

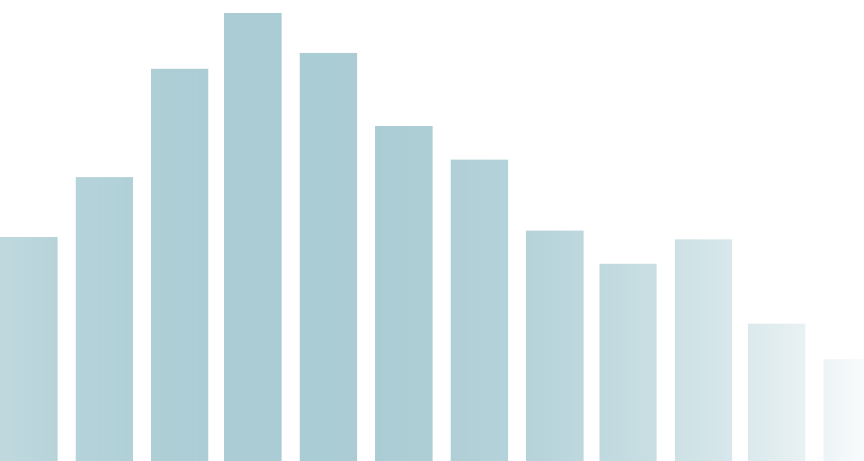


**Commonwealth
Medicine**



Applying Infection Control Basics in Congregate Care Settings

Maureen Spencer, M.Ed, RN, CIC, FAPIC
Infection Preventionist Consultant
Boston, MA



Housekeeping Items:



- This webinar is being recorded and will be made available at later date.



- Audio is provided through your computer or phone line.
 - Turn up speakers or headphones



- Phone lines
 - 1-646-876-9923 or 1-301-715-8592 or 1-312-626-6799



- Webinar ID: 914 5421 4268 Passcode: 698298

Your Role



Please participate actively



Submit questions via the Q&A box which can be found in the toolbar



Make note of the actions you can take



Maureen Spencer, RN,
M.Ed.
Certified Infection Control
Preventionist

Learning Objectives

- ✓ Review basics of infection control in order to train others.
- ✓ Identify scenarios when hand washing should be utilized.
- ✓ Identify scenarios when applying alcohol-based sanitizer is appropriate.
- ✓ Identify scenarios when personal protective equipment should be used; Demonstrate the correct procedure for putting on and removing personal protective equipment.
- ✓ Identify what should be cleaned/disinfected and how frequently; List the contact time for commonly used disinfectants in congregate care programs.

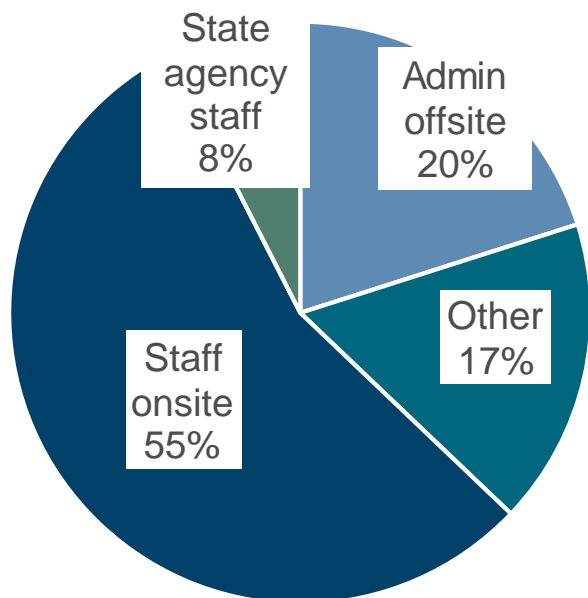
Purpose of Today's Webinar

To prepare congregate care managers, program staff and state agency congregate care staff to:

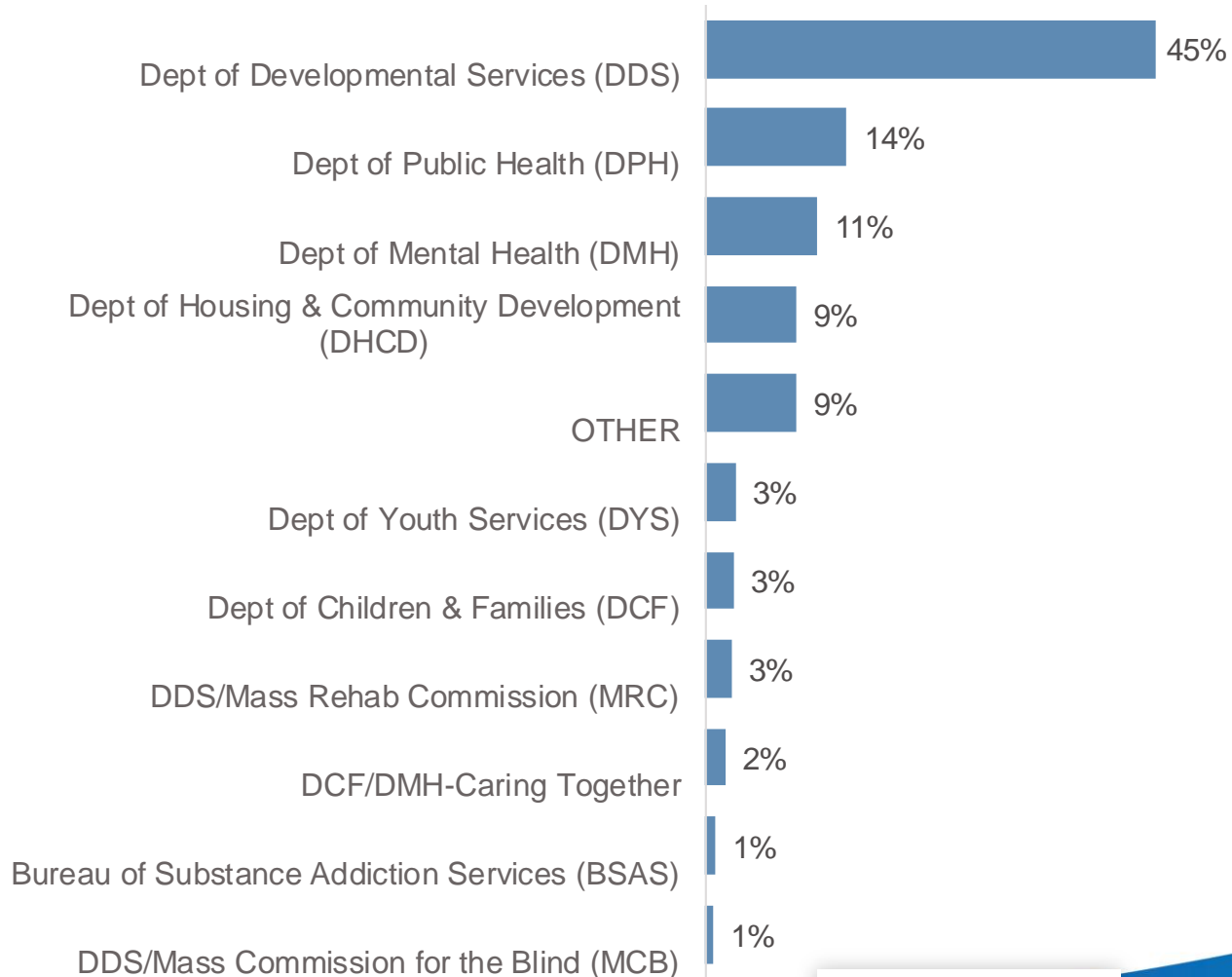
train and monitor staff and residents in congregate care programs on infection control practices to prevent and decrease exposure to illness

