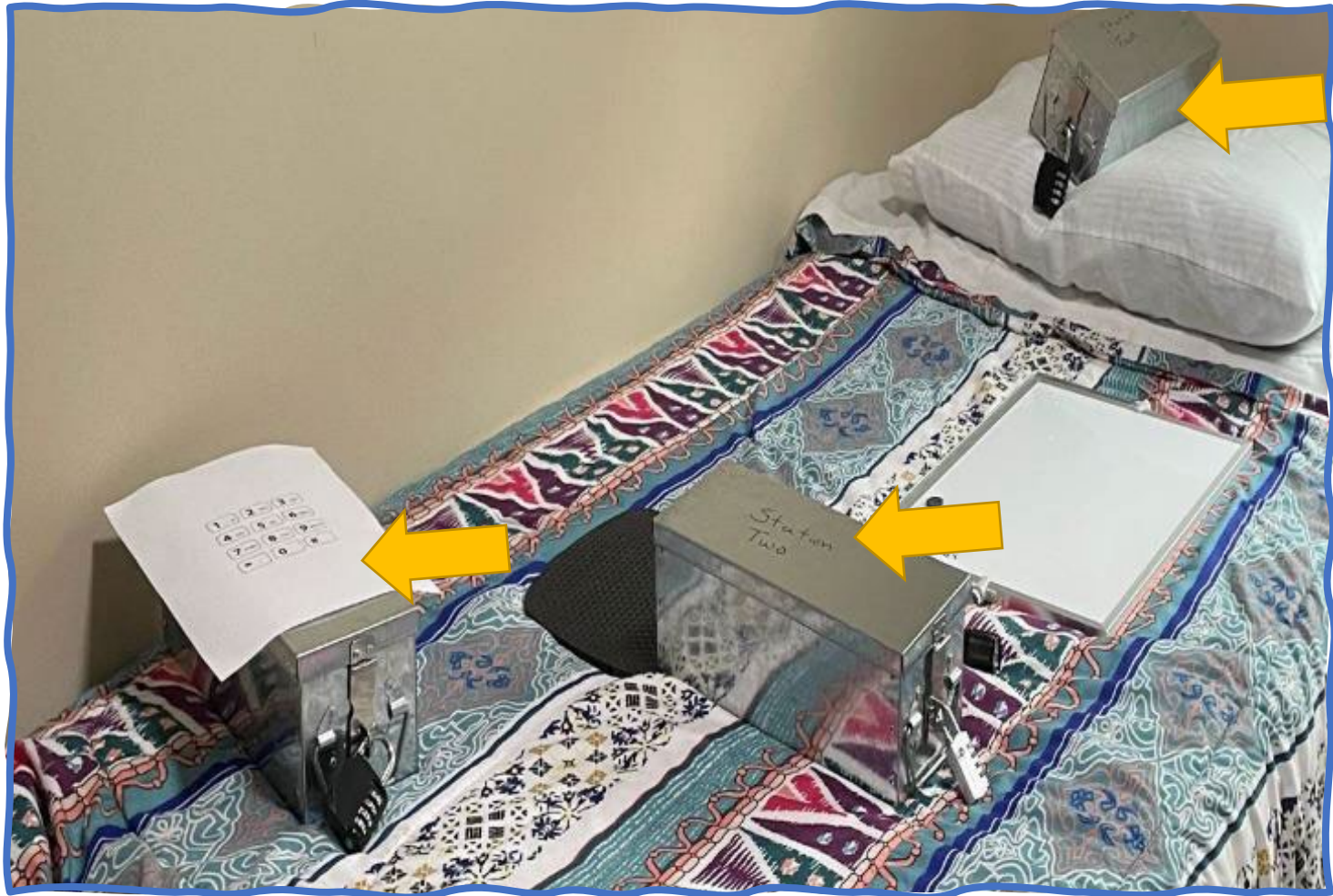
- Describe how respiratory droplets are spread
- List the benefits of proper mask positioning
- Explain the purpose of source control



