

We will begin in a moment



Instructions for Contact Hour

1. Update your Zoom name to reflect your full name
2. Zoom name MUST match your evaluation name
3. Enjoy the entire program
4. Complete the post-evaluation by March 24, 2023, 5:00 PM (available on the last slide)
5. Certificate will be emailed to you by April 15, 2023

What's Your LEPRECHAUN Name?

The 1st Letter of Your Name....



A - Adorable	H - Helpful	O - Outgoing	V - Vibrant
B - Bubbly	I - Itchy	P - Playful	W - Witty
C - Cheerful	J - Jolly	Q - Quiet	X - X-tra Special
D - Dreamy	K - Kind	R - Restless	Y - Youthful
E - Eager	L - Lucky	S - Silly	Z - Zany
F - Fussy	M - Musical	T - Timid	
G - Grouchy	N - Noisy	U - Useful	



The Month You were Born... [Fb.com/ShutUpImStillTalking](https://www.facebook.com/ShutUpImStillTalking)

Jan. - McCheesy	May - McWiggles	Sept. - McBlarney
Feb. - O'Gratin	June - O'Lucky	Oct. - O'Doodles
March - McMuffin	July - McNoodles	Nov. - McWobbles
April - O'Really	Aug. - O'Wacky	Dec. - O'Goofy

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San Diego Skilled Nursing Facility Infection Prevention Collaborative

Grow - Collaborate - Succeed

Coordinated by the County of San Diego
Healthcare-Associated Infections (HAI) Program

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Reminders



COUNTY OF SAN DIEGO
HHSA
HEALTH AND HUMAN SERVICES AGENCY



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Recording is on!



PHS.HAI.HHSA@sdcounty.ca.gov



Keep your lines muted



Participate in the polls and chat



Use the chat box for questions



Slides will be emailed



“Right click” to rename



Type into the chat your:

- Name
- Title
- Facility

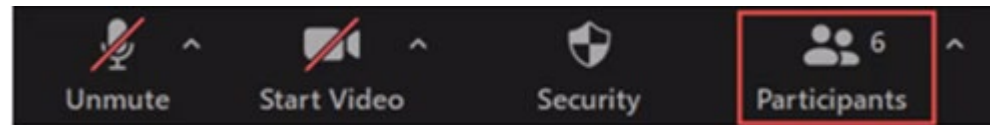
Reminders



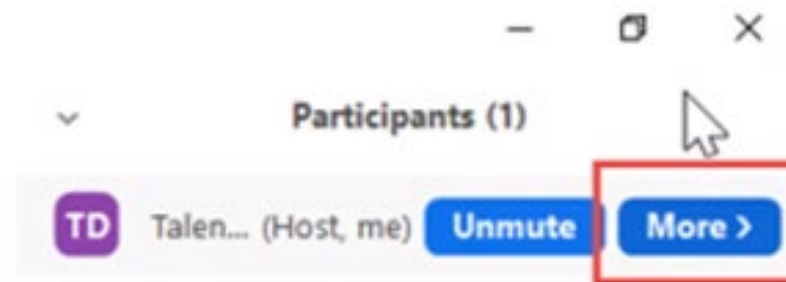
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Please update your name on the participant list

1. Find your name on the participant list



2. Hover over your name and click "More"



3. Click "RENAME"
4. Type your full name

Land Acknowledgement



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Public Health Services would like to begin by acknowledging the Indigenous Peoples of all the lands that we are on today. While we are meeting on a virtual platform, I would like to take a moment to acknowledge the importance of the lands, which we each call home. We respectfully acknowledge that we are on the traditional territory of the Kumeyaay. We offer our gratitude to the First Nations for their care for, and teachings about, our earth and our relations. May we honor those teachings.

Agenda



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Welcome

General Updates

Featured Topic: “What an IP needs to know about air ventilation”

Announcements

Next Collaborative

HAI WEBSITE



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New Materials

Q sdhai.org



CANDIDA AURIS (*C. auris*)

Frequently Asked Questions for
Patients and Family Members

- **What is *C. auris*?**
 - It is a yeast that can survive in healthcare settings for a long time.
- **What is the risk?**
 - It can be hard to treat with medicine usually used for yeast.
 - It can spread quickly in healthcare settings. It can lead to severe infections, when germs enter your body and make you sick. It can even cause death.
- **How should I protect myself?**
 - Tell your doctor if you have ever been diagnosed with *C. auris* or another drug resistant infection.
 - You have a right to be treated with clean hands. All healthcare staff have to wash their hands or use hand sanitizer before they touch you or any tubes attached to your body. If you did not see them wash their hands, it is ok to ask them to.
 - Your visitors care about you. It's ok to ask them to wash their hands or use hand sanitizer too.
 - Staff might come into your room to clean and disinfect. They do this to keep you safe. Please follow their instructions on what to do during this process.
- **What if I have questions?**
 - Ask your doctor or nurse.
 - Visit our website sdhai.org for more information or scan the QR code to the right.



3/16/2023

醫療保健人員需要了解的事項

耳念珠菌 (*C. Auris*)

C. Auris 是一種在醫療保健設施內傳播的真菌，很難治療。



甚麼是 *C. Auris* ?

- *C. Auris* 是一種可能導致嚴重感染的真菌，其在醫療保健設施中極易傳播。

為甚麼引起專家關注？為甚麼應該引起我們的關注？

- *C. Auris* 通常對抗真菌藥物具有耐藥性，因此很難治療。
- 它可以在人與人之間輕鬆傳播，或者輕易地從受污染表面和共用醫療設備上傳染給人。
- 大多數 *C. Auris* 攜帶者沒有任何體徵或症狀，稱為「定植」。
- *C. Auris* 感染可能很難治療，而且可以導致重症或死亡。

哪些人最有可能感染 *C. Auris* ?

- 醫療保健設施內帶有開放性傷口或體內放置導管（例如飼食管、呼吸管和中央靜脈導管）的人員。
- 免疫功能低下者。
- 其他風險因素包括複雜病史、近期手術，或是皮膚完整性受損。
- 健康人感染 *C. Auris* 的風險較低。

如何預防病患感染 *C. Auris* ?

