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# Outbreak Response and Infection Prevention and Control for Shelters

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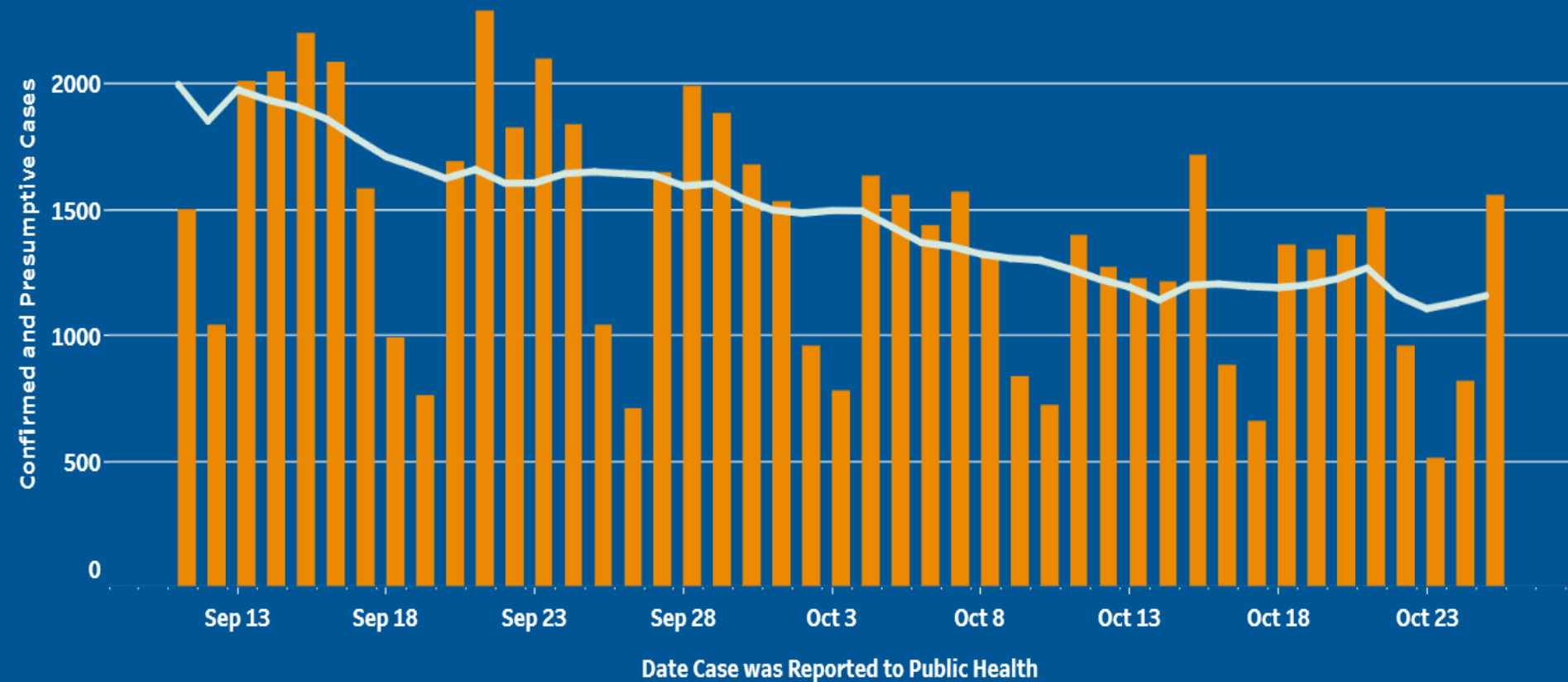


# Objectives

- Overview of COVID-19 Oregon state data
- Overview of key considerations for response and planning
- Overview of Infection Prevention and control mitigation measures

<b>New Cases</b>	<b>1,557</b>	<b>7 Day Daily Average of Cases</b>	<b>1,155</b>	<b>Cases Per 100k in Last 7 Days</b>	<b>189.4</b>
<b>Tests Reported</b>	<b>17,970</b>	<b>ELR Test Positivity</b>			
		<b>7.7%</b>			
<b>New Deaths</b>	<b>23</b>	<b>COVID-19 Patients Hospitalized†</b>			<b>542</b> ▼