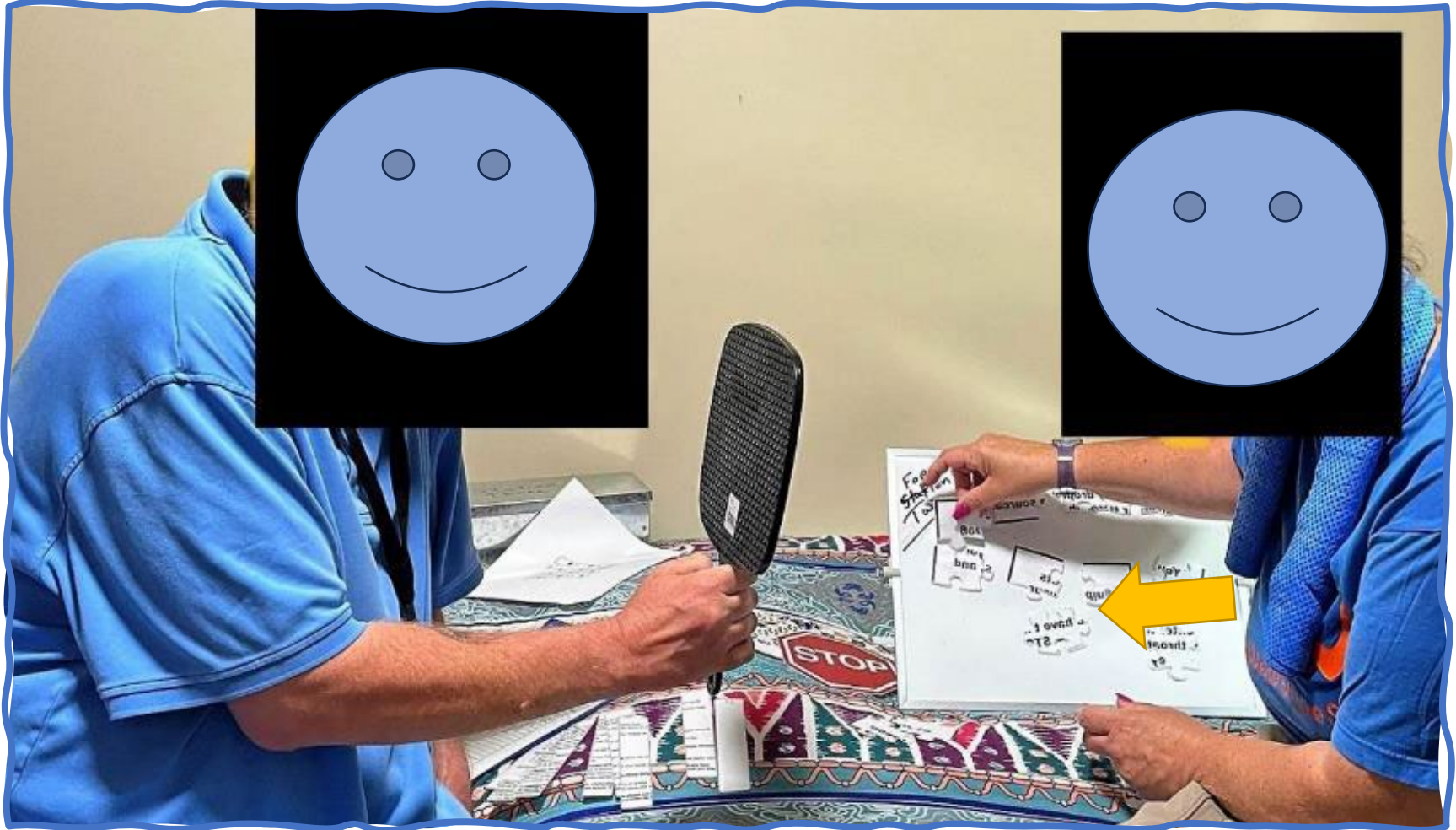
Source Control Station



Source Control Station



Source Control Puzzle



Source Control Puzzle

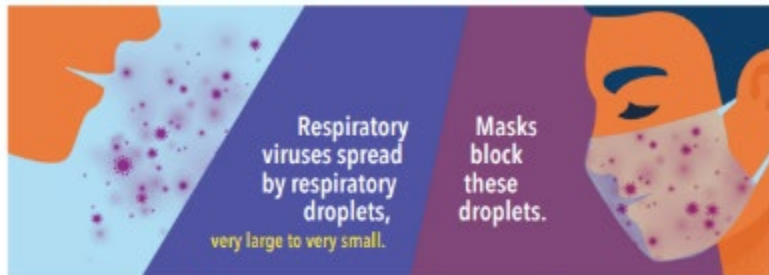


Source Control Poster




Source Control Poster

Follow these recommended healthcare **Infection Control Actions** to stop the spread of viral respiratory infections like influenza, RSV, and COVID-19.




Respiratory viruses spread by respiratory droplets, very large to very small.


Masks block these droplets.




When needed & used correctly, respirators filter respiratory droplets as air is breathed in & out.



Wearing masks & respirators in healthcare facilities will protect you, your patients, and your coworkers.

 U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

 PROJECT FIRSTLINE

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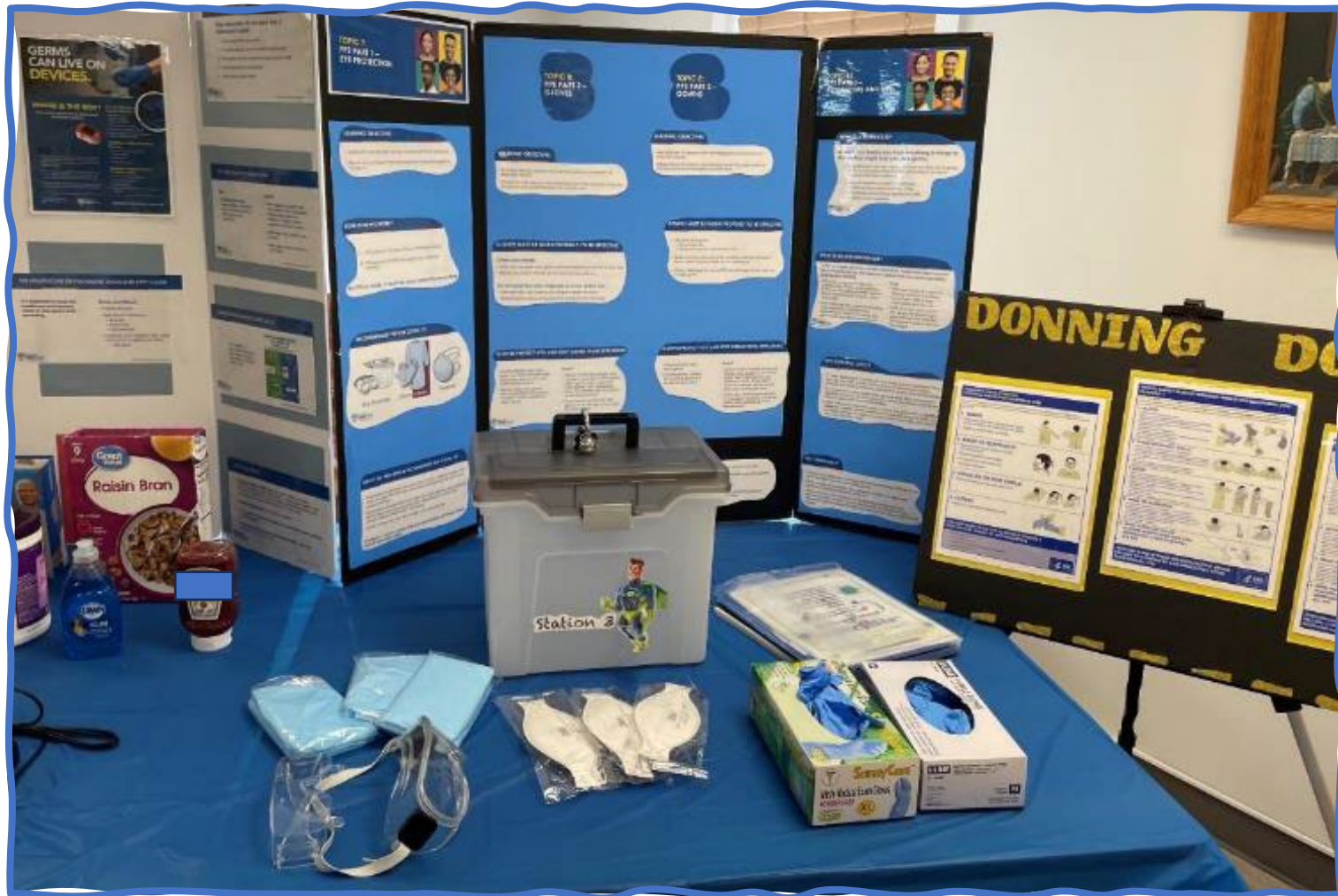
Station Three: PPE