Pre-Webinar Question: Participants

Your Role



State Agency Affiliated with your Program



Train the Trainer Approach



Webinars

Live and
Recorded



Visuals

To print and
post



Videos

Basics of
infection
control



Facilitator Guide

How to
make it
work at
your
program

COVID-19 Current Status: EOHHS Congregate Care Sites

Agency	State-Operated Sites					Vendor-Operated Sites			Positive Client Deaths in Last 7 Days
	Total State Staff	Current State Staff Cases	Current Client Census	Current Positive Client Cases	Current Clients Recovered	Current Client Census	Current Positive Client Cases	Current Clients Recovered	
Department of Developmental Services (DDS) Congregate Care Sites	3,562	108	1,068	37	223	7,728	305	1,976	8
Department of Children and Families (DCF) Congregate Care Sites						1,710	41	383	0
Department of Public Health (DPH) Congregate Care Sites						5,498	333	923	0
Department of Mental Health (DMH) Congregate Care Sites	235	< 5	227	0	7	3,133	56	207	< 5
Department of Youth Services (DYS) Congregate Care Sites	326	34	96	0	21	141	6	11	0
Massachusetts Commission for the Blind (MCB) Congregate Care Sites						49	0	11	0
Massachusetts Rehabilitation Commission (MRC) Congregate Care Sites						116	< 5	< 5	0

Data as of January 19, 2021

Data reported weekly: <https://www.mass.gov/info-details/eohhs-covid-19-reporting>

Treatment and Prevention

Prevention

- Wash hands often
- Avoid close contact- social distancing per local and regional guidelines
- Cover mouth and nose with face covering - MASK
- Cover coughs and sneezes
- Clean and disinfect surfaces
- Monitor your health

Vaccine

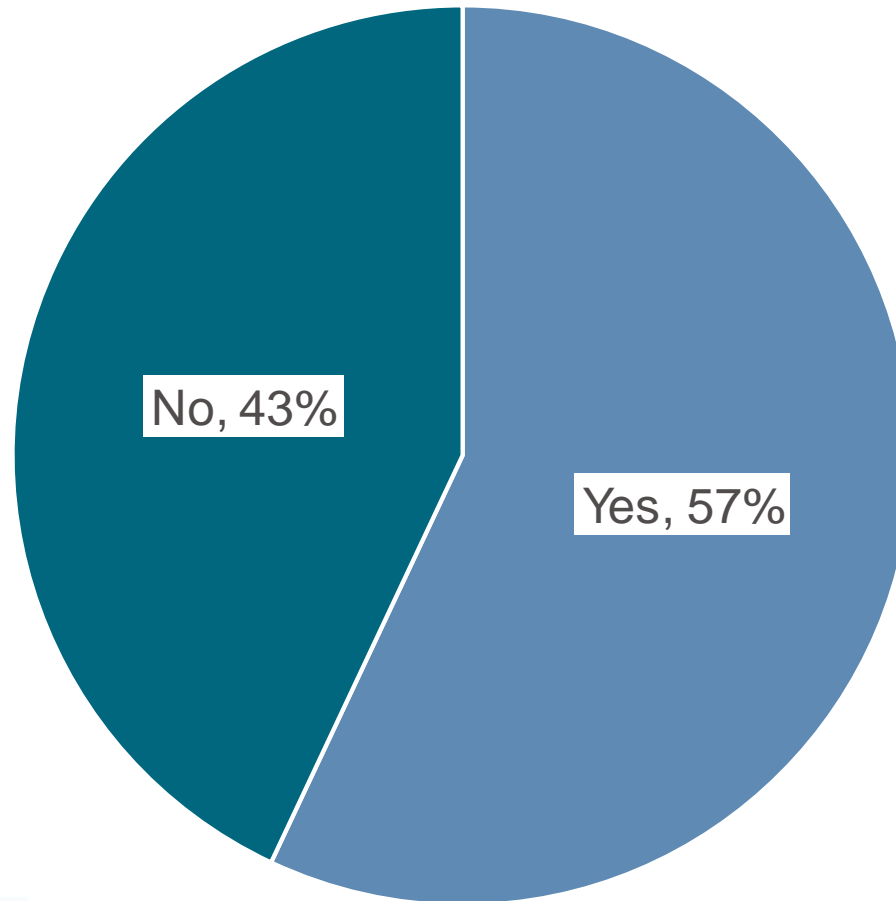
- Pfizer vaccine
- Moderna vaccine
- Other vaccines as they obtain Emergency Use Authorization (EUA)

Current Treatment

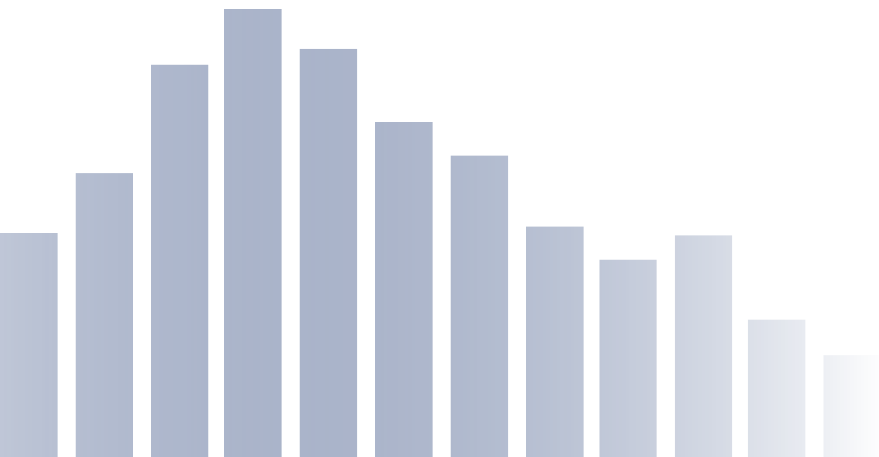
- Possible drug combinations
- Oxygen therapy
- Further studies ongoing
- COVID-19 treatment has improved with new drug combinations and enhanced care strategies due to experience caring for COVID-19 patients. As a result mortality has been reduced significantly since the early days of the pandemic when less was known about the disease.