- 護理已知或可疑 *C. Auris* 感染病患時，應採取接觸性傳播預防措施（例如手部衛生、防護衣和手套）。
- 徹底消毒物體表面和醫療設備。
- 請務必遵守張貼在病患房間內的接觸性傳播感染隔離指示。

哪裡可以獲得更多資訊？

- sdhai.org



2023年3月16日

For Healthcare Staff

- County of San Diego

■ *C. auris* FAQs - What Healthcare Staff Should Know

- Spanish
- Arabic
- Dari (Persian)
- Farsi (Persian)
- Korean
- Somali
- Tagalog
- Traditional Chinese
- Vietnamese

SCAN ME



General Updates



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- **New Health Alerts**
- **Respiratory Virus Update**
- **AFL Updates**

San Diego CAHAN



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To: CAHAN San Diego Participants

Date: February 28, 2023

From: Public Health Services

Health Advisory: Increase in Extensively Drug-Resistant Shigellosis in the United States

Key Messages

- On February 24, 2023, the Centers for Disease Control and Prevention (CDC) issued a health [advisory](#) regarding an increase in extensively drug-resistant (XDR) shigellosis in the United States.
- Healthcare providers are asked to be vigilant about suspecting and reporting cases of XDR *Shigella*.
- XDR *Shigella* cases can be reported to the Epidemiology Unit by faxing a Confidential Morbidity Report, or by calling 619-692-8499 (Monday-Friday 8 AM-5 PM), or 858-565-5255 (after hours).

Media Alert



COUNTY OF SAN DIEGO
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Candida auris in the news

Annals of Internal Medicine®

Original Research

Worsening Spread of *Candida auris* in the United States, 2019 to 2021

Meghan Lyman, MD , Kaitlin Forsberg, MPH , D. Joseph Sexton, PhD , Nancy A. Chow, PhD, MS,

Shawn R. Lockhart, PhD , Brendan R. Jackson, MD, MPH , and Tom Chiller, MD, MPHTM [See Less](#)

Author, Article, and Disclosure Information

<https://doi.org/10.7326/M22-3469>

Respiratory Virus Update



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San Diego County Respiratory Virus Surveillance Report

Prepared by Epidemiology and Immunization Services Branch

www.sdepi.org

March 16, 2023

COVID-19

Cases
146,573

Deaths
389

Outbreaks*
396

7/3/2022 – 3/11/2023

Influenza

Cases
21,092

Deaths
41

Outbreaks*
24

7/3/2022 – 3/11/2023

*In residential congregate settings

Respiratory Virus Update



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COVID-19 and Influenza Cases by Episode Week, Fiscal Year-to-Date

Figure 2.1. San Diego County **COVID-19** Confirmed and Probable Cases by CDC Episode Week*, 2022-23 Fiscal Year-to-Date (N=165,565)

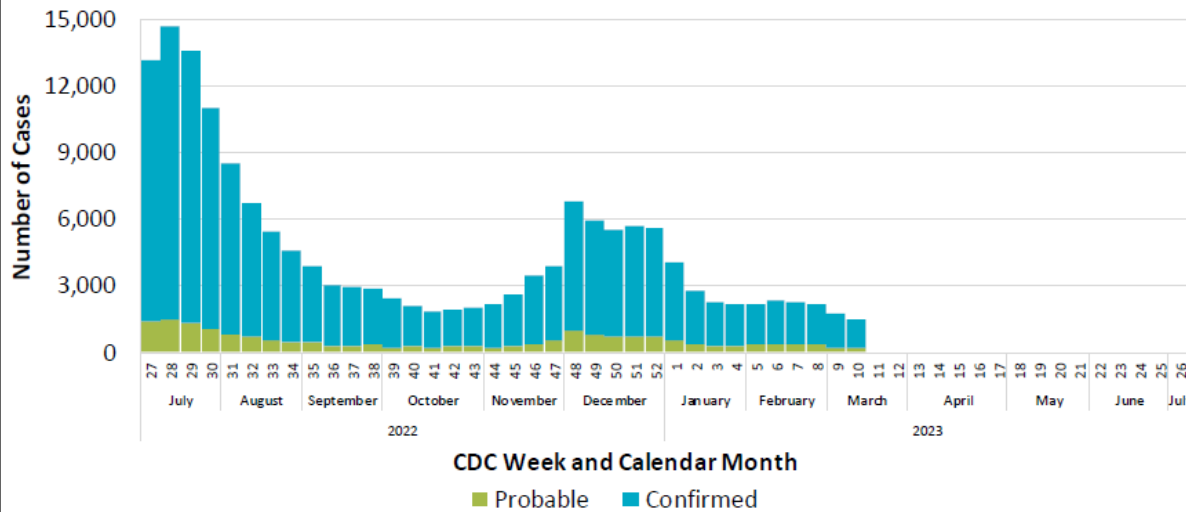
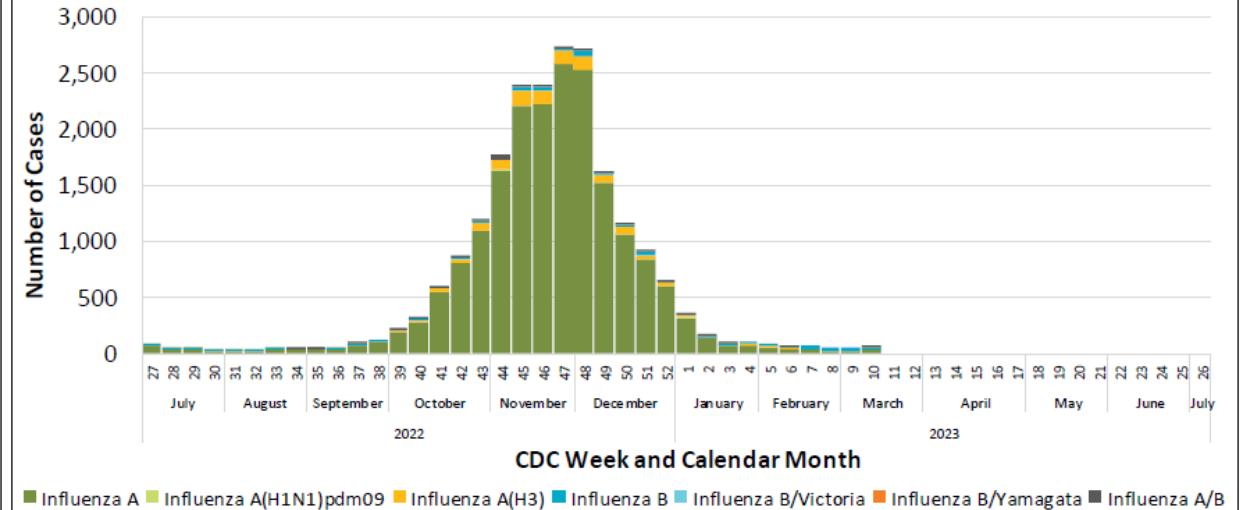