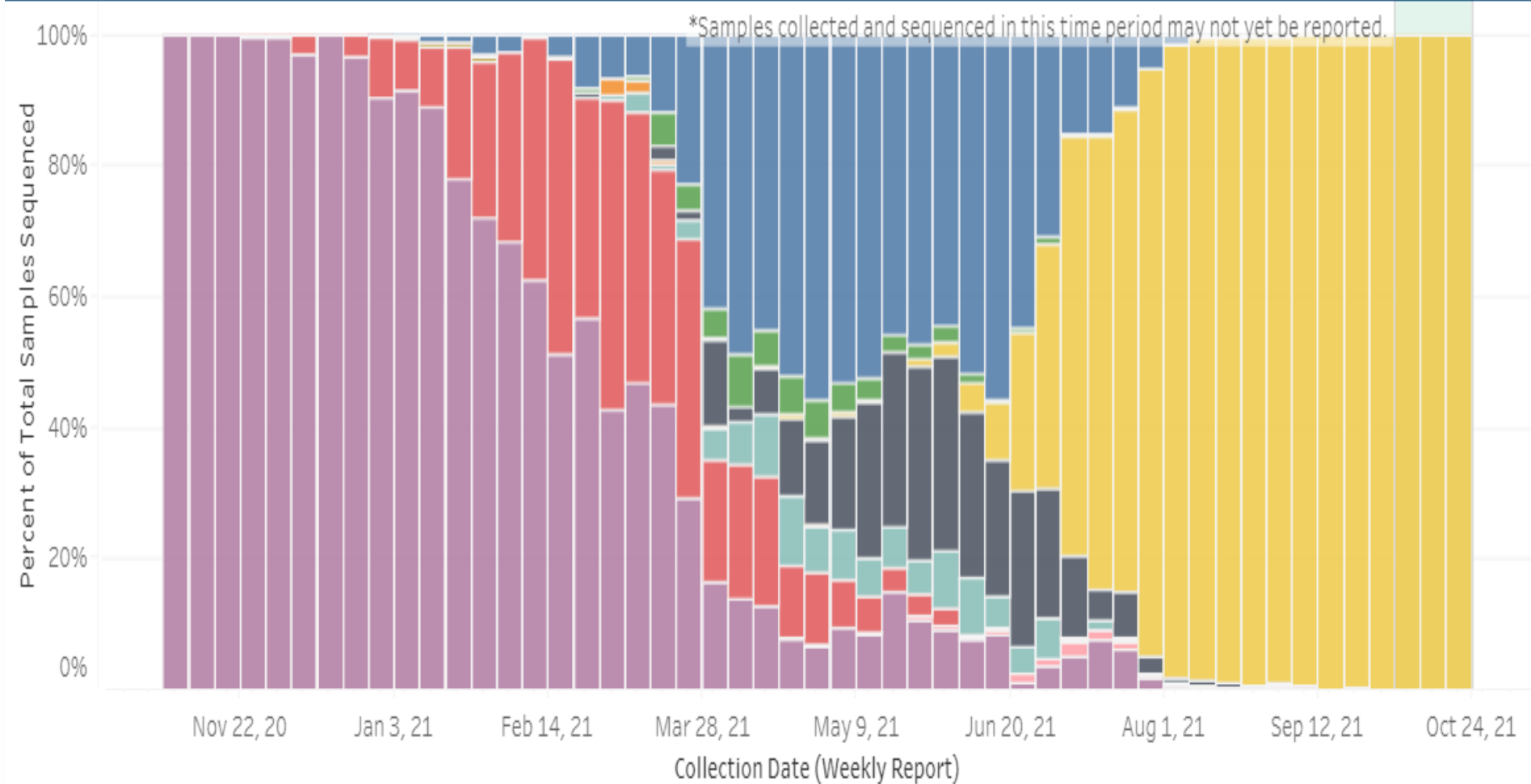
## Daily Cases and 7 Day Moving Average over the Previous Six Weeks