Pre-Webinar Question: Training

Have you had training on Infection Control in the last year?



How to Confine and Contain COVID-19



Routes of Transmission of SARS-CoV-2

Direct Contact



An individual is exposed to infectious viruses by direct physical contact

Indirect Contact



An individual is exposed to infectious viruses by physical contact with contaminated objects

Droplet Transmission



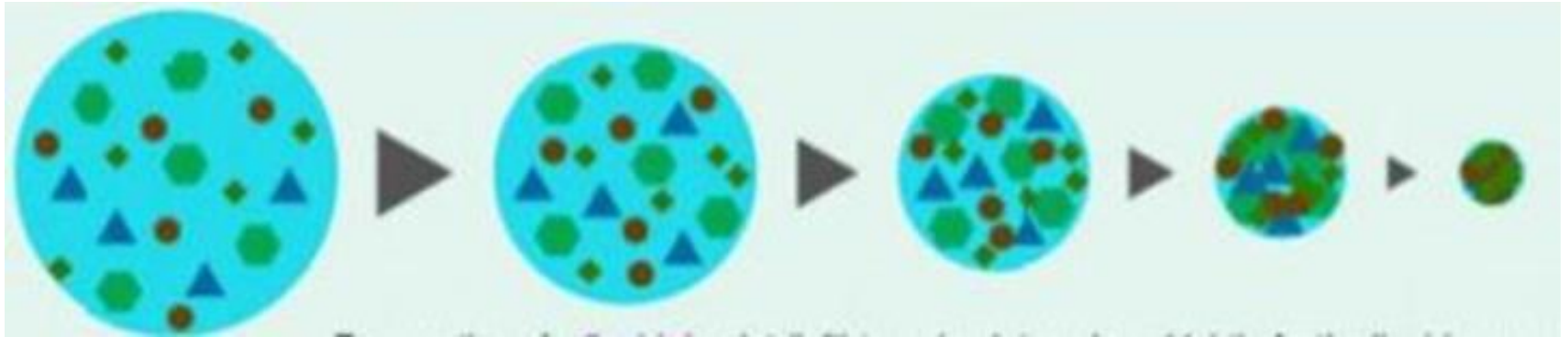
The infected individual releases infectious agents via droplets to another individual in close proximity and the droplet nuclei suspended in the air to other individuals who are farther away

Airborne Transmission



During an aerosol generating procedure infectious virus-laden aerosols are released into the environment with the potential to cause infection if inhaled by another individual

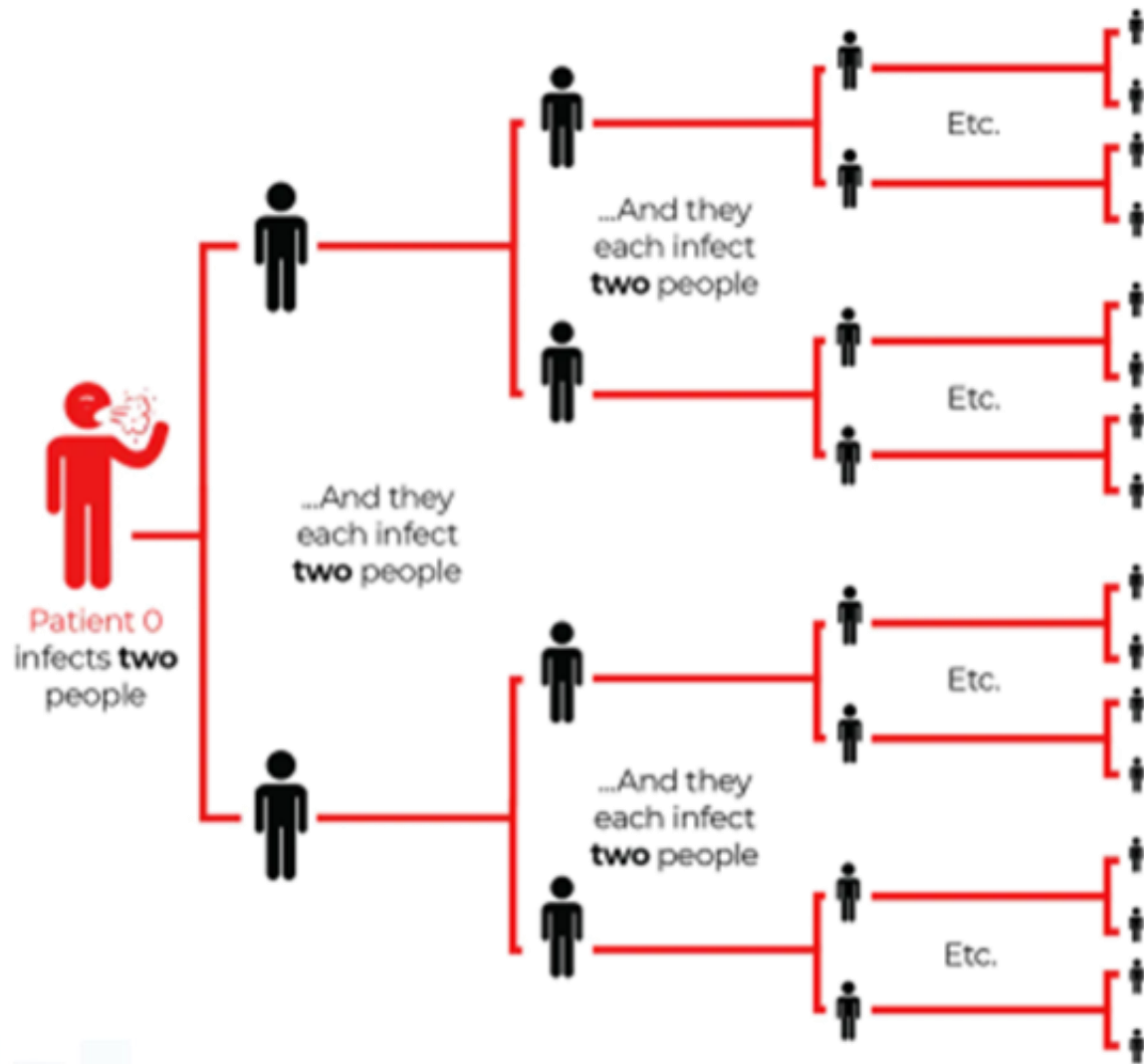
Routes of Transmission of SARS-CoV-2



Evaporation of a liquid droplet (left) to a droplet nucleus (right). As the liquid evaporates, the non-evaporative content concentrates until a droplet nucleus is obtained. Such a droplet nuclei could remain suspended in the air for longer periods than liquid droplets

This is why mask wearing is critical

How Fast the Virus Spreads with No Social Distancing



Standard Precautions

Hand Hygiene and Respiratory Etiquette



Personal Protective Equipment and Waste Disposal



Environmental Cleaning and Disinfection



Transmission Based Precautions

Contact Precautions



In addition to Standard Precautions

Droplet Precautions



In addition to Standard Precautions

Airborne Precautions



In addition to Standard Precautions

Pre-Webinar Questions: Signs, Equipment and Training

Do you have signs or other visual reminders about hand washing posted?