Figure 2.2. San Diego County **Influenza** Cases by Type and CDC Episode Week*, 2022-23 Fiscal Year-to-Date (N=21,092)



New COVID Guidance



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Changes from State

- On Friday March 3, 2023, CDPH announced changes to the State Public Health Orders & guidance:
 - **Vaccine requirements for Healthcare Personnel (HCP)**
 - Effective 4/3/23, State will no longer require COVID vaccination/boosters for HCP.
 - CMS continues to require HCP to receive the COVID primary vaccine series, unless exempted (**CMS QSO 23-02-ALL**)

New COVID Guidance



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Changes from State:

- **Masking in healthcare and other high-risk settings**
 - Effective 4/3/23, State will no longer require masking in indoor healthcare settings, however Local Health Jurisdictions may recommend/require universal masking.
 - County of San Diego has not yet announced the local guidance.
- **COVID-19 Isolation Guidance**
 - **For the general public:** COVID-19 positive person may end isolation after five days, if they feel well/improved, fever free
 - **Updated isolation guidance does not apply to SNFs at this time.**
Please refer to **AFL 21-08.9** for HCP, and **AFL 22-13** for residents

County Special Session



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IMPORTANT!

SNF Special Session Webinar

Topic: What's Next? Post COVID-19 Planning and Considerations

Time: Mar 27, 2023 2:00 PM Pacific Time (US and Canada)

County/CDPH Briefings



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- **County LTC Sector COVID Monthly Telebriefing:**
 - 4th Thursday @ 2PM-3PM
 - Next briefing is on 3/23/2023

- **CDPH Healthcare Facility Call: NEW SCHEDULE**
 - 2nd Tuesday of each month @ 8AM-9AM
 - Next call is on 4/11/23

- **CDPH/HSAG SNF IP Webinars:**
 - 2nd/4th Wednesday @ 3PM-4PM
 - Next webinar is on 3/22/2023 & 4/5/2023



Contact Hour Instructions

- **Ensure your full name identifies you on Zoom**
- **Enjoy the full presentation**
- **Complete the post-evaluation**



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Kyle Peerless, MPH
Industrial Hygienist, CDPH



Elon Ullman, M.S.
Industrial Hygienist, CDPH

Speaker Introduction

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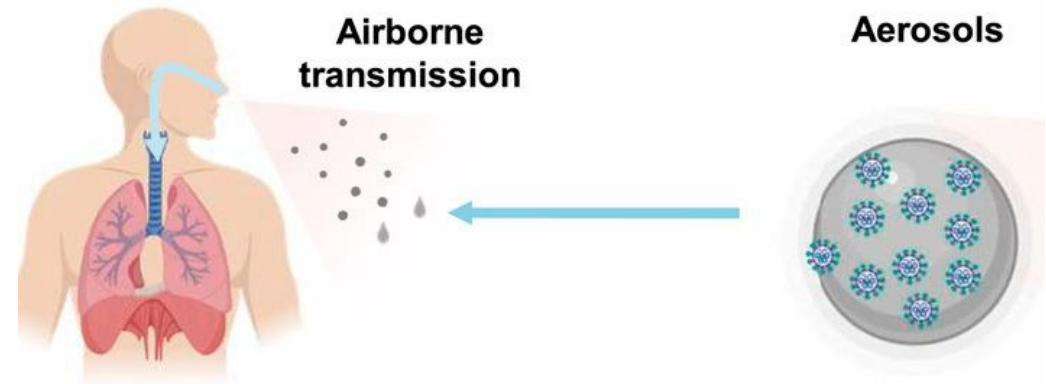
Ventilation Strategies to Control COVID-19 Transmission in Long Term Care Facilities

*Kyle Peerless and Elon Ullman
CDPH Occupational Health Branch
March 22, 2023
San Diego SNF IP Webinar*



Dominant Transmission Routes of COVID-19

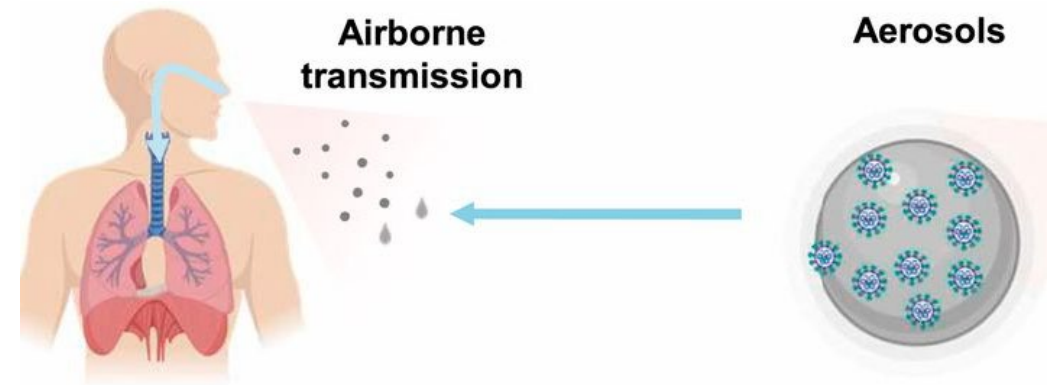
- Inhalation of virus particles from close contact



- Inhalation of virus particles that have remained suspended in air and "built up" because of poorly-ventilated indoor environments (not necessarily from close contact)

What Will Better Ventilation Help Most With?

- Inhalation of virus particles from close contact



- Inhalation of virus particles that have remained suspended in air and "built up" because of poorly-ventilated indoor environments (not necessarily from close contact)

Cigarette Smoke Analogy



What Would Reduce “Smoke” Inhalation Risk?