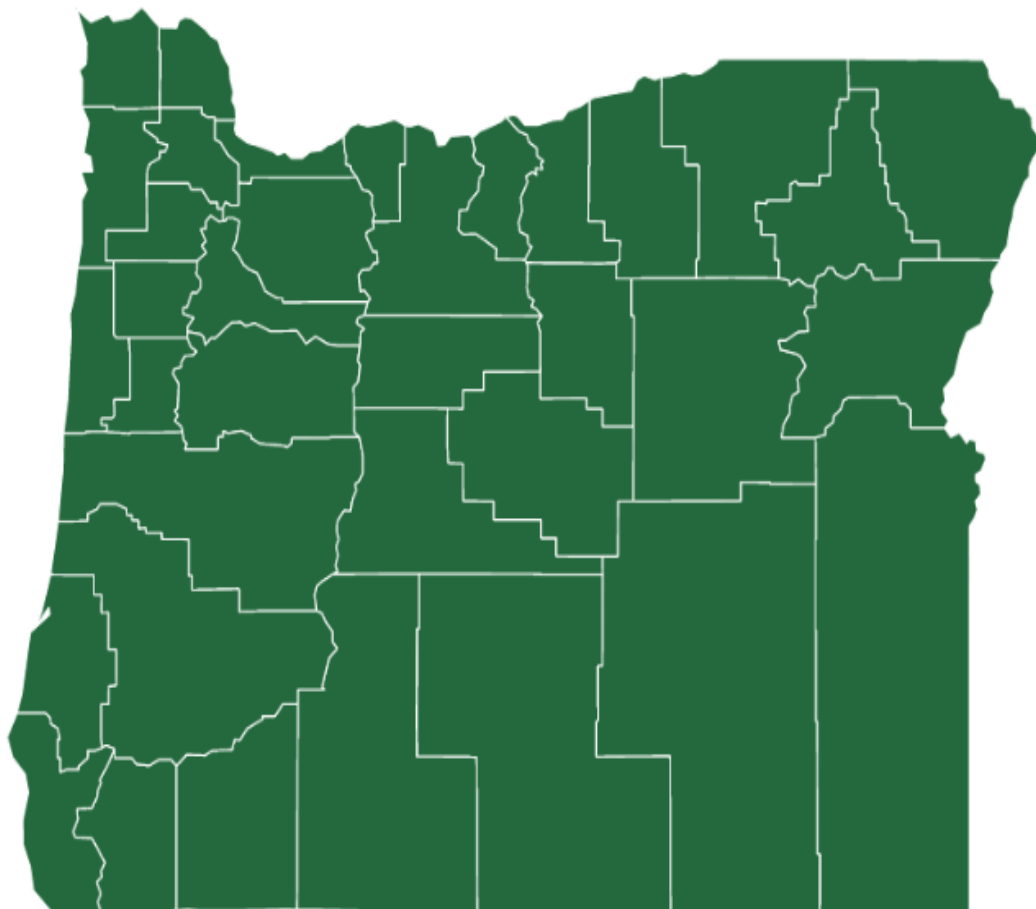
## Lineage



# Lineage Prevalence Over Time



Hover over a county to see more information



### Statewide

### Community Transmission

■ High

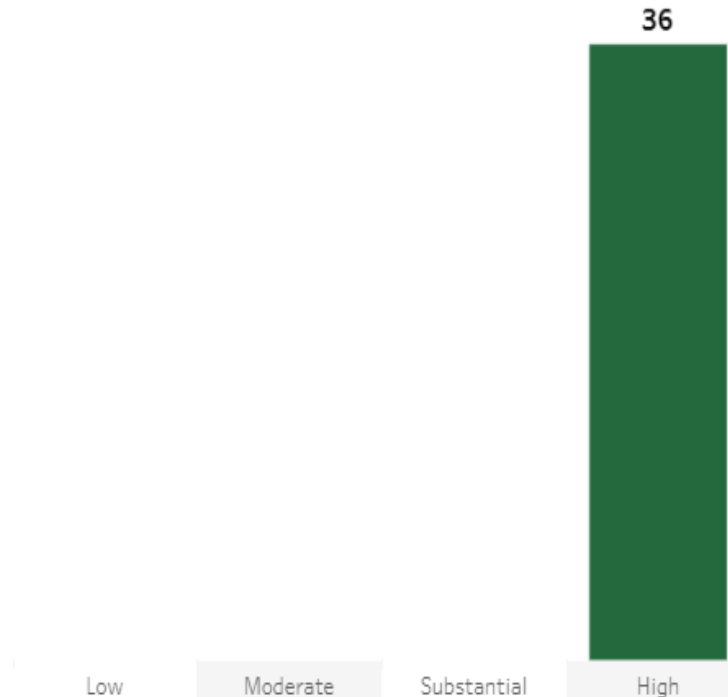
Week of **10/17/2021**

**181.3** cases per 100k residents

**7.4%** test positivity

Select one of the bars below to highlight the counties in that level of community transmission.