Yes, 96%

No, 4%

Do you have access to basic personal protective equipment such as gloves, masks, and face shields in your program?

Yes, 99%

No, 1%

Have you had any training on training on using personal protective equipment?

Yes, 89%

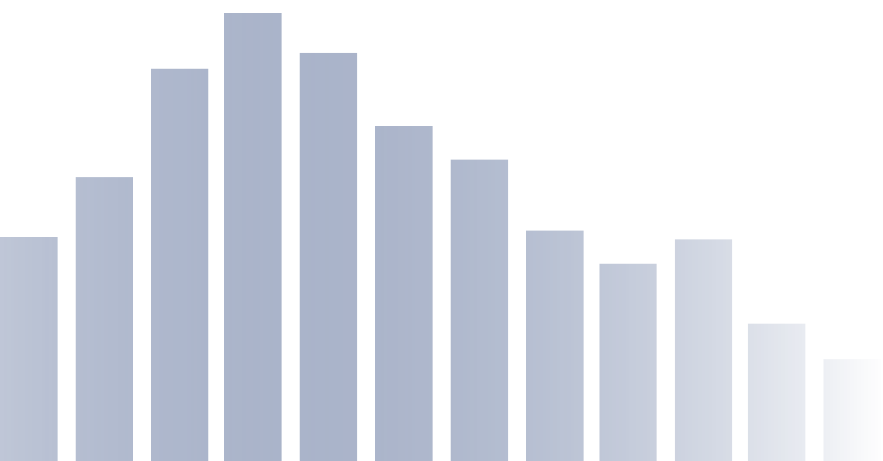
No, 11%

What Programs Can Do

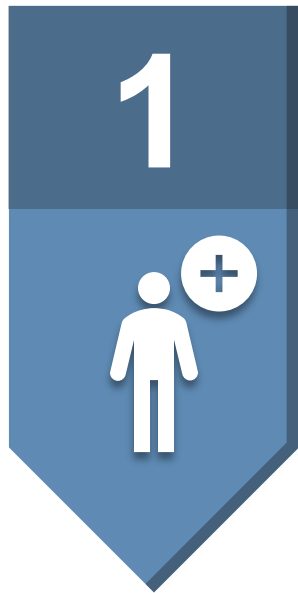
- Practice social distancing
- Conduct COVID-19 screen for staff, visitors and contractors prior to entering program sites
- Stagger staff breaks to promote social distancing
- Monitor and document hand washing, and putting on and off PPE
- Clean and disinfect environment frequently



Hand Hygiene and Respiratory Etiquette



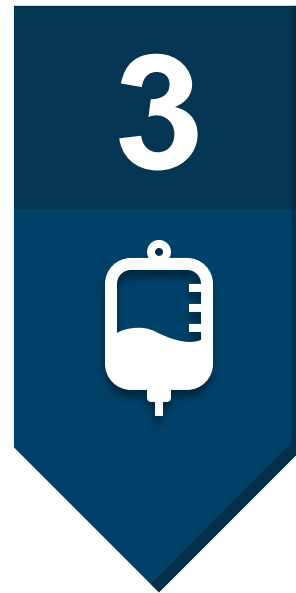
World Health Organization: 5 Steps to Hand Hygiene



Before
Touching a
person



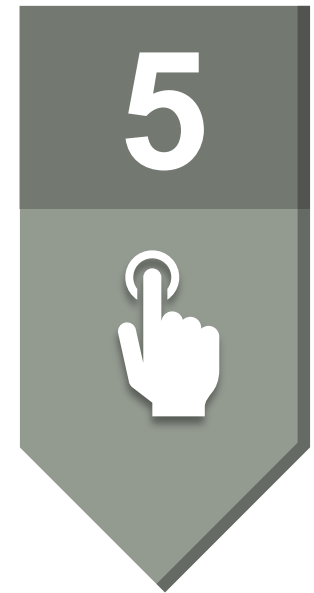
Before
clean/aseptic
procedures



After body
fluid
exposure/risk



After touching
a person



After touching
surroundings

Pre-Webinar Question: Barriers to Hand Washing

- Compliance/ consistency (55)
 - Adherence to protocols
 - Forgetting
 - Taking it seriously
- Oversight (20)
 - Ensuring it is done
 - Reminding students, residents
 - Monitoring
- Ability of residents (15)
 - Physical disabilities
 - Behavioral health
 - Cognitive or developmental disabilities
- Time it takes (12)
 - Not washing for long enough
 - Getting into habit
- Awareness (9)
 - Lack of knowledge
 - Helping people understand importance
- Availability of sinks (8)
 - Limited sinks/ proximity to sinks
 - No sinks in bedrooms
- Access to supplies (8)
 - Shortage in stores

How to Apply Alcohol Based Sanitizer



Alcohol-based Sanitizer should be 60% alcohol

Video available at: <https://youtu.be/B3eq5fLzAOo>

Hand Hygiene

If your hands are soiled:

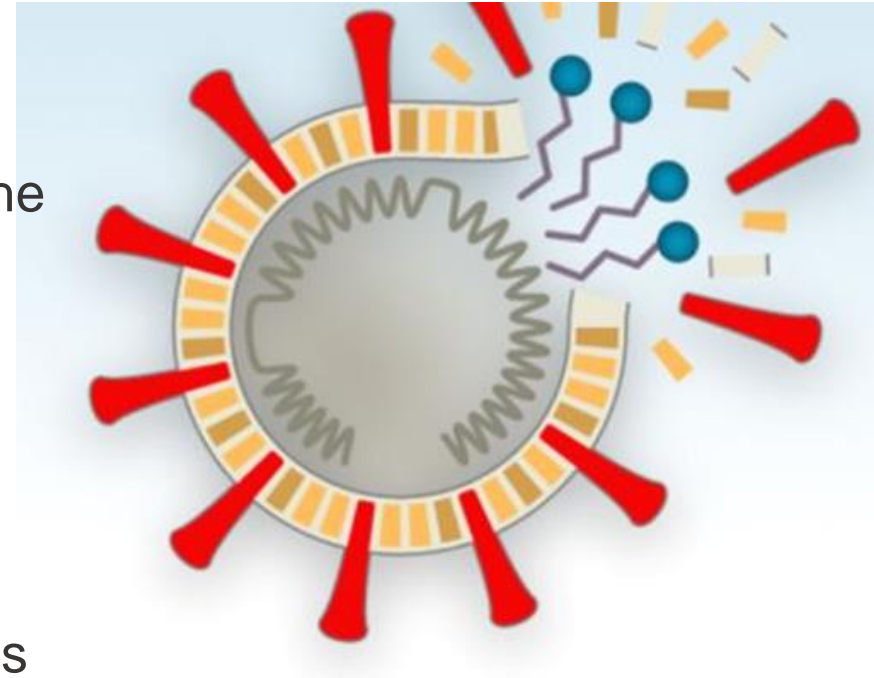
- Use soap and water
- Cover all surfaces of your hands
- Wash between fingers, under nails, tops of hands and thumbs
- Wash your hands for at least 20 seconds: (sing “Happy Birthday” twice)
- Use paper towels to shut off faucet handles
- Wash before and after going to the bathroom
- Wash after coughing, sneezing, or blowing your nose



For more information – go to the CDC handwashing website <https://www.cdc.gov/handwashing>

How Soap Works to Destroy the SARS-CoV-2

- Soap Destroys the Virus
- Soap molecules wedge themselves in the fatty membrane and pry it apart
- Best way to avoid getting infected is to:
 - wash your hands
 - avoid touching your face
 - keep your distance from sick people
 - regularly clean contaminated surfaces

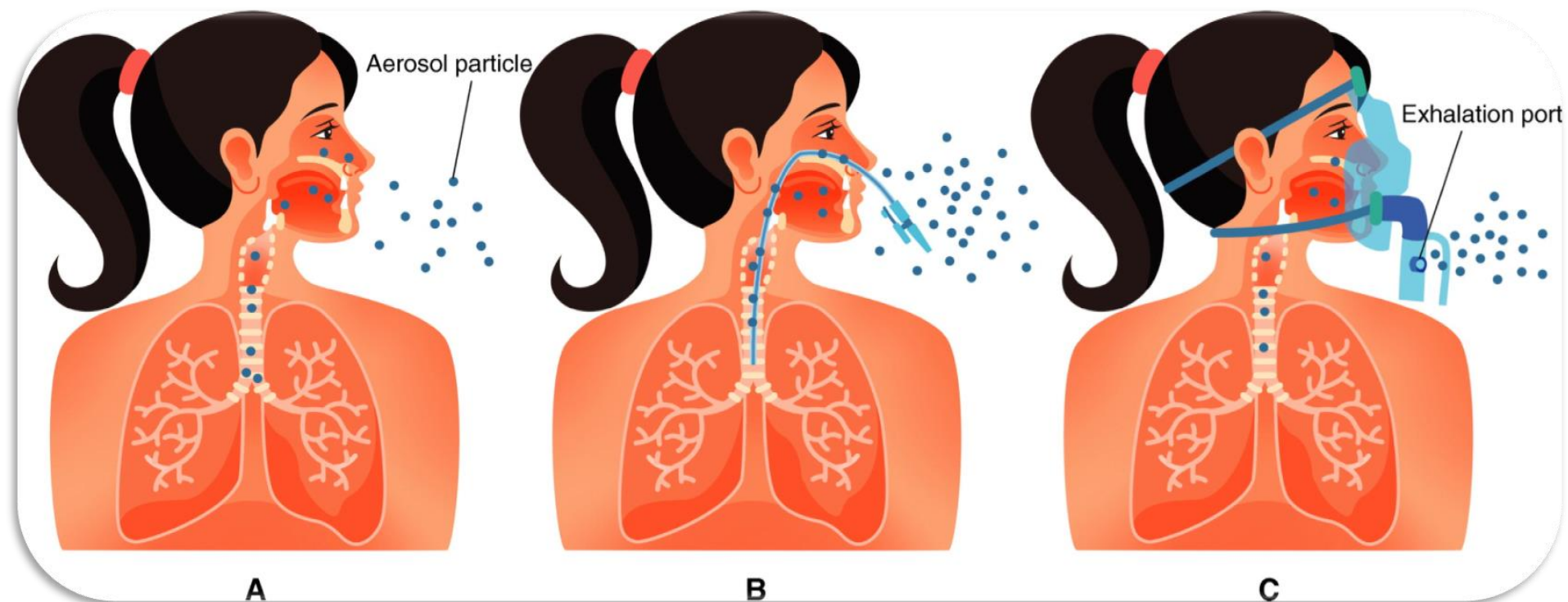


CDC Hand Hygiene Video



Video available at : https://www.youtube.com/watch?v=d914EnpU4Fo&feature=emb_logo

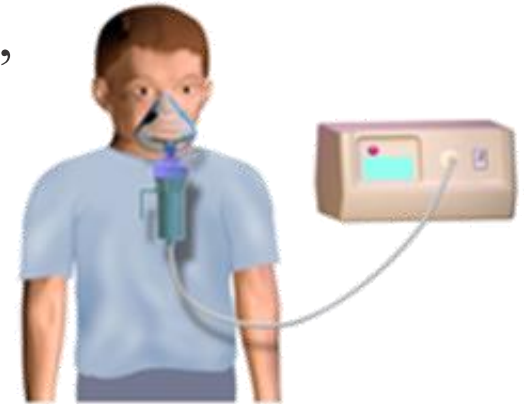
Airborne Transmission Through Particles



American Journal of Respiratory and Critical Care Medicine Volume 202 Number 5 | September 1 2020

Identify Aerosol Generating Procedures

- During Aerosol Generating Procedures (AGPs), identify and respond with appropriate PPE protection to reduce exposure risk
- Whenever involved in AGPs, be sure to utilize the following controls:
 - Don an isolation gown
 - Wear a respirator (DPH recommends N95) depending on region – or a mask
 - Wear face shield or goggles
 - Wear exam gloves