- **Dilute** the smoke with outdoor air, opening the windows, etc.
- **Filter** out smoke particles in the air with air filter/HEPA filter
- **Isolate/separate** the "smoker" from others
- **Exhaust/remove** the smoke from the indoor space

Strategies to Reduce Risk

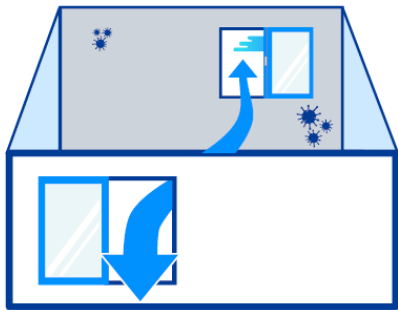
Exhaled virus will behave like invisible smoke in the air. Regardless of circumstances in a SNF, the same best practices apply:

- Dilute indoor air with as much fresh air as possible using natural or mechanical ventilation
- Filter indoor air that is being recirculated and use portable filters to supplement other strategies
- Isolate persons known or suspected to be COVID-19 positive
- Exhaust “dirty” air directly to the outside if possible

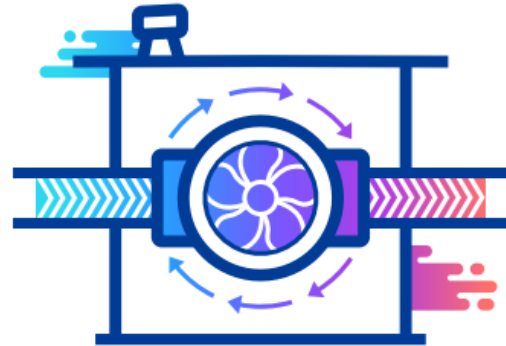
How Do We Improve Indoor Air Quality (IAQ)?