### Counties by Level of Community Transmission

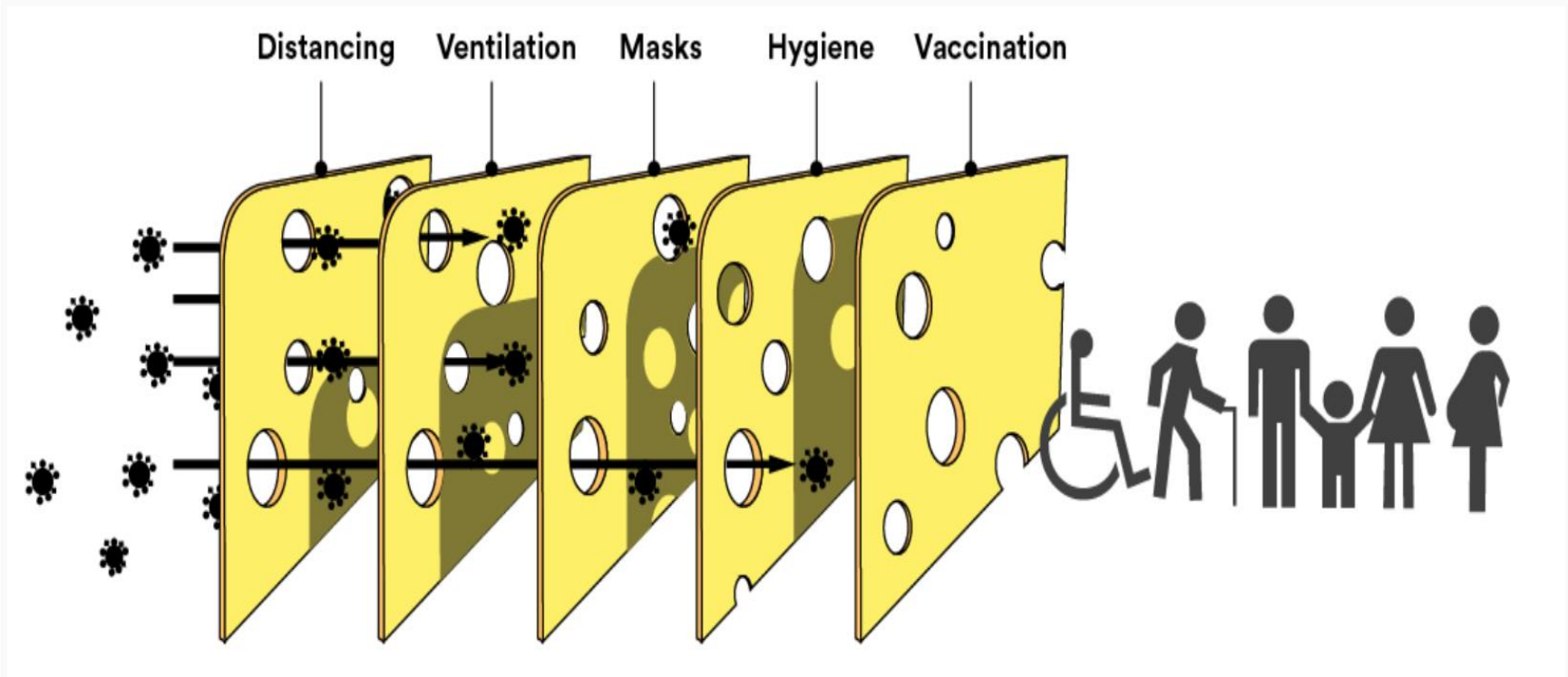


# Measures of Infection Prevention and Control

- **Preventive**- Risk Assessment and Planning
- **Protective**- Manage/ Avoid risk
- **Implementable**- One size doesn't fit all!