Learning Objectives:

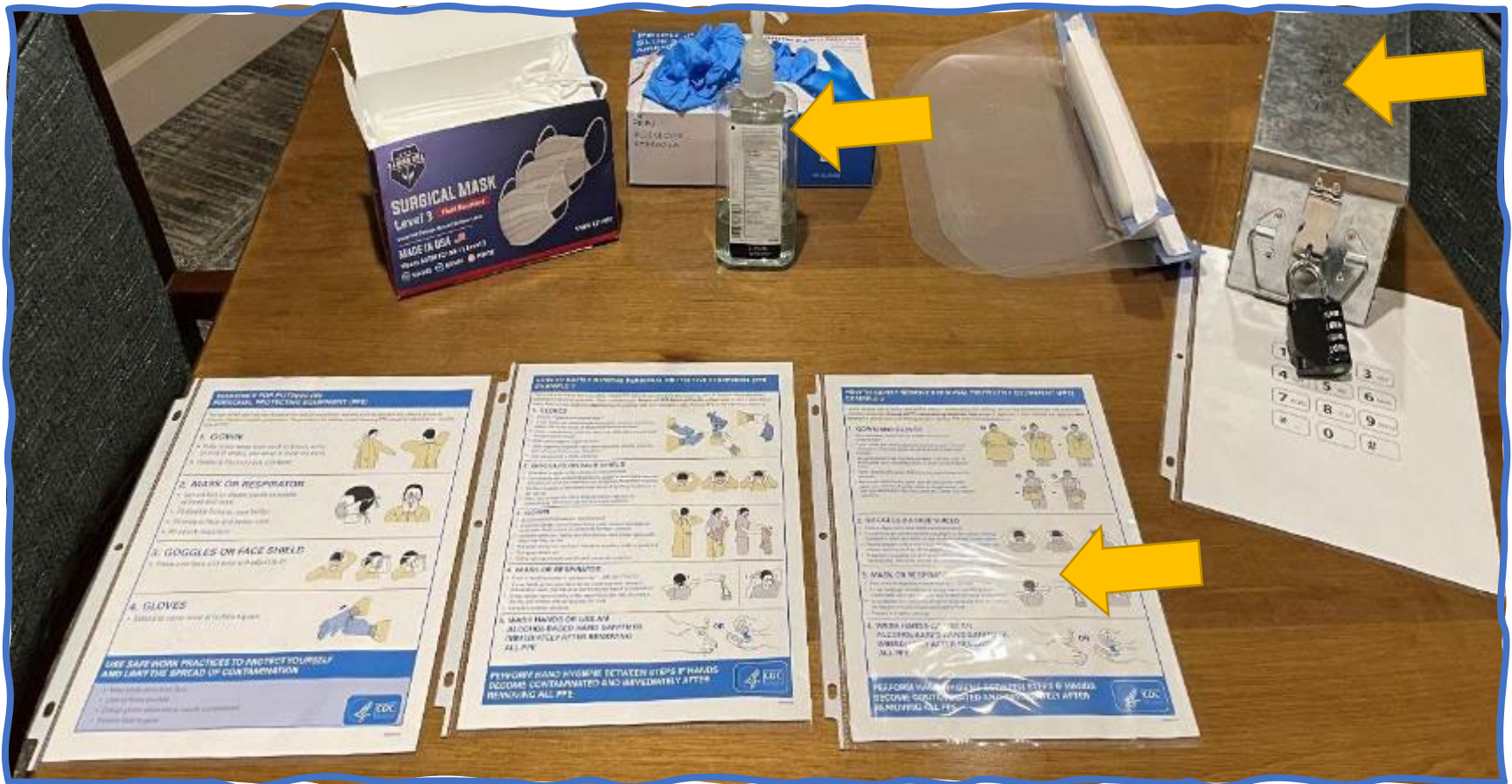
- Review step-by-step directions for donning/doffing
- Perform donning/doffing technique
 - Cloth vs Disposable gown

Tip: Use simulated germ products to make the donning and doffing fun and interactive