Ventilation

Natural

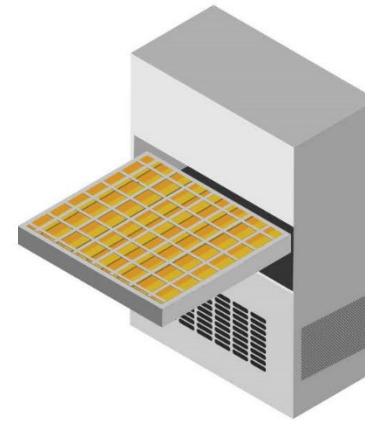


Mechanical

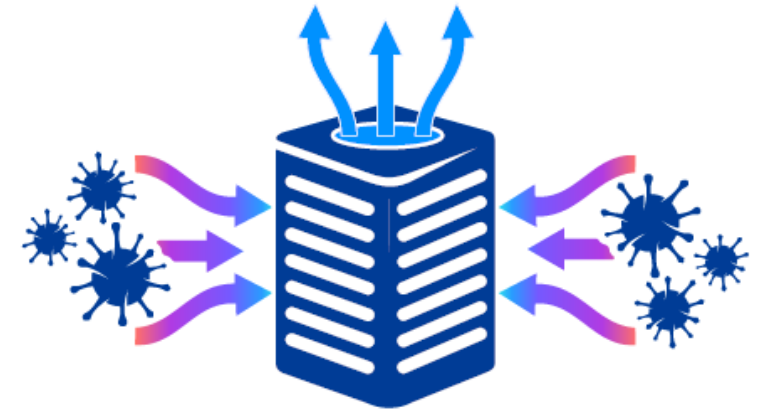


Filtration

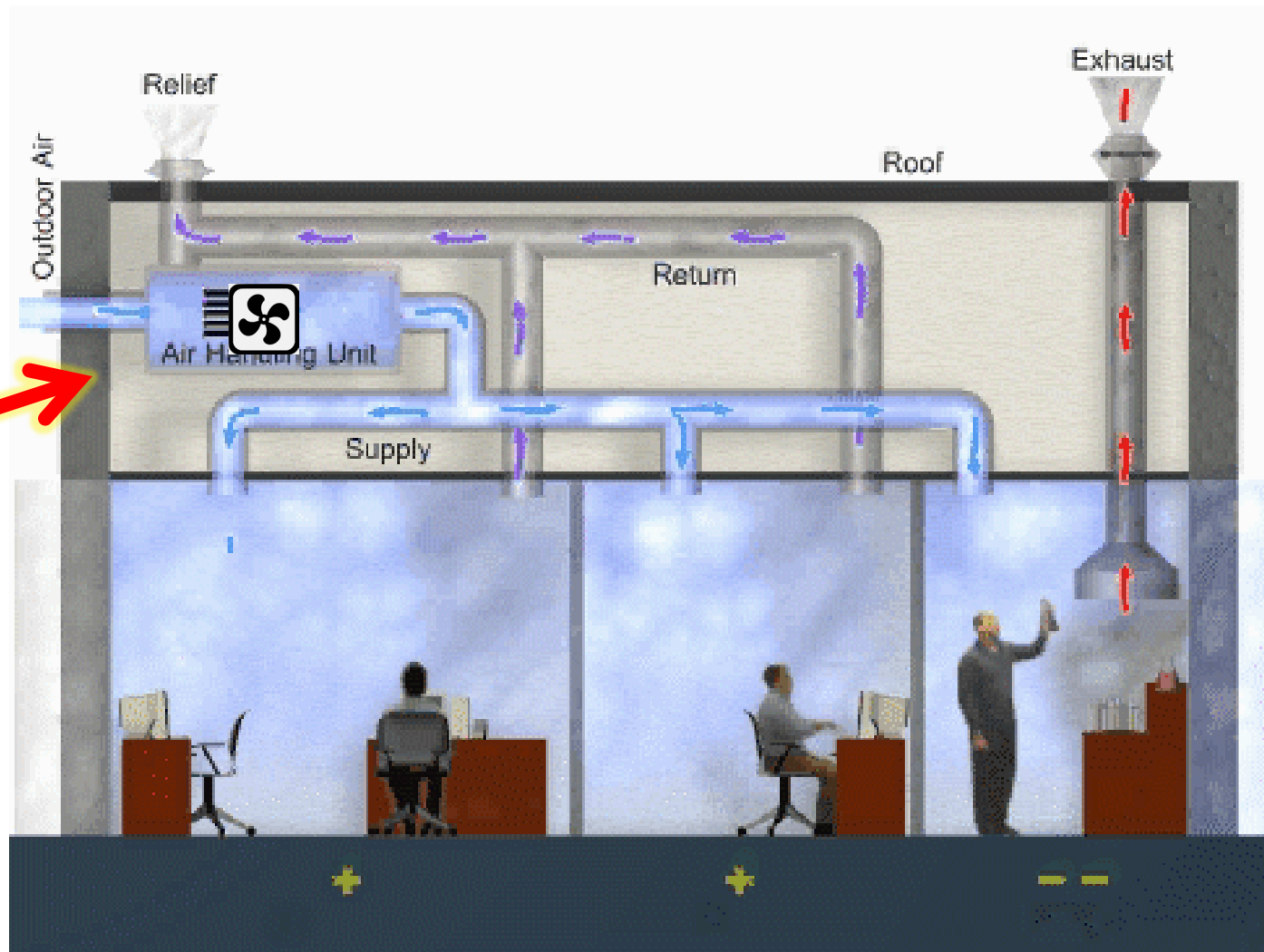
HVAC



Portable



Mechanical Ventilation System Diagram



* Air Handling Unit houses the fan that moves the air and the MERV filters that clean the air

Ventilation System and Air Handler Explained

- Ventilation systems supply buildings with a mixture of fresh and recirculated air
- Ventilation outdoor air damper can be adjusted on/in air handler to supply more fresh air



Air Handler w/ Adjustable Ventilation Damper

Mechanical Ventilation Diagram, cont.



Outside Air Flow

Filters

Return Air Flow

FAN pulls
mixed air in
this direction

Maximizing Outdoor Air



Dilution

- Bring in as much fresh air as possible from the outside to dilute and reduce the concentration of virus particles suspended in air
- Maximize outdoor air being brought in by mechanical ventilation system; run system on extended hours/continuously
- If no HVAC system, open windows & doors and place fans near windows/doors to promote fresh air entering SNF
- Ceiling fans do not dilute indoor air; they are not bringing fresh air in

Maximizing Outdoor Air Explained

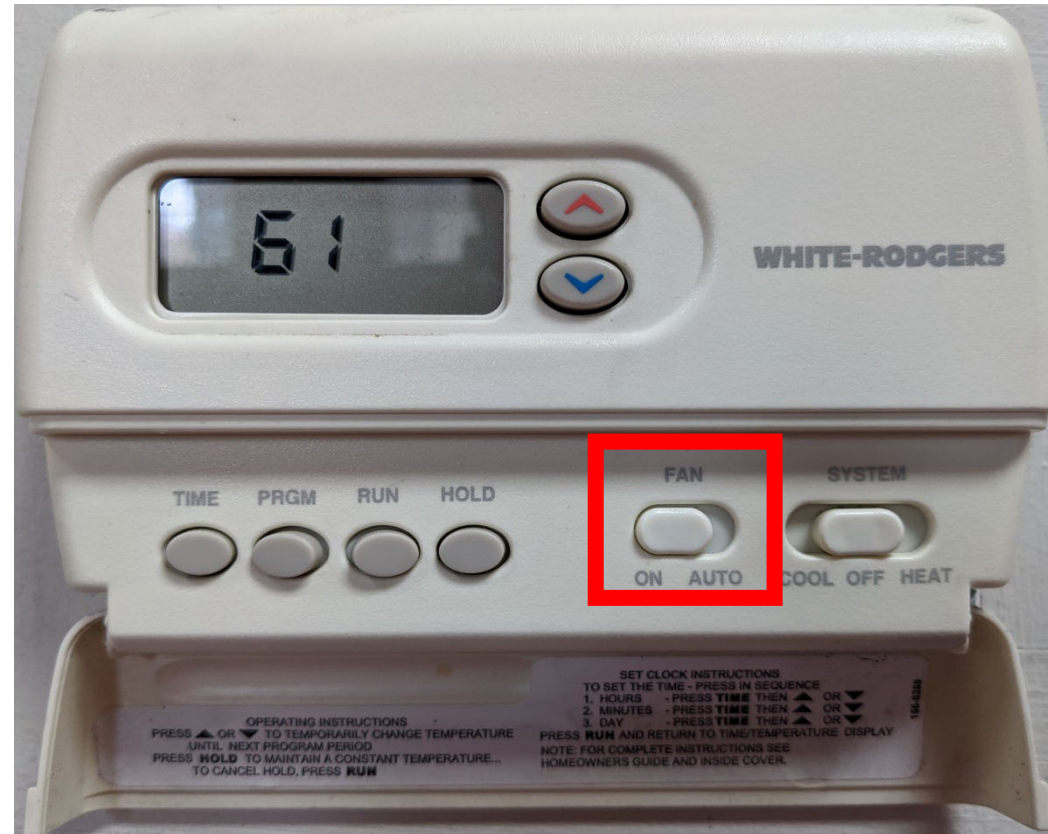
- Ventilation systems supply buildings with a mixture of fresh and recirculated air
- Ventilation outdoor air damper can be adjusted to supply more fresh air



Adjustable Ventilation Damper

Running System Continuously

- To run continuously, set system to “ON” instead of “AUTO” on thermostat
- In “AUTO,” HVAC fan turns off when temperature setpoint is achieved
- Continuous operations required by Cal/OSHA [§5142](#)



Running System Continuously

If thermostat is on “Auto”

- Inconsistent outside air
- Inconsistent filtration of recirculated air

If thermostat is on “ON”

- Continuous outside air
- Continuous filtration of recirculated air



FAN pulls mixed air in this direction

Outside Air Flow

Filters

Return Air Flow

Maintenance

- Important but often overlooked
- Need to maintain regularly like a car
- Filter changes, ducts checked
- Outdoor air dampers



Maintenance: Vents and Air Cleaners



Evaluating Ventilation

- Carbon dioxide monitors
 - Proxy measure for ventilation effectiveness
 - Doesn't take into account filtration
- Consult with facility, engineer or industrial hygienist