# Swiss cheese model



<https://www.nottingham.ac.uk/helmopen/rlos/practice-learning/public-health/CoVE/section10.html>

# Key to Response and Prevention

- PLANNING
- COMMUNICATION
- PLANNING





# Key Considerations

- Type of shelter- short term/ long term/ winter warming
- Facility Demographics- Number of guests/ residents/ clients, staff, beds, bathrooms, specific population or referrals
- Facility layout- dorm setting, individual rooms, both, congregate spacing
- Congregate activities- Dining, recreational activities, counseling/ case management

# Key Considerations

- Resource requirements- PPE, Hand hygiene, physical barriers
- Ventilation
- Testing plans
- Identify overflow sites externally and within shelter grounds
- Isolation and quarantine sites within the shelter and external sites (hotels/ motels)

# Key Considerations

- Plans for suspect and/ or symptomatic or positive cases
- Plans for transfer out of the facility



# Community Planning and Response

- Local and state health departments
- Homeless service providers and Continuum of Care leadership
- Healthcare providers/ Emergency management
- Housing authorities
- Community Based Organizations(CBO's)/ Community Action Agency (CAA's)
- Other support services like outreach, case management, and behavioral health support

# Outbreak Response

- Symptomatic/ positive individual identified Inform local public health authority (LPHA) within 24 hours
- Connect with LPHA to establish a testing plan
- Facility wide testing recommended At least 2 rounds of negative testing recommended before outbreak is considered over
- Follow screening, masking, physical distancing, disinfection, ventilation etc. other mitigation measures

# Personal Protective Equipment (PPE)

- Maintain 30-day supply
- Face-cover- Medical-grade surgical mask
  - N95 → Fit-tested and Seal checked
- Eye protection- Disposable/ Re-usable  
(recommended eye protection use for all patient care based on community risk-moderate to high)
- Gowns- Disposable/ Re-usable
- Gloves

## FIT & FILTRATION: YOUR KEY TO A BETTER MASK

Two important steps to choosing a mask

Make sure it fits



- Your mask should fit snugly over your nose, mouth, and chin.
- Choose a mask with a nose wire.



- Wearing a cloth mask over a disposable mask makes your disposable mask fit better.
- You can also choose to use a mask fitter or brace.



[cdc.gov/coronavirus](https://www.cdc.gov/coronavirus)

❖ Continue to monitor your PPE supplies and use the CDC's PPE burn rate calculator (<https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/burn-calculator.html>)

❖ PPE don and doff signage: for use in PPE don/doff room

<https://www.cdc.gov/hai/pdfs/ppe/ppe-sequence.pdf>

# Use Personal Protective Equipment (PPE) When Caring for Patients with Confirmed or Suspected COVID-19

## Before caring for patients with confirmed or suspected COVID-19, healthcare personnel (HCP) must:

- Receive comprehensive training on when and what PPE is necessary, how to don (put on) and doff (take off) PPE, limitations of PPE, and proper care, maintenance, and disposal of PPE.
- Demonstrate competency in performing appropriate infection control practices and procedures.

### Remember:

- PPE must be donned correctly before entering the patient area (e.g., isolation room, unit if cohorting).
- PPE must remain in place and be worn correctly for the duration of work in potentially contaminated areas. PPE should not be adjusted (e.g., retying gown, adjusting respirator/face mask) during patient care.
- PPE must be removed slowly and deliberately in a sequence that prevents self-contamination. A step-by-step process should be developed and used during training and patient care.

#### Preferred PPE – Use N95 or Higher Respirator



#### Acceptable Alternative PPE – Use Facemask



### Donning (putting on the gear):

More than one donning method may be acceptable. Training and practice using your healthcare facility's procedure is critical. Below is one example of donning.

1. Identify and gather the proper PPE to don. Ensure choice of gown size is correct (based on training).
2. Perform hand hygiene using hand sanitizer.
3. Put on isolation gown. Tie all of the ties on the gown. Assistance may be needed by another HCP.
4. Put on NIOSH-approved N95 filtering facepiece respirator or higher (use a facemask if a respirator is not available).  
If the respirator has a nosepiece, it should be fitted to the nose with both hands, not bent or kinked. Do not pinch the nosepiece with one hand. Respirator/facemask should be extended under chin. Both your mouth and nose should be protected. Do not wear respirator/facemask under your chin or store in scrubs pocket between patients.\*  
  - Respirator: Respirator straps should be placed on crown of head (top strap) and base of neck (bottom strap). Perform a user seal check each time you put on the respirator.
  - Facemask: Mask ties should be secured on crown of head (top tie) and base of neck (bottom tie). If mask has loops, hook them appropriately around your ears.
5. Put on face shield or goggles. When wearing an N95 respirator or half facepiece elastomeric respirator, select the proper eye protection to ensure that the respirator does not interfere with the correct positioning of the eye protection, and the eye protection does not affect the fit or seal of the respirator. Face shields provide full face coverage. Goggles also provide excellent protection for eyes, but fogging is common.
6. Put on gloves. Gloves should cover the cuff (wrists) of gown.
7. HCP may now enter patient room.