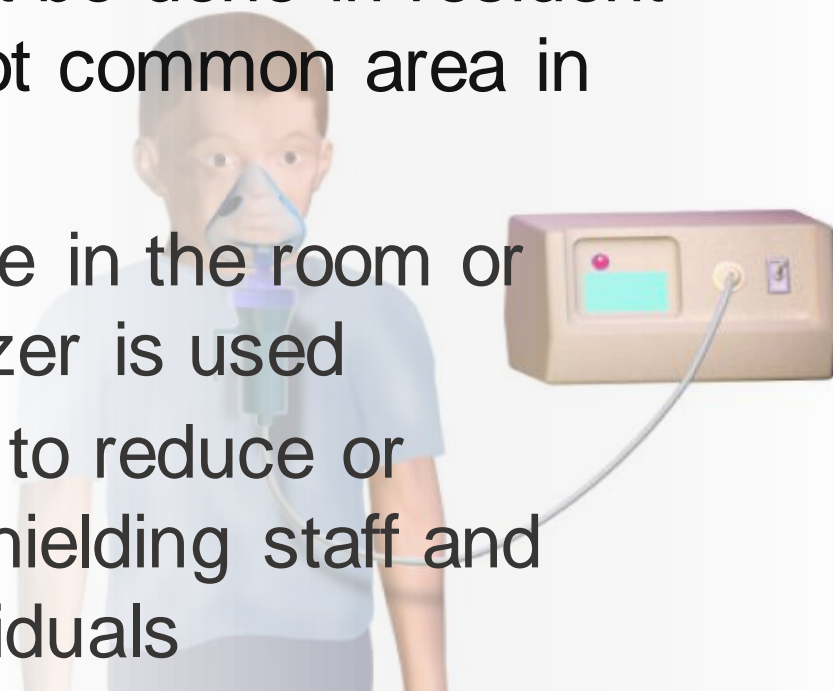
Using a Nebulizer



Aerosol Generating Procedures (AGP)

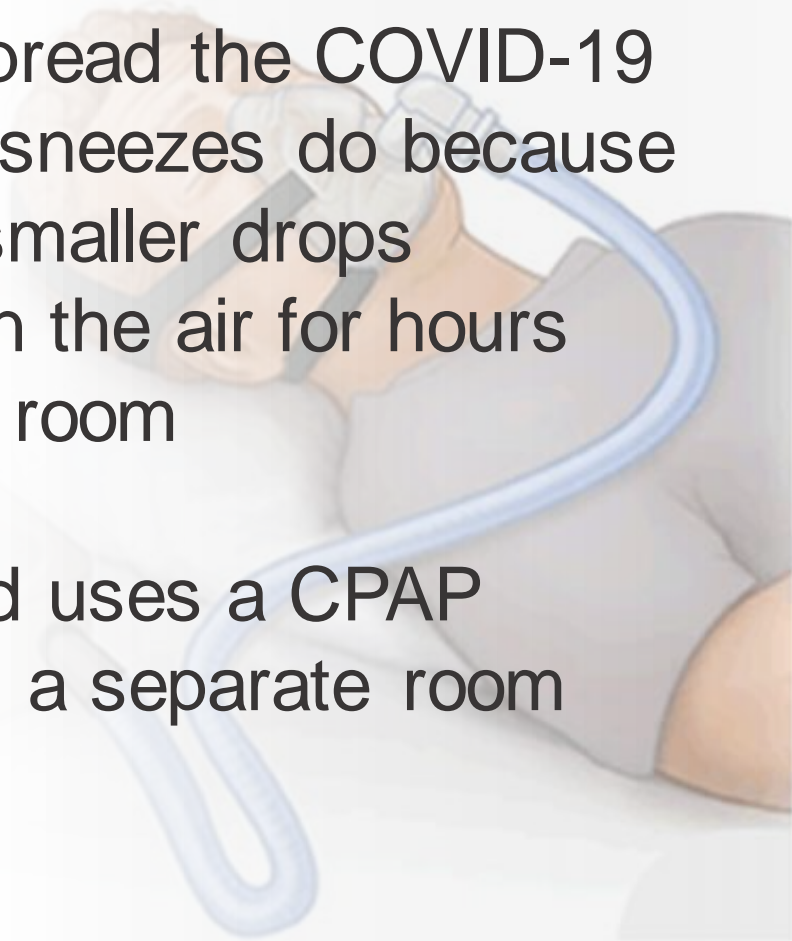
Nebulization:

- DPH has recommended it be done in resident room with door closed, not common area in home
- Limit the number of people in the room or location where the nebulizer is used
- Use engineering controls to reduce or eliminate exposures by shielding staff and others from infected individuals

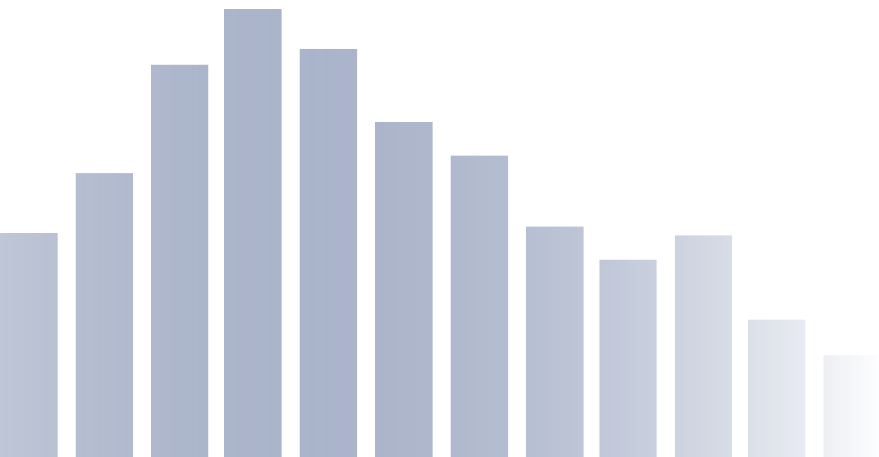


CPAP During the COVID-19 Outbreak

- Using a CPAP machine can spread the COVID-19 even further than coughs and sneezes do because the CPAP mask makes even smaller drops
 - These tiny drops can stay in the air for hours and can travel to the whole room
- If someone has COVID-19 and uses a CPAP machine they should isolate in a separate room



Personal Protective Equipment (PPE) and Waste Disposal



Personal Protective Equipment (PPE) Requirements

- Precautions
 - Standard
 - Transmission Based
 - Aerosol Generating Procedures
- PPE
 - Donning/Doffing
- Masks/Respirators
 - Do's and Don'ts
 - Fit testing



Face Coverings, Masks, and Respirators

Homemade Cloth Face Coverings Low Risk Jobs	Disposable Surgical Style Masks Medium Risk Jobs	NIOSH-approved N-95 Respirator High and Extremely High-Risk Jobs
Purchased face coverings (many types) for low-risk jobs NOT RECOMMENDED: For staff use in congregate care programs	Congregate Care Staff should be wearing RECOMMENDED: For staff use in congregate care programs	Congregate Care staff should be wearing RECOMMENDED: For staff working with COVID positive or suspected COVID residents/participants
Keeps droplets from escaping into the air	Keeps droplets from escaping into the air	Protects the wearer from inhaling droplets already in the air

What is Difference Between a N95 vs KN95?