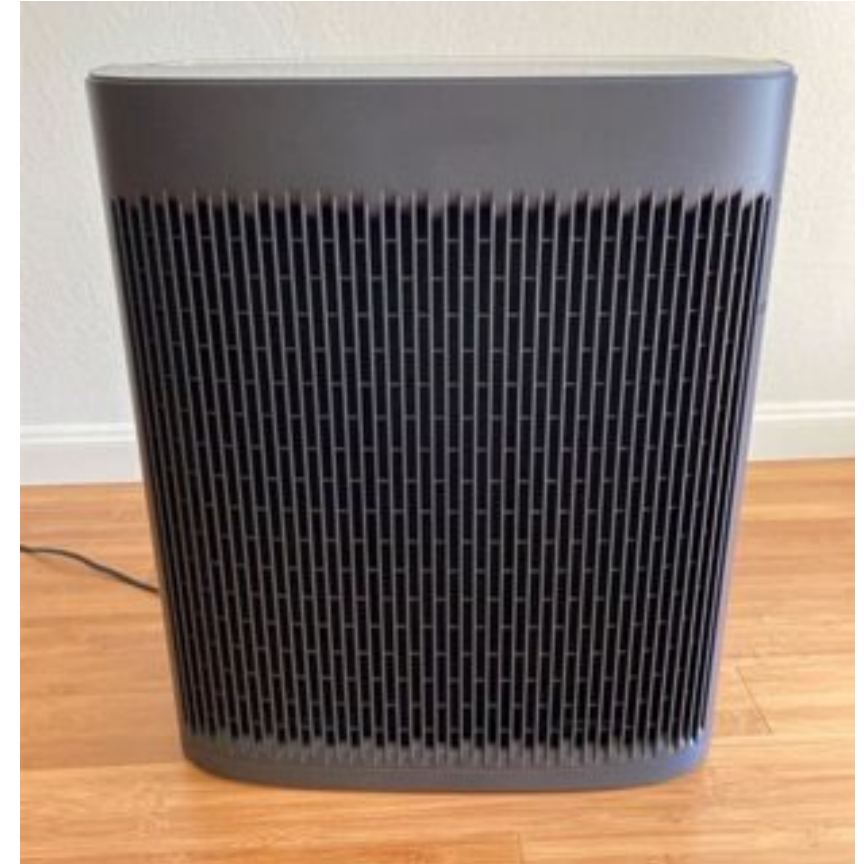


Filtration

- Upgrade filtration in ventilation system to as high as possible if facility recirculates indoor air (goal is to have MERV-13 or higher)
 - Most facilities currently use MERV-8, which isn't effective for virus-sized particles
- Filter upgrade may not be possible in some facilities
- Use portable HEPA air cleaners to filter indoor air
 - ☐ Particularly useful to supplement other strategies in red/yellow areas
 - ☐ Place in visitation areas or other areas with potential crowding (dining, activity)
 - ☐ Important tool for older facilities with inadequate ventilation from HVAC system

Portable Air Cleaners

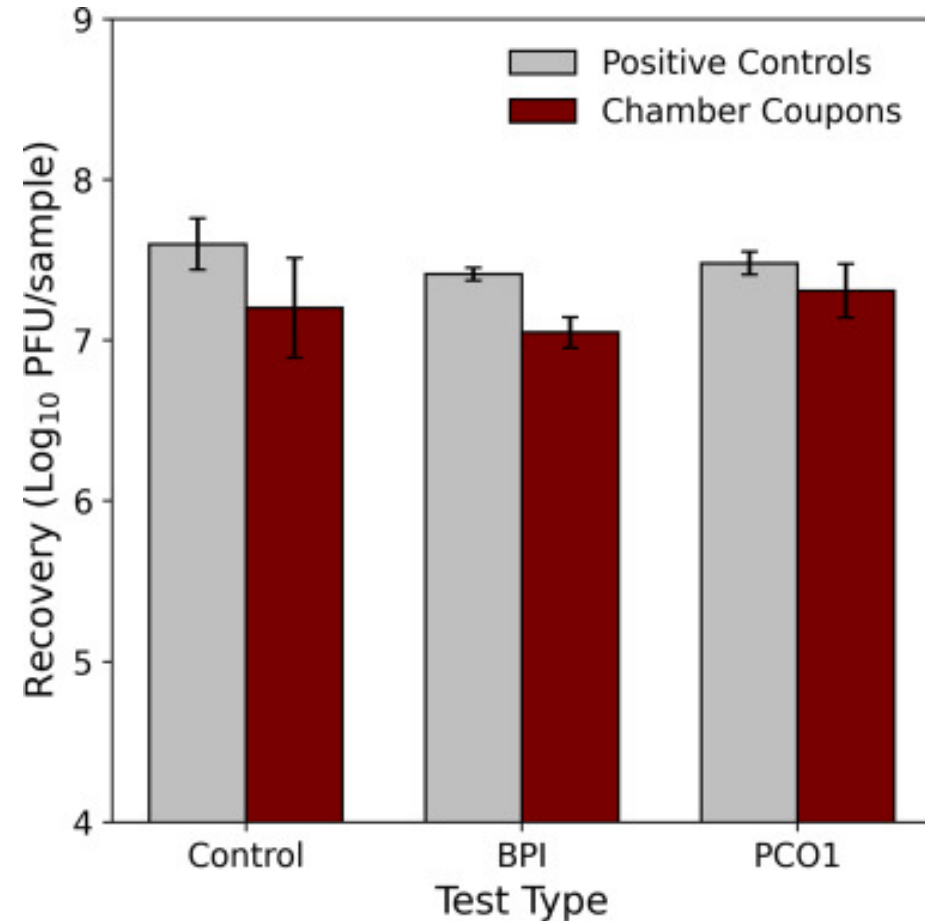
- Equipped with HEPA filters (99.97% capture efficiency)
- Designed to take in “dirty air,” filter contaminants, and release fresh air back into the room
- HEPA filtration is proven; ozone and “ionizers” not recommended



Portable Air Cleaners – Ionizers and Photocatalytic oxidization

“No significant differences were observed between control and technology tests in terms of the amount of MS2 (test bacteria) deposited or inactivated on surfaces during testing.”