### Doffing (taking off the gear):

More than one doffing method may be acceptable. Training and practice using your healthcare facility's procedure is critical. Below is one example of doffing.

1. Remove gloves. Ensure glove removal does not cause additional contamination of hands. Gloves can be removed using more than one technique (e.g., glove-in-glove or bird beak).
2. Remove gown. Untie all ties (or unsnap all buttons). Some gown ties can be broken rather than untied. Do so in gentle manner, avoiding a forceful movement. Reach up to the shoulders and carefully pull gown down and away from the body. Rolling the gown down is an acceptable approach. Dispose in trash receptacle.\*
3. HCP may now exit patient room.
4. Perform hand hygiene.
5. Remove face shield or goggles. Carefully remove face shield or goggles by grabbing the strap and pulling upwards and away from head. Do not touch the front of face shield or goggles.
6. Remove and discard respirator (or facemask if used instead of respirator). \* Do not touch the front of the respirator or facemask.  
  - Respirator: Remove the bottom strap by touching only the strap and bring it carefully over the head. Grasp the top strap and bring it carefully over the head, and then pull the respirator away from the face without touching the front of the respirator.
  - Facemask: Carefully untie (or unhook from the ears) and pull away from face without touching the front.
7. Perform hand hygiene after removing the respirator/facemask and before putting it on again if your workplace is practicing reuse.



\*Facilities implementing reuse or extended use of PPE will need to adjust their donning and doffing procedures to accommodate these practices.

[www.cdc.gov/coronavirus](http://www.cdc.gov/coronavirus)

[https://www.cdc.gov/coronavirus/2019-ncov/downloads/A\\_FS\\_HCP\\_COVID19\\_PPE\\_11x17.pdf](https://www.cdc.gov/coronavirus/2019-ncov/downloads/A_FS_HCP_COVID19_PPE_11x17.pdf)

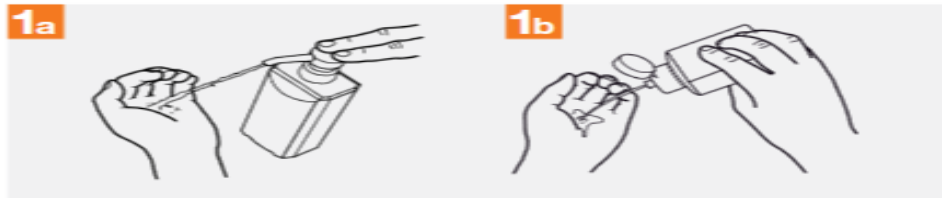
Oregon Health Authority



# Hand Hygiene: Hand Sanitizer

**RUB HANDS FOR HAND HYGIENE! WASH HANDS WHEN VISIBLY SOILED**

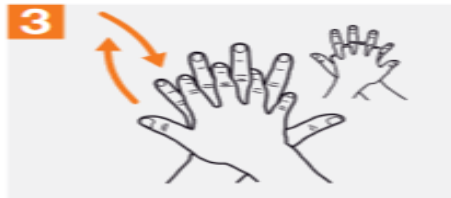
**🕒 Duration of the entire procedure: 20-30 seconds**



**1a** Apply a palmful of the product in a cupped hand, covering all surfaces;



**2** Rub hands palm to palm;



**3** Right palm over left dorsum with interlaced fingers and vice versa;



**4** Palm to palm with fingers interlaced;



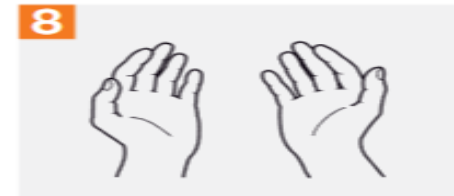
**5** Backs of fingers to opposing palms with fingers interlocked;



**6** Rotational rubbing of left thumb clasped in right palm and vice versa;



**7** Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;




**8** Once dry, your hands are safe.

[https://www.who.int/gpsc/5may/Hand\\_Hygiene\\_Why\\_How\\_and\\_When\\_Brochure.pdf](https://www.who.int/gpsc/5may/Hand_Hygiene_Why_How_and_When_Brochure.pdf)