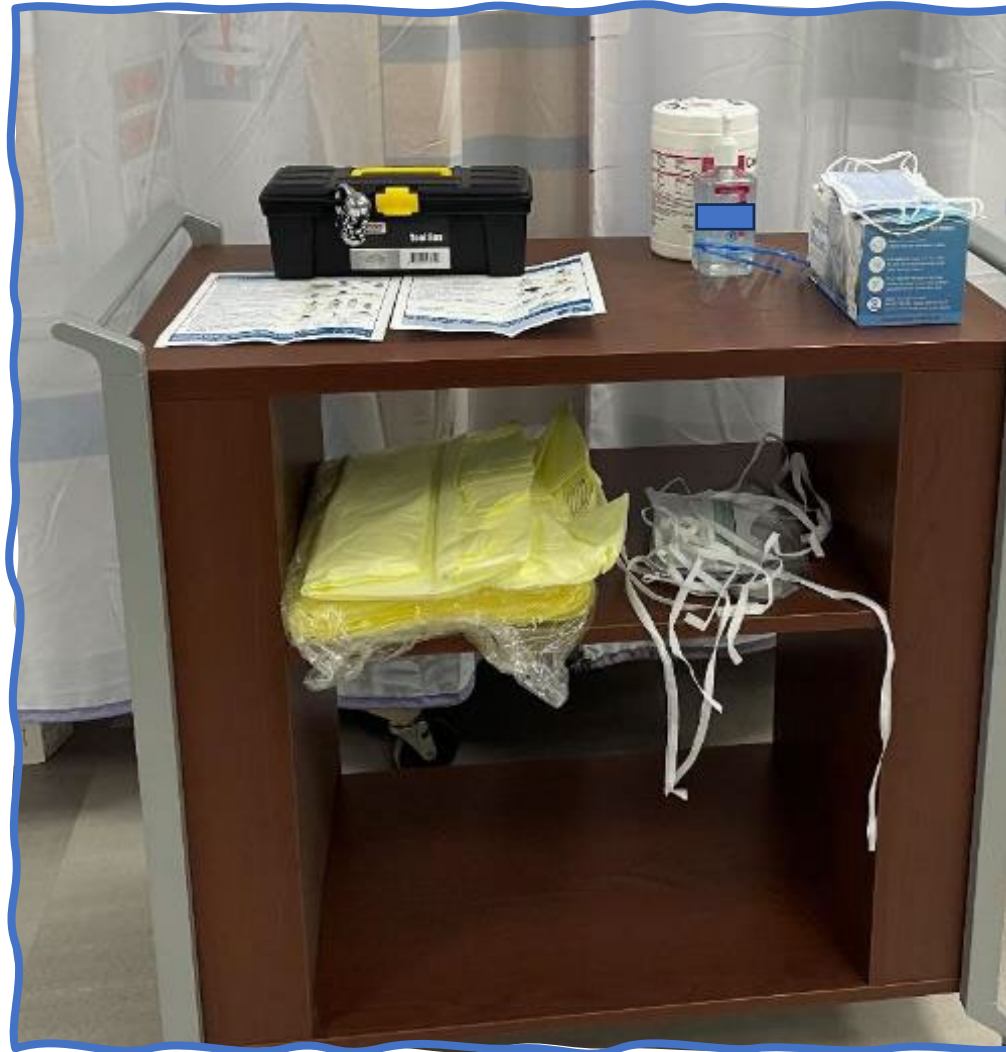
PPE Station



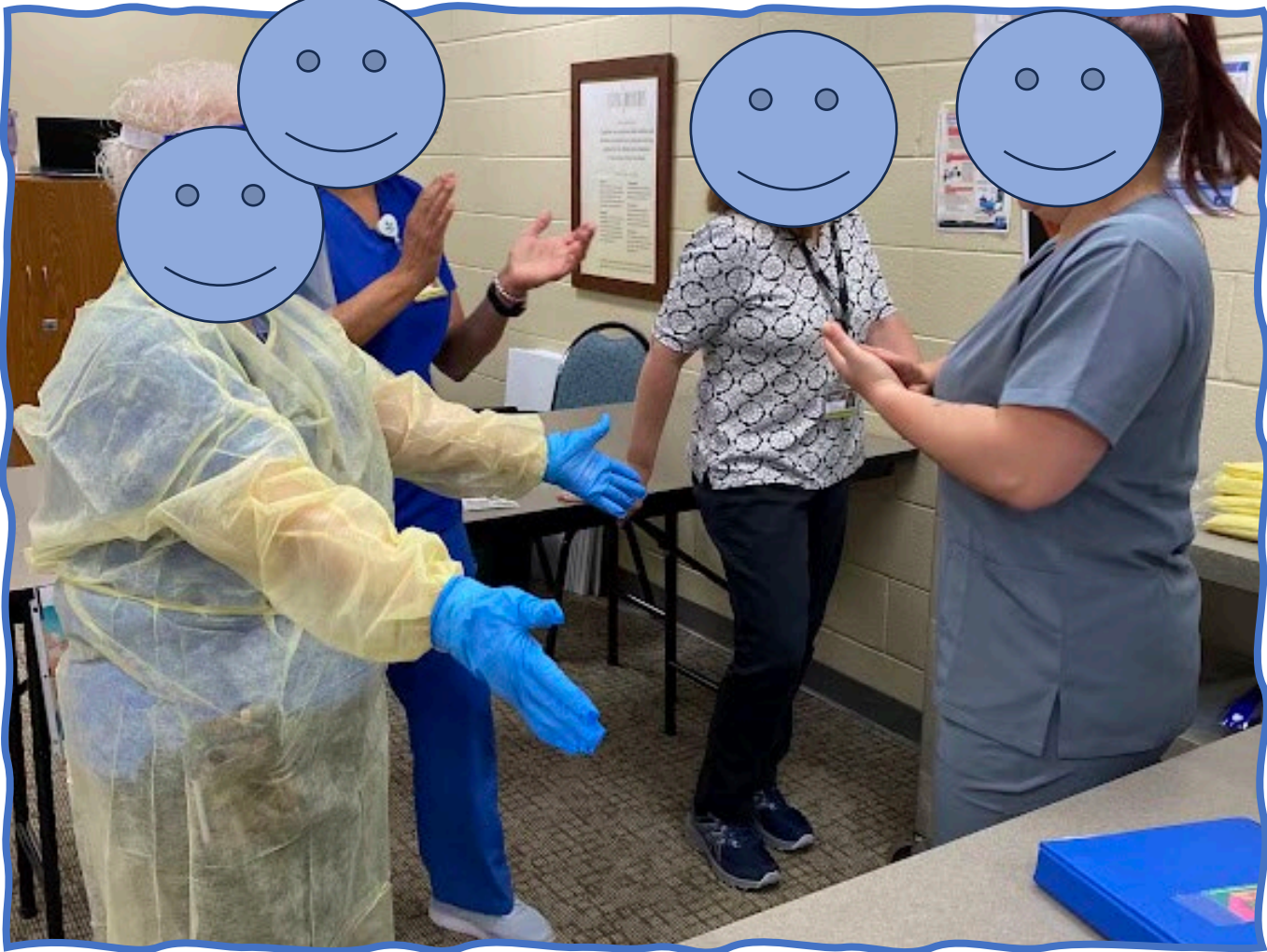
PPE Station



PPE Station