[Large-scale evaluation of microorganism inactivation by bipolar ionization and photocatalytic devices](#) (EPA, 2022)



Portable Air Cleaners – Tips and Tricks

- Purchase portable air cleaners with HEPA filters (>99.97% filtration)
 - Ionizers, UV lights, etc will only add \$\$\$, not effectiveness
- Size based on room size
 - **Don't trust "square footage" recommendations – not standardized across companies!**
 - Use the 2/3rd rule to size – CADR 2/3rd sqft of room size

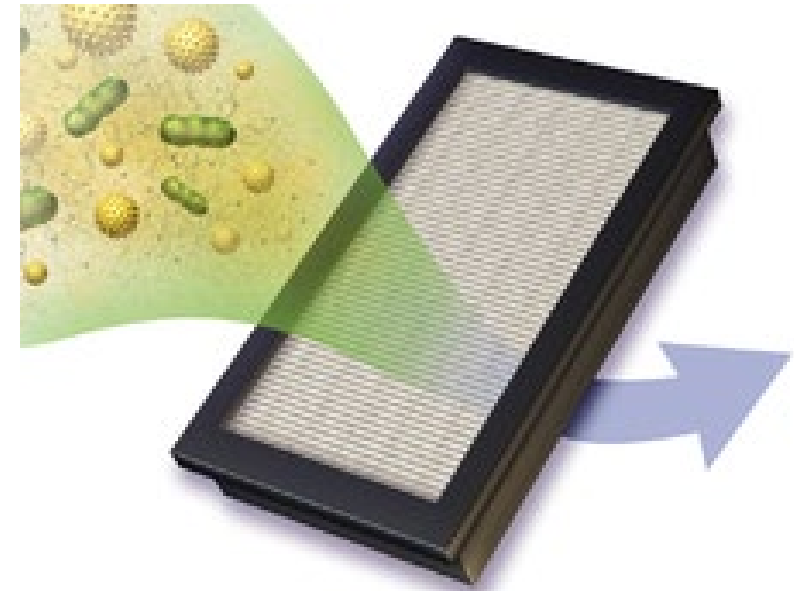


Image Credit: Wikimedia Commons

Isolating Positive COVID-19 Residents: Recommendations and Considerations

Minimum Isolation Set-up

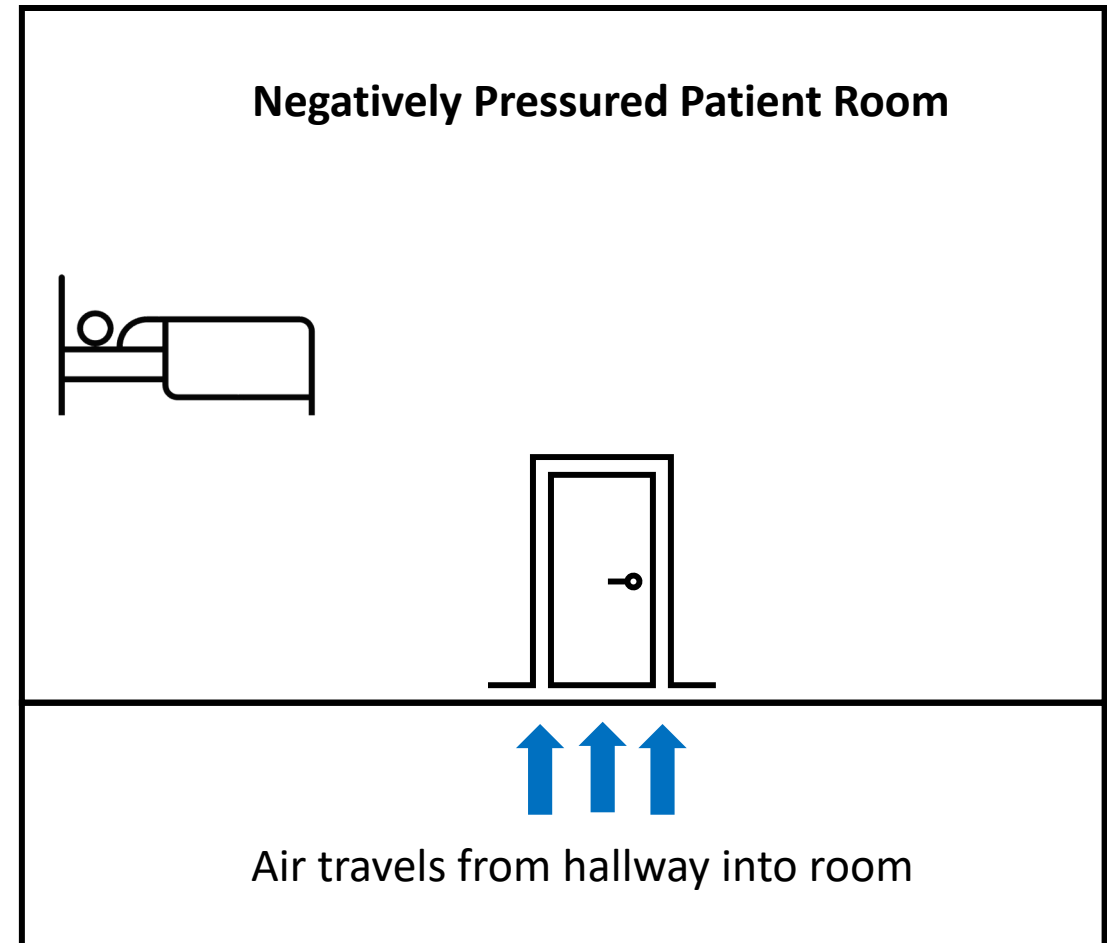
- Single resident or patient room with dedicated bathroom
- Closed door creates barrier to hallway
- **Increase filtration using portable HEPA-filtered air cleaner in room**
- **Supplement with bathroom exhaust fan running**



Ideal for Isolation: Negative Pressure

Ways to Achieve Negative Pressure

- Negative air machine
- Running bathroom fans
- Work with facilities staff to adjust air pressure relationships



Simple Negative Pressure Tests



Smoke test: Use non-toxic smoke to see if it gets sucked into the room



Tissue test: Place tissue outside door and see if it gets sucked into the room

Spotlighting Facility Staff

- Advocate for facility/maintenance staff air quality training
 - Industry focus on thermal comfort
 - Staff also need training on outside air, filtration etc
 - Collaborate with staff to improve indoor air quality!

