

THE SOURCE OF SOURCE CONTROL—WHY MASK?

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TOPICS

- History behind masking and source control
- Current recommendations
- Case Studies
- Fit Testing
- Respiratory Protection Program compliance



HISTORY OF MASKS



HISTORY OF MASKS



Red Cross workers fold reusable masks during the influenza pandemic, Boston, MA, USA, March 1919
Copyright © 2020 Courtesy National Archives [165-WW-269B-37]



Police officers in Seattle, Washington, wearing masks made by the Red Cross, during influenza pandemic, December 1918.
Credit: National Archives



DEFINITIONS

- **HCP**—Health Care Personnel (paid and unpaid).
- **Community Transmission or Transmission Levels**—CDC description of the **amount** of COVID-19 spread within a county. Measured two ways:
 - Number of new cases per 100,000 persons in past 7 days, OR
 - Percentage of positive NAAT tests during the past 7 days

*If the two indicators suggest different transmission levels, the higher level is selected
- **Community Levels**—CDC description of the **severity** of COVID-19 spread within a county. Measured two ways:
 - New COVID-19 hospital admissions per 100,000 population (7-day total), OR
 - Percent of staffed inpatient beds in use by COVID-19 patients (7-day average)

*If the two indicators suggest different community level, the higher level is selected

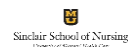
Use COVID Data Tracker to determine: https://covid.cdc.gov/covid-data-tracker/#county-view?list_select_state=all_states&list_select_county=all_counties&data-type=CommunityLevels



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AND MORE DEFINITIONS

- **Close Contact**—Someone who was less than 6 feet away from an infected person (laboratory-confirmed or a clinical diagnosis) for a total of 15 minutes or more over a 24-hour period (for example, three separate 5-minute exposures for a total of 15 minutes).
- **Higher-Risk Exposure**—HCP who had prolonged close contact with a COVID positive individual and:
 - HCP was not wearing a respirator (or if wearing a facemask, the infected person was not wearing a mask)
 - HCP was not wearing eye protection if the person with SARS-CoV-2 infection was not wearing a mask.
 - HCP was not wearing all recommended PPE (i.e., gown, gloves, eye protection, respirator) while present in the room for an aerosol-generating procedure)
- **IPC**—Infection Prevention and Control



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WHAT IS SOURCE CONTROL?

Source Control—refers to a respirator, well-fitting facemask, or face covering (i.e., cloth masks) to cover a person’s mouth and nose to prevent spread of respiratory secretions when they are breathing, talking, sneezing, or coughing.

- * Referred to as “source control” when the primary function is to keep the **wearer’s** exhalations and droplets to themselves
- * Limited protection from secretions of **others**
- * Varies by type of device (mask)



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DIFFERENCE BETWEEN MASKS AND RESPIRATORS

- Surgical Mask—primarily for source control (keeping respirations and droplets contained)
- N95 (NIOSH-approved respirator)—Used for filtering incoming air **and** for source control
 - Filters at least 95% of airborne particles
- KN95 (non-domestic respirator)—Not typically NIOSH-approved. NOT to be used for transmission-based precautions.



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WHAT IS NIOSH?

National Institute of Occupational Safety and Health (established in 1970)

<https://www.cdc.gov/niosh/index.htm>

Promoting productive workplaces
through safety and health research / **NIOSH**[®]

- List of certified respirators and other resources
<https://www.cdc.gov/niosh/topics/respirators/>
- CDC recommendations for respirator use refers to a NIOSH-approved respirator



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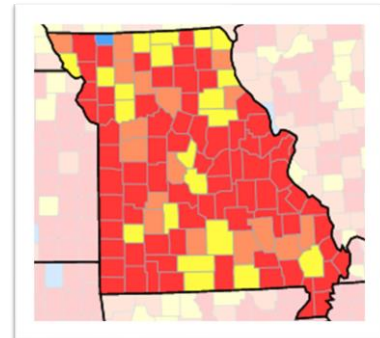
CURRENT CDC RECOMMENDATIONS

What are the **current** requirements for my facility???

Where do I find this information???