- N95 masks and KN95 masks are made from multiple layers of synthetic material (typically a polypropylene plastic polymer)
- Both masks filter out and capture 95 percent of tiny 0.3 micron particles
- Regardless of where masks are manufactured KN95s are typically regulated by the Chinese government, while N95s are regulated by the National Institute for Occupational Safety and Health in the U.S.
- Approved KN95s will perform almost identically to N95s—they have virtually the same filtration rate and are therefore equally safe if they're properly certified
- KN95s might have ear loops; most N95s only attach via head straps.
- KN95s might be more readily available for purchase as demand for N95s continues to rise.
- Disclaimer about KN95 masks (important to check the DPH resource to ensure your KN95 masks meet standards <https://www.mass.gov/doc/KN95-respirator-test-results/download> <https://www.mass.gov/doc/faq-regarding-use-of-KN95-respirators-available-through-the-department-of-public-health/download>)



N95

vs.

KN95

PPE: Donning (Putting on) and Doffing (Taking off)

DONNING

- Perform hand hygiene
- Put on gown
- Put on mask (surgical or respirator)
- Put on eye protection
- Perform hand hygiene
- Put on gloves

DOFFING

- Remove gloves
- Remove gown
- Perform hand hygiene
- Remove eye protection
- Remove mask (surgical or respirator)
- Perform hand hygiene

Steps for donning and doffing posters available to download at <https://www.cdc.gov/coronavirus/2019-ncov/hcp/using-ppe.html>

CDC: Donning (Putting on) PPE



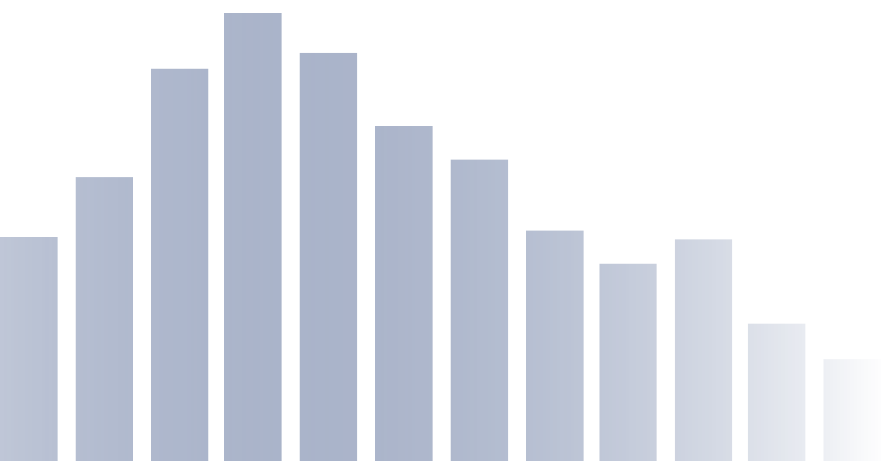
Video Available at: https://www.youtube.com/watch?v=H4jQUBAlBrI&feature=emb_logo

CDC: Doffing (Taking off) PPE



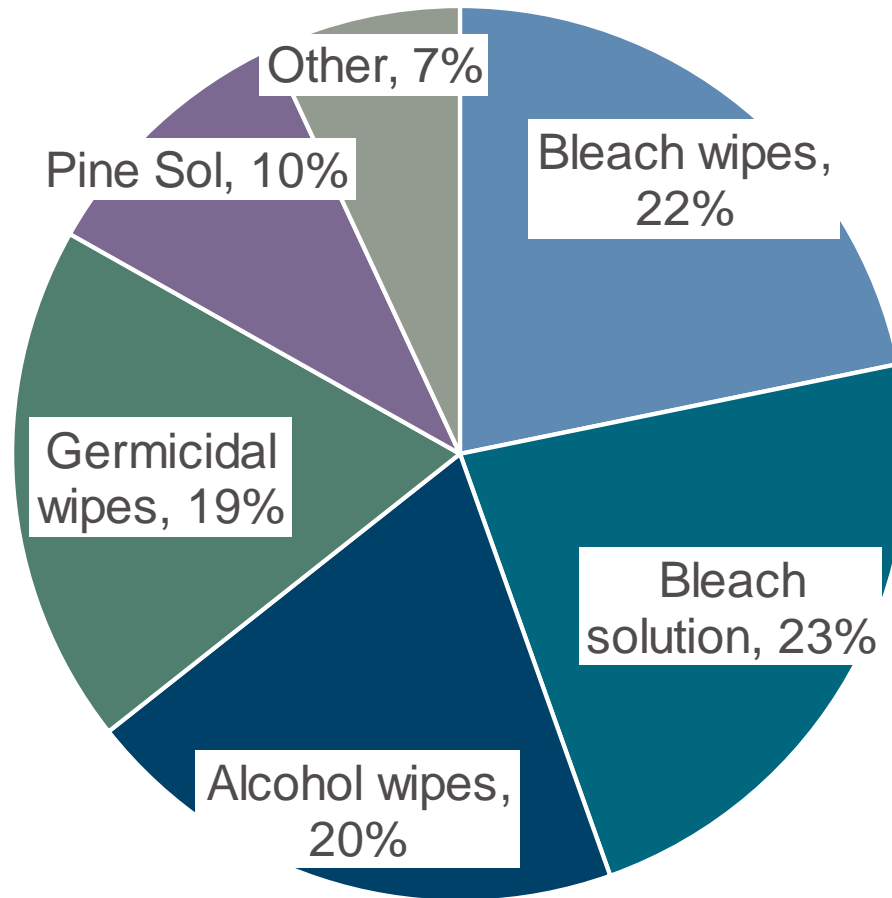
Video available at: <https://www.youtube.com/embed/PQxOc13DxvQ?feature=oembed>

Environmental Cleaning and Disinfection



Pre-Webinar Question: Disinfectants

What do you use to disinfect surfaces?



Cleaning and Disinfection Recommendations

- Decontaminate surfaces and equipment with appropriate disinfectants
- Use Government registered, facility approved disinfectants with label claims to be effective against SARS-CoV-2
- Follow manufacturer's written recommendations for use, such as dilution, contact time, and safe handling
- List N: Disinfectants for Use Against SARS-CoV-2 can be found on this website: <https://www.epa.gov/pesticide-registration/list-n-disinfectants-coronavirus-covid-19>



Cleaning and Disinfecting the Environment

- Normal routine cleaning with soap and water removes germs and dirt from surfaces. It lowers the risk of spreading COVID-19 infection.
- Disinfectants kill germs on surfaces. By killing germs on a surface after cleaning, you can further lower the risk of spreading infection.
- Leave the disinfectant on the surface for the required contact time for complete disinfection
- Store and use disinfectants in a responsible and appropriate manner according to the label.
- Do not mix bleach or other cleaning and disinfection products together--this can cause fumes that may be very dangerous to breathe in.
- Keep all disinfectants out of the reach of children.
- Always wear gloves appropriate for the chemicals being used when you are cleaning and disinfecting. Additional personal protective equipment (PPE) may be needed based on setting and product.