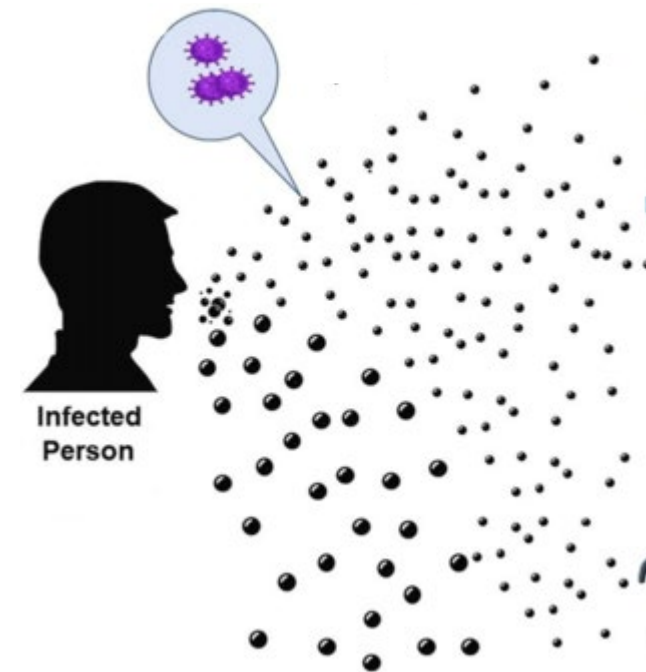


Image Credit: Wikimedia Commons

Beyond COVID:

Airborne transmission of common respiratory disease

- Acceptance of airborne transmission of COVID
- Evidence of airborne transmission of:
 - RSV
 - Influenza
 - Rhinovirus
 - Adenovirus



Wang CC, Prather KA, Sznitman J, Jimenez JL, Lakdawala SS, Tufekci Z, Marr LC. Airborne transmission of respiratory viruses. Science. 2021 Aug 27;373(6558):eabd9149. doi: 10.1126/science.abd9149. PMID: 34446582; PMCID: PMC8721651.

Beyond COVID: Airborne transmission of common respiratory disease

Evidence of Respiratory Syncytial Virus Spread by Aerosol. Time to Revisit
Infection Control Strategies?

<https://www.atsjournals.org/doi/10.1164/rccm.201509-18330C>

*“Conclusions: Many of the aerosolized particles that contained RSV in the air surrounding infants with bronchiolitis were sufficiently small to remain airborne for a significant length of time and small enough to be inhaled and deposited throughout the respiratory tract. **It is likely that this leads to spread of infection to others**, with dissemination of infection throughout the respiratory tract.”*

Beyond COVID: Airborne transmission of common respiratory disease

Review of Aerosol Transmission of Influenza A Virus (2009)

Published findings that support the occurrence of aerosol transmission were reviewed to assess the importance of this mode of transmission. **Published evidence indicates that aerosol transmission of influenza can be an important mode of transmission...** Despite the evidence cited in support of aerosol transmission, many guidelines or review articles nevertheless routinely state that "large droplets transmission is thought to be the main mode of influenza transmission" (or similar statements) without providing supporting evidence from either previously published studies or empirical findings.

Beyond COVID:

Airborne transmission of common respiratory disease

- Airborne transmission still being studied
- Increasing evidence of airborne transmission of common respiratory diseases
- Improving IAQ can reduce general disease transmission

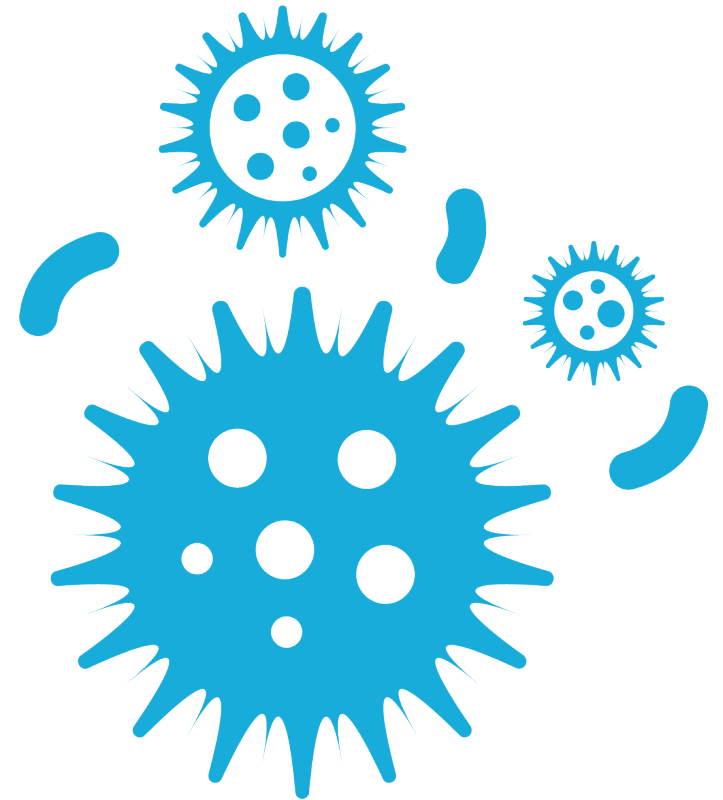


Image Credit: EPA

4 Steps You Can Take to Improve Ventilation at Your Facility Right Now

- Run HVAC system continuously (instead of temp. setpoint)
- Increase outdoor air & check all outside dampers and supply/return vents
- Prioritize Portable Air Cleaners in high-risk areas (red zone, dining, break rooms)
- Prioritize Improving Indoor Air for Disease Transmission Control!

References and Resources

- [CDPH OHB – Improving Ventilation Practices to Reduce COVID-19 Transmission Risk in Skilled Nursing Facilities](#)
- [ASHRAE- HVAC Strategies for LTC Infection Management & Prevention](#)
- [CDPH - Interim guidance for Ventilation, Filtration, and Air Quality in Indoor Environments](#)
- [Cal/OSHA-Aerosol Transmissible Diseases Standard](#)
- [Cal/OSHA - Aerosol Transmissible Diseases Standard Guide](#)

QUESTIONS?



Contact Hour Instructions

- **Ensure your Zoom name is your full name**
- **Complete the post-evaluation by Friday, March 24th, 5:00PM**
- **Expect your certificate by April 15th.**



Next Collaborative



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**April 26, 2023
11:00AM – 12:00PM
ZOOM**

Featured Topic:

“Learning from Orange County’s Candida auris (C. auris) Experience.”

1 Contact Hour Offered

Registration Link

**Submit questions about
or**

Feedback about today’s collaborative meeting to:

PHS.HAI.HHSA@sdcounty.ca.gov

—”
**THANK
YOU**
”—

Contact us at:

PHS.HAI.HHSA@sdcounty.ca.gov