▶ PPE in Action



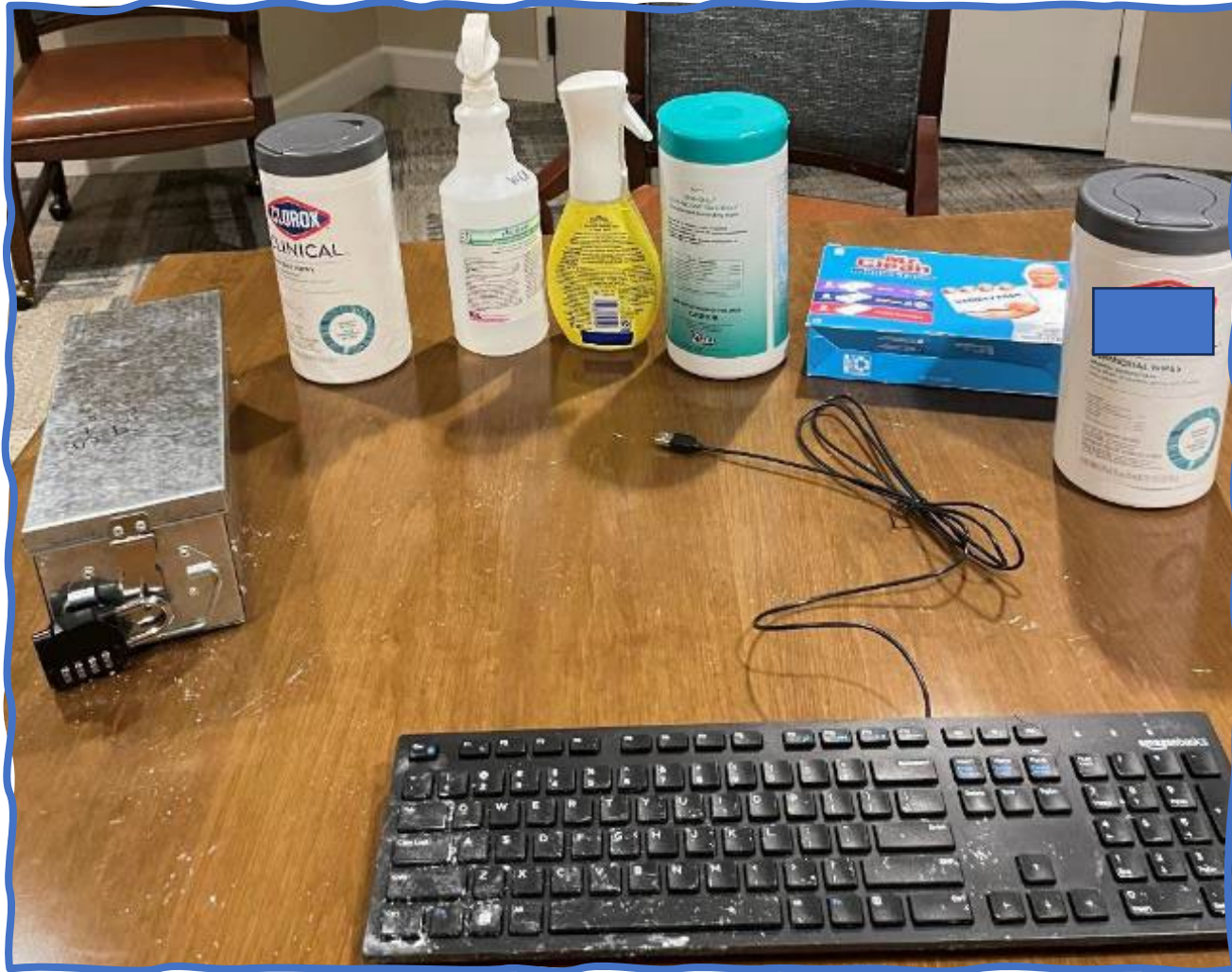
Station Four: Cleaning and Disinfection

Learning Objectives:

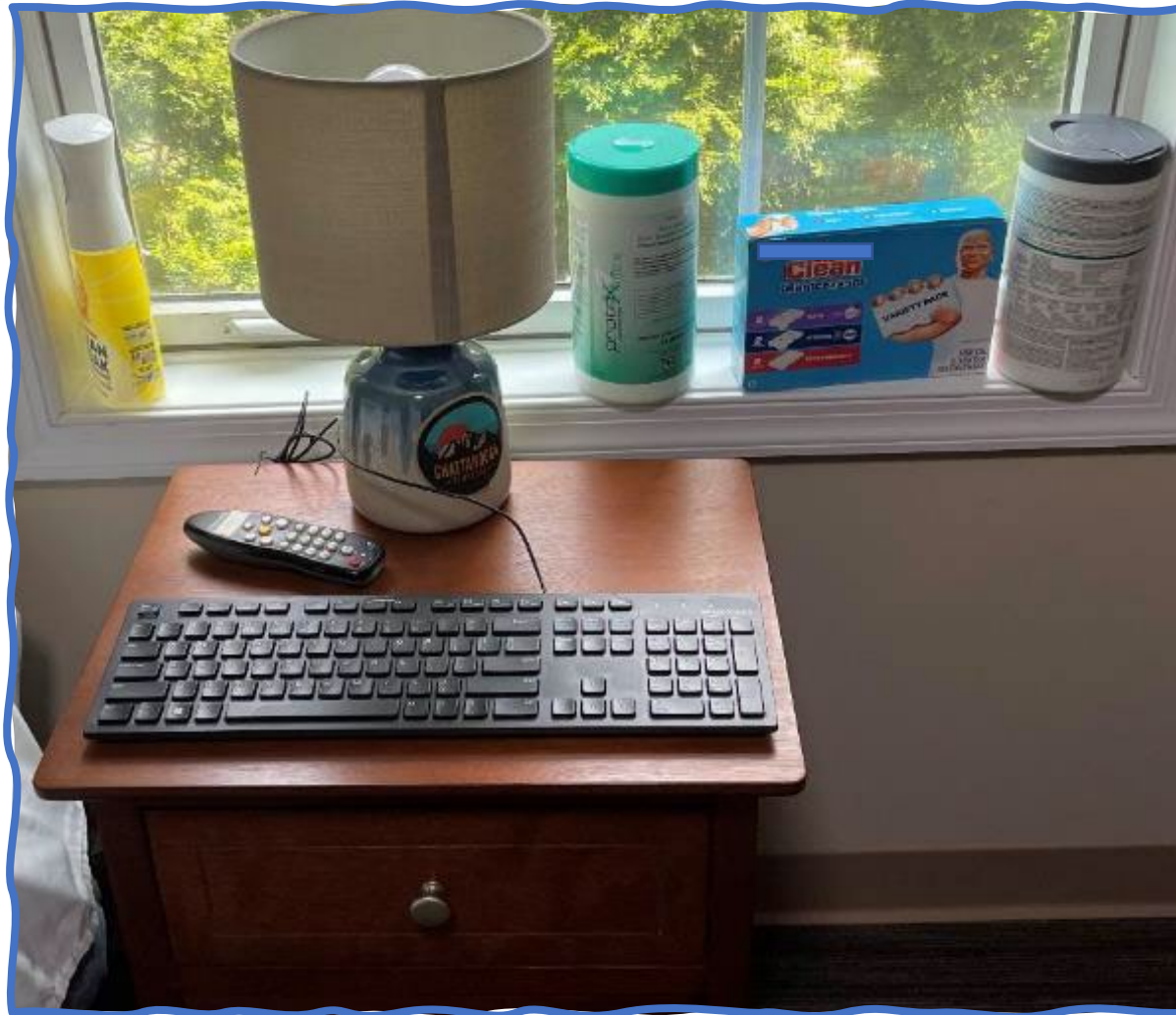
- Identify high-touch surfaces
- Read a disinfectant label
- Understand contact time