<https://www.epa.gov/coronavirus/guidance-cleaning-and-disinfecting-public-spaces-workplaces-businesses-schools-and-homes>

Contact Times for Common Disinfectants

Disinfectant	Brand	Company	Contact Time
Sodium hypochlorite	Clorox Healthcare Spore10 Defense Cleaner Disinfectant	The Clorox Company	1 minute
Sodium hypochlorite	Clorox Clean Up Cleaner + Bleach	The Clorox Company	0.5 (30 seconds)
Quaternary ammonium	Fantastik® Multi-Surface Disinfectant Degreaser	S.C. Johnson Professional	5
Quaternary ammonium	Lysol® Brand All Purpose Cleaner	Reckitt Benckiser LLC	2
Quaternary ammonium	Lysol® Disinfecting Wipes (All Scents)	Reckitt Benckiser LLC	2
Citric acid	Lysol® Bathroom Cleaner	Reckitt Benckiser LLC	5
Quaternary ammonium	Lysol® Brand Deodorizing Disinfectant Cleaner	Reckitt Benckiser LLC	10
Quaternary ammonium	Lysol® Brand Cling & Fresh Toilet Bowl Cleaner	Reckitt Benckiser LLC	0.5 (30 seconds)
Sodium hypochlorite	Clorox Multi Surface Cleaner + Bleach	The Clorox Company	1
Quaternary ammonium	Lysol® Brand Heavy Duty Cleaner Disinfectant Concentrate	Reckitt Benckiser LLC	5

6 Steps for Safe and Effective Disinfectant Use

Step 1: Check that your product is EPA-approved

- Find the EPA-registration number on the product label.
- Then check to see if it is on the EPA's list of approved disinfectants at www.epa.gov/listn
- Label products

Step 2 : Read the directions

- Follow the product's directions. Check "use site" and "surface types" to see where you can use the product.
- Read the "precautionary statements".

Step 3: Pre-clean the surface

- Make sure to wash the surface with soap and water if the directions mention pre-cleaning or if the surface is visibly dirty.

Step 4 : Follow the contact time

- You can find the contact time in the directions.
- The surface should remain wet the whole time to ensure the product is effective

Step 5 : Wear gloves and wash your hands

- For disposable gloves, discard them after each cleaning.
- For reusable gloves, dedicate a pair to disinfecting COVID-19.
- Wash you hands after removing the gloves

Step 6 : Lock it up

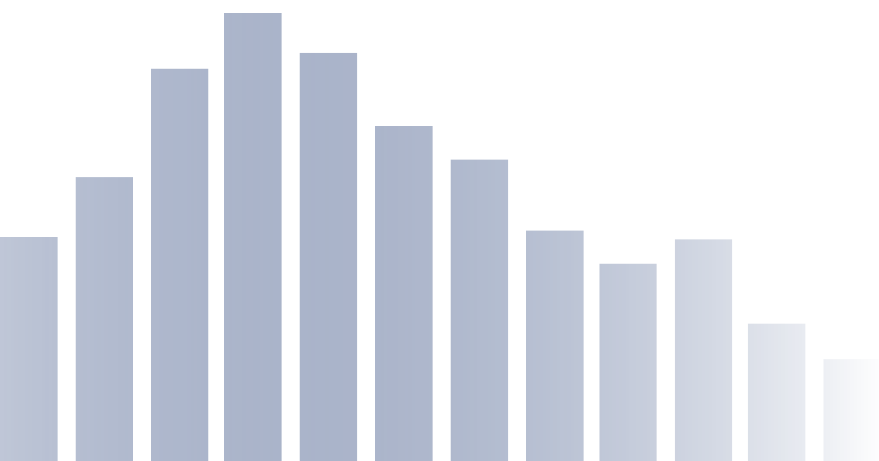
- Keep lids tightly closed and store out of reach of children.

Disinfect Phones, Desks, Mobile Devices

- Use a disinfecting wipe that is compatible with your device
- Remember... your phone touches your face
- Due to today's risk factors...
- Clean them often
- Wash your hands before and after using a phone
- Cell phones can be disinfected with disinfectant wipes



Summary and Resources



Self-Care

1. Eat healthy and exercise
2. Avoid things that deplete immune function
 - Reduce alcohol & sugar intake
 - Both have been shown to reduce immune function
3. Take care of yourself
 - Stress Reduction



Diet and Immune Function. *Nutrients*, 2019 Aug 16;11(8):1933

Alcohol and the Immune System. *Alcohol Research – Current Review*, Volume 37, Number 2, 2015

In Summary



Use appropriate PPE

for contact with infected residents (as well as those suspected to be positive) and observe proper donning and doffing and record competencies



Practice social distancing, use face coverings and frequently wash hands

throughout facility, center or group home



Train staff in proper hand hygiene

observe and record competencies for soap and water hand washing and alcohol based hand sanitizer



Follow Guidelines

CDC and MA Department of Public Health (DPH)

Resources to Learn More

Center for Disease Control and Prevention	https://www.cdc.gov/coronavirus/2019-ncov/
Mass DPH COVID information	https://www.mass.gov/info-details/covid-19-updates-and-information
Mass DPH COVID cases	https://www.mass.gov/info-details/covid-19-response-reporting
Mass DPH Travel	https://www.mass.gov/info-details/covid-19-travel-order
Video: CDC Hand Hygiene	https://www.youtube.com/watch?v=d914EnpU4Fo&feature=emb_logo
Video: How to apply hand sanitizer	https://www.youtube.com/watch?v=4xC-7ZiQoY&feature=emb_logo
Video: CDC Donning PPE	https://www.youtube.com/watch?v=H4jQUBAIBrl&feature=emb_logo
Video: CDC Doffing PPE	https://www.youtube.com/embed/PQxOc13DxvQ?feature=oembed
Mass DPH Guidance on KN-95 Masks	https://www.mass.gov/doc/kn95-respirator-test-results/download

References

- Centers for Disease Control and Prevention
- <https://www.cdc.gov/coronavirus/2019-ncov/>
- U.S. Environmental Protection Agency
- <https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>
- CDC Hand Hygiene Guidelines:
<https://www.cdc.gov/handhygiene/providers/guideline.html>
- CDC Duration of Isolation for COVID19
<https://www.cdc.gov/coronavirus/2019-ncov/hcp/duration-isolation.html>

Next Steps

- Share this information with other staff
- Share the recorded version
- Utilize tools in facilitator guide in your program
- Attend Infection Control Office hours