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-recommendations.html>

<https://health.mo.gov/living/healthcondiseases/communicable/novel-coronavirus/>



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IMPLEMENT SOURCE CONTROL MEASURES

- High-risk individuals should wear the most protective form of source control that fits well and that they will wear consistently
- Healthcare facilities may choose to offer visitors well-fitting facemasks but should allow visitors to use a mask/respirator with higher-level protection that is not visibly soiled
- Cloth masks are not recommended for HCP
- Dispose of source control if it becomes soiled, damaged, or hard to breathe through
- Reuse is not recommended
- If used as personal protective equipment (PPE) when indicated for the care of a resident, the respirator should be removed and discarded after the resident encounter is complete and a new one should be donned



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IMPLEMENT SOURCE CONTROL MEASURES

When SARS-CoV-2 Community Transmission is **high**, source control is recommended for **everyone** in a healthcare setting when they could encounter residents.



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COMMUNITY TRANSMISSION IS NOT HIGH

- If Community Transmission is **not** high, healthcare facilities could choose not to require universal source control. It remains recommended for individuals who:
 - Have suspected or confirmed SARS-CoV-2 infection or other respiratory infection (runny nose, cough, sneeze) **or**
 - Had [close contact](#) (patients and visitors) or a [higher-risk exposure](#) (HCP) with someone with SARS-CoV-2 infection, for 10 days after their exposure **or**
 - Reside or work on a unit or area of the facility experiencing a SARS-CoV-2 outbreak **or**
 - Have had source control use recommended by public health authorities
- Consider using or recommending source control when caring for patients who are moderately to severely immunocompromised.

Check transmission levels at least weekly

<https://covid.cdc.gov/covid-data-tracker/#county-view>



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IMPLEMENT UNIVERSAL USE OF PERSONAL PROTECTIVE EQUIPMENT FOR HCP

When community transmission increases, healthcare facilities should consider broader use of respirators and eye protection during resident care encounters. Facilities in counties where Community Transmission is high should consider having HCP use PPE as described below:

- NIOSH-approved particulate respirators with N95 filters or higher used for:
 - All aerosol-generating procedures.
 - Situations where additional risk factors for transmission are present, such as the patient is unable to use source control and the area is poorly ventilated.
- To simplify implementation, facilities in counties with high transmission may consider implementing universal use of N95 or higher respirators during all resident encounters or in specific areas at higher risk for SARS-CoV-2 transmission.
- Eye protection (i.e., goggles or a face shield that covers the front and sides of the face) worn during all resident care encounters.



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COMMON QUESTIONS

Q. CAN I WEAR THE CLOTH MASKS MY AUNT MADE FOR ME TO WORK?

A. Source control options for HCP (staff) include:

- A NIOSH-approved particulate respirator with N95 filters or higher;
- A respirator approved under standards used in other countries that are similar to NIOSH-approved N95 filtering facepiece respirators (Note: These should not be used instead of a NIOSH-approved respirator when respiratory protection is indicated);
- A barrier face covering that meets ASTM F3502-21 requirements including Workplace Performance and Workplace Performance Plus masks (<https://wwwn.cdc.gov/PPEInfo/RG/FaceCoverings>); OR
- A well-fitting facemask.

*Simple answer is **NO** since it is not rated or NIOSH approved



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COMMON QUESTIONS

Q. WHAT'S THE BIG DEAL ABOUT COVERING YOUR MOUTH AND NOSE WITH A MASK?

A. The portal of entry for viruses such as COVID are through the mouth, nose, and eyes. Which is why eye protection is also recommended while providing direct care in situations of **HIGH** community transmission or during a facility outbreak. Covering just the mouth puts you and others at risk of transmitting respirations and droplets and inhaling pathogens.



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COMMON QUESTIONS

Q. How can I address the question of “Why are nursing homes the only ones that require a mask?”

A. CDC guidance for healthcare settings, which includes Nursing Homes, is consistent with mask-wearing. We care for vulnerable individuals and protecting them is a priority.



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ENCOURAGE COMPLIANCE

Engage everyone

Ensure appropriate knowledge and resources

Culture of mask usage

Positive reinforcement for appropriate usage

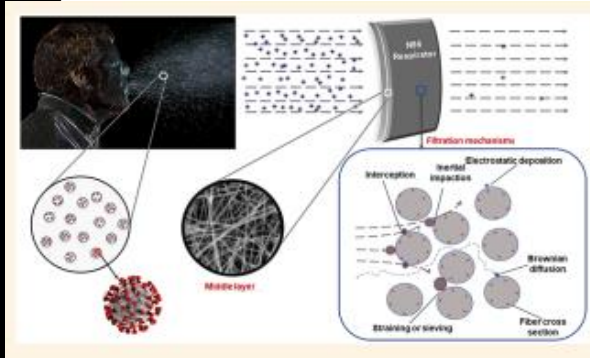
Audits—results shared with staff. PPE audit information & tools:

<https://www.cdc.gov/infectioncontrol/pdf/strive/PPE104-508.pdf>



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EVIDENCE SUPPORTING N95 USE



Effectiveness of N95 masks against SARS-CoV-2: Performance Efficiency, Concerns, and Future Directions from ACS Chemical Health & Safety

<https://pubs.acs.org/doi/10.1021/acs.chas.1c00016>

In general:

- Surgical masks acceptable for exposure to large particles
- N95 FFR should be used for microscopic bacteria and viruses (i.e., respiratory viruses)
- Must be properly used along with other IPC practices



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CASE STUDY #1

One of your residents, Mrs. J, has developed a fever, persistent cough, and runny nose. She is lethargic and has not eaten since yesterday morning.

1. Which symptom creates the greatest risk for spreading this potentially infectious disease?
2. What PPE should be worn for her care?
3. What are your next actions?
4. What education should be provided to the family?



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CASE STUDY #2

Your facility has just received an admission (primary diagnoses: CHF, diabetes, early dementia) that requires breathing treatments every 4 hours. The IP informed you this morning that community transmission in your county was high (red); your facility is COVID-free at this time. Upon seeing the admission for the first time, you, the charge nurse, notes that the resident is very weak and tires with minimal exertion. As you gather the equipment to administer their first breathing treatment, you consider what PPE you will need.

1. What type of source control is indicated?
2. What other PPE is needed?
3. Is it safe to stay in the room while administering the treatment?
4. What other supplies are needed?



RESPIRATORY PROTECTION STANDARDS

OSHA Standard 29 CFR 1910.134

<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.134>

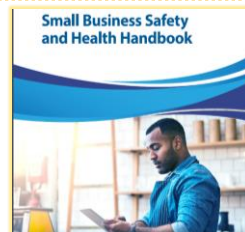
Further Assistance:

Small Business Safety & Health Handbook

<https://www.osha.gov/sites/default/files/publications/small-business.pdf>

Respiratory Protection Guidance for the Employers of Those Working in Nursing Homes, Assisted Living, and Other Long-Term Care Facilities During the COVID-19 Pandemic

<https://www.osha.gov/sites/default/files/respiratory-protection-covid19-long-term-care.pdf>



WHY SHOULD I CARE??

First: Safety of staff, residents, and visitors!



Secondly: OSHA fines are **considerable**: from \$0-60,000



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WHAT LTC FACILITIES NEED A RESPIRATORY PROTECTION PROGRAM (RPP)?

Any location a respirator may be used



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RPP ELEMENTS

Includes:

- Engineering (ventilation, filters, workflow, isolation, etc.)
- Administrative (IPC practices, hand hygiene, housekeeping, etc.)
- Equipment & processes related to fit testing (selection of respirators, medical form, fit of mask, training, use, disposal)
- Written plan with designated plan administrator

It is not just one practice but every element working together to create a safe environment

<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.134>

https://www.osha.gov/sites/default/files/training-library_major_requirements.pdf



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WHEN TO FIT TEST

- New Employee onboarding
- Change in respirators used in facility
- Change in characteristics of the same respirator model used in the facility
- Change in physical characteristics of HCP (i.e., weight gain or loss)
- At least annually



*You will want to have a method of tracking



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FIT TESTING—TRAIN THE TRAINER

Scheduled sessions:

- February 28, 2023—St. Peters, MO
- March 9, 2023—St. Louis, MO
- March 14, 2023—Kansas City, MO
- April 27, 2023—Poplar Bluff, MO
- April 28, 2023—Cape Girardeau, MO
- May 2, 2023—Macon, MO
- May 25, 2023—Springfield, MO



Registration information coming soon:

<https://nursinghomehelp.org/icar-project/icar-project-events/> or <https://hqin.org/events/>



ANY QUESTIONS???



Thank You!



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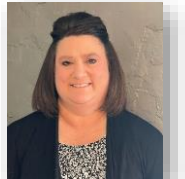
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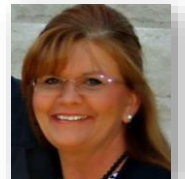
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CLINICAL EDUCATION NURSES

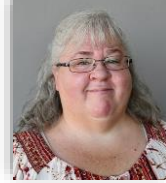
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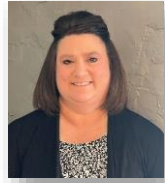
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