Tip: Use simulated germ products to show cleaning/disinfection techniques

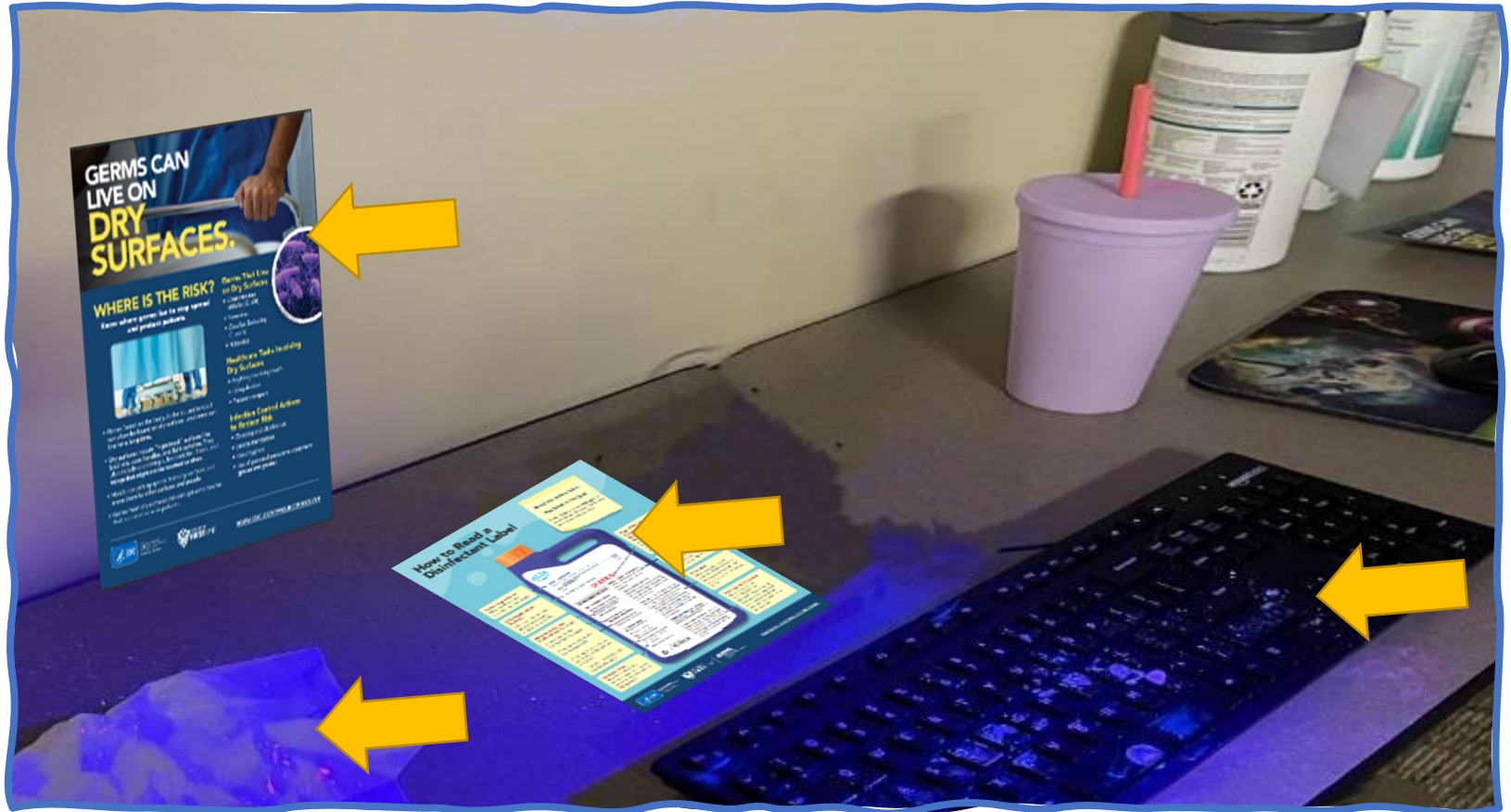
▶ Cleaning and Disinfection Station



▶ Cleaning and Disinfection Station



Cleaning and Disinfection Station



Contact Times in Action



Crossword Puzzle

High Touch Areas

HIGH TOUCH AREAS

DOWN:

1. Turns to open a door
2. Can be grasped for support
3. Types in letters and numbers
4. Flushes

ACROSS:

5. Long flat top fixtures
6. Used to turn on water

Legend:

Answer Key

HIGH TOUCH AREAS

DOWN:

1. Turns to open a door
2. Can be grasped for support
3. Types in letters and numbers
4. Flushes

ACROSS:

5. Long flat top fixtures
6. Used to turn on water

C L E A N

Success!

PROJECT FIRSTLINE **ESCAPE ROOM**
QUICK TIPS



YOU MADE IT!

Captain Germ B Gone thanks you for being a hero and learning how to stop the spread of germs right at the source!

- **HAND HYGIENE**
Protect yourself and your patients from potentially deadly germs by cleaning your hands. Cleaning your hands the right way at the right time is important
- **SOURCE CONTROL**
Apply a mask that covers both your nose and mouth to stop the spread of respiratory droplets
- **PPE**
The donning and doffing of PPE must be done correctly to prevent the spread of germs which could cause infections
- **CLEANING AND DISINFECTING**
Contact time is found on a disinfectant product label usually in the section labeled "Directions for Use"

DON'T SPREAD GERMS...SPREAD THE GOOD POINTS YOU LEARNED TODAY DURING THE PFL ESCAPE ROOM EXERCISE!



PROJECT FIRSTLINE
Pennsylvania Department of Health
100 North 3rd Street, Harrisburg, PA 17133
www.pennsylvania.gov/health



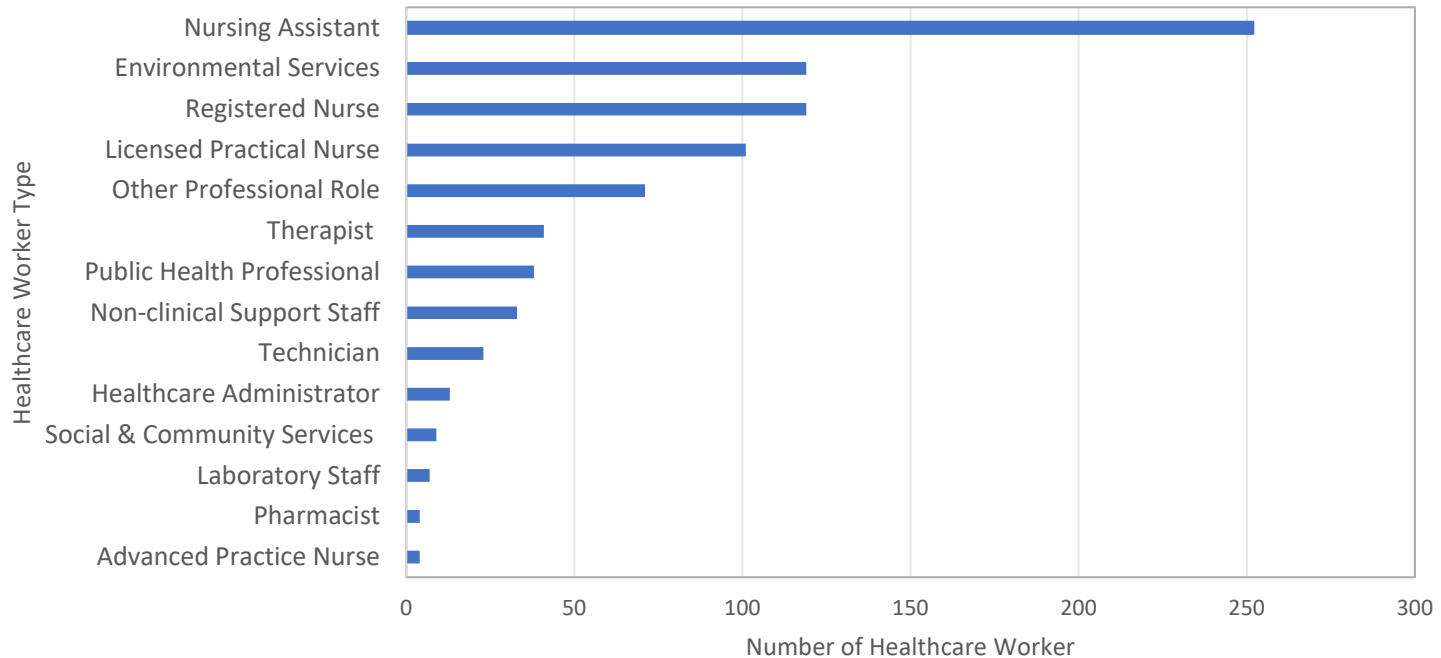
Success!

- Since June 2023, PA PFL has fulfilled 28 Escape Room requests. Results include:
 - 190 sessions completed (~6 sessions per Escape Room request)
 - 832 HCWs successfully completed
 - 56 different facilities included



Success!

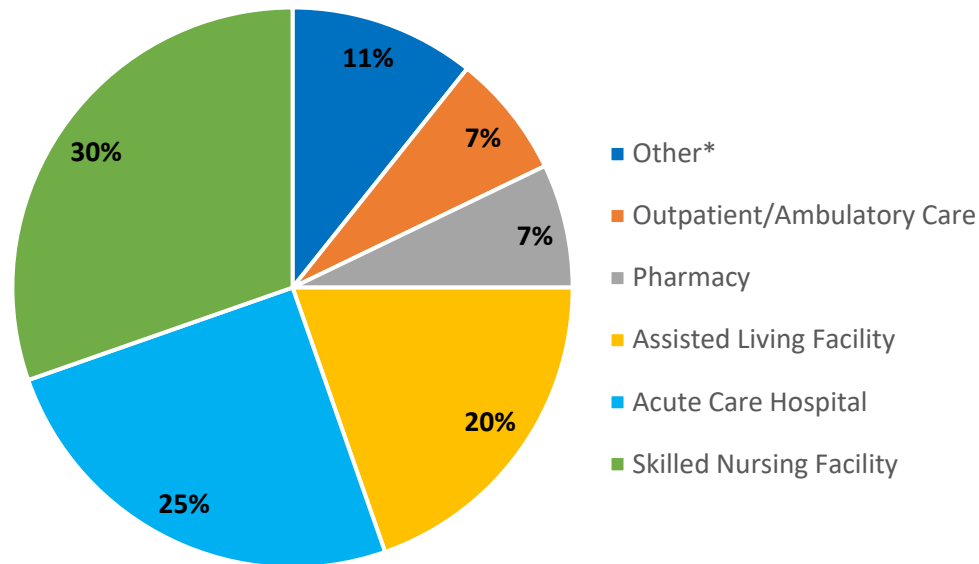
Total Number of Escape Room Attendees



- Captured a wide range of HCW types
- Nursing assistants represent the most participants followed by Environmental / Facility Services


Success!

Types of Facilities Represented at Escape Rooms



- Nursing homes represented the largest facility type, followed by acute care and assisted living facilities.


Escape Room Flyer




Project Firstline Escape Room

A NO-COST, LIVE , INTERACTIVE, TEAM-BUILDING ACTIVITY BROUGHT TO YOU BY
PA PROJECT FIRSTLINE

Captain Germ-B-Gone needs your help against the imaginary "Clutterbug" who is working hard to find ways to spread the flu throughout your facility. Teams of 4-5 people will have about 30 minutes to overcome Clutterbug's clever traps and unite with Captain Germ-B-Gone to proclaim victory!!!




PROJECT FIRSTLINE
CDC's National Training Collaborative
for Healthcare Infection Prevention & Control



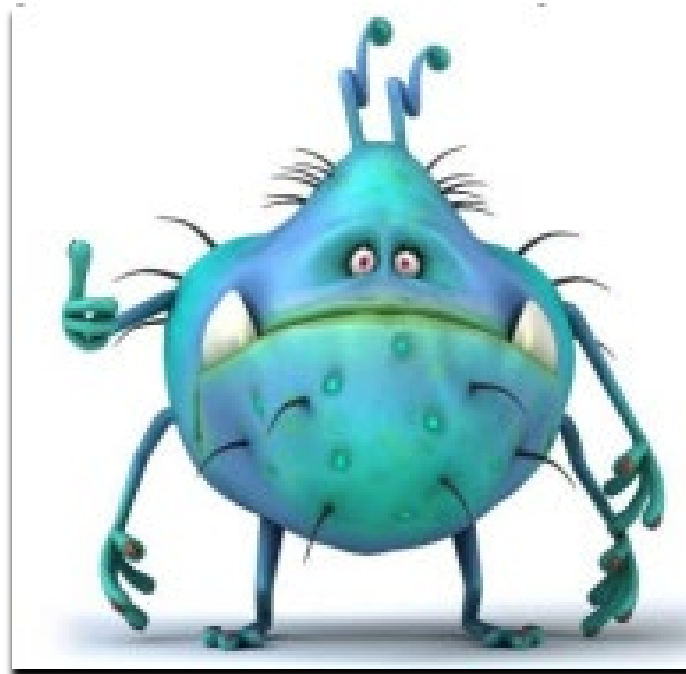
ESCAPE ROOM

SIGN-UP TODAY FOR THE PROJECT FIRSTLINE
ESCAPE ROOM EXPERIENCE AT YOUR FACILITY.
SPOTS ARE LIMITED



RA-
DHFIRSTLINE@PA.ORG

Questions?



Resources

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Resources continued

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- International Journal of Environmental Research and Public Health. (2021). Escape Room vs. Traditional Assessment in Physiotherapy students' Anxiety, Stress and Gaming Experience: A Comparative Study. [International Journal of Environmental Research and Public Health | An Open Access Journal from MDPI](#)

Questions?

Visit the PA Project Firstline Page for more resources:

- <https://www.health.pa.gov/topics/programs/HAIP-AS/Pages/PA-Project-Firstline.aspx>

Contact us at RA-DHFIRSTLINE@pa.gov