# Hand Hygiene: Hand Wash

WASH HANDS WHEN VISIBLY SOILED! OTHERWISE, USE HANDRUB

 Duration of the entire procedure: 40-60 seconds



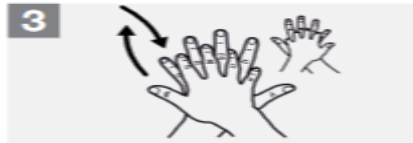
Wet hands with water;



Apply enough soap to cover all hand surfaces;



Rub hands palm to palm;



Right palm over left dorsum with interlaced fingers and vice versa;



Palm to palm with fingers interlaced;



Backs of fingers to opposing palms with fingers interlocked;



Rotational rubbing of left thumb clasped in right palm and vice versa;



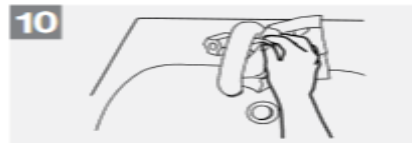
Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;



Rinse hands with water;



Dry hands thoroughly with a single use towel;



Use towel to turn off faucet;



Your hands are now safe.

# Cleaning and Disinfection

- Approved disinfectant from CDC's- List N of approved disinfectants by Environmental Protection Agency (EPA)- <https://cfpub.epa.gov/wizards/disinfectants/>
- Contact time- Time for which a surface needs to remain wet to achieve full disinfection.
- Education



# Cohorting

- Important tool in the event of an outbreak
- Zoning to support cohort
- COVID-unit/ space- cohort residents in the space

Existing Illness

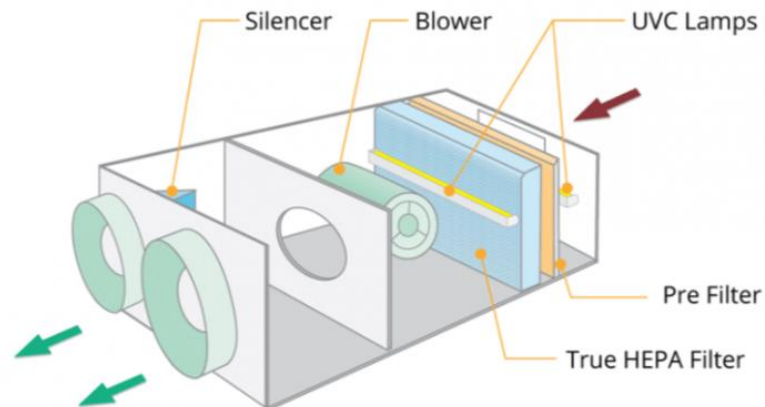


- cohort staff with the positive residents
- maintain separate space amongst staff



# Ventilation

- Increasing the amount of fresh outside air that is introduced into the system
- Exhausting air from indoors to the outdoors
- Cleaning the air that is recirculated indoors with effective filtration methods (e.g., HEPA filters) to remove virus-containing particles from the air.



# Ventilation

- Increasing outdoor ventilation by opening doors and windows unless doing so creates a health or safety risk
- Using fans to move indoor air out
- Open vent if window air conditioners are installed (only if outdoor air quality is good)
- Operate exhaust fans and ventilations exhausts (eg- kitchen etc.)
- Portable HEPA filtration devices

# Ventilation

- Operate and maintain HVAC system
- CDC's ventilation guidance: <https://www.cdc.gov/coronavirus/2019-ncov/community/ventilation.html>



# Testing

- Molecular PCR test- Screening for exposures, Asymptomatic transmission
- Close contacts of confirmed or presumptive COVID-19 cases regardless of vaccination status
- People exposed to COVID-19 in a congregate setting
- Rapid Binax Now test- Diagnostic testing
- Symptomatic residents and staff





# Other mitigation measures

- Symptom screening
- Switching up signages to prevent “COVID fatigue”
- Hand hygiene & disinfection signages in common spaces ( break rooms, copiers, meeting rooms etc.)
- Maximum capacity signages (common/ rec rooms, laundry rooms, elevators, etc.)
- Floor markings



**Symptoms of Coronavirus (COVID-19)**

Know the symptoms of COVID-19, which can include the following:

**Symptoms can range from mild to severe illness, and appear 2-14 days after you are exposed to the virus that causes COVID-19.**

**Seek medical care immediately if someone has Emergency Warning Signs of COVID-19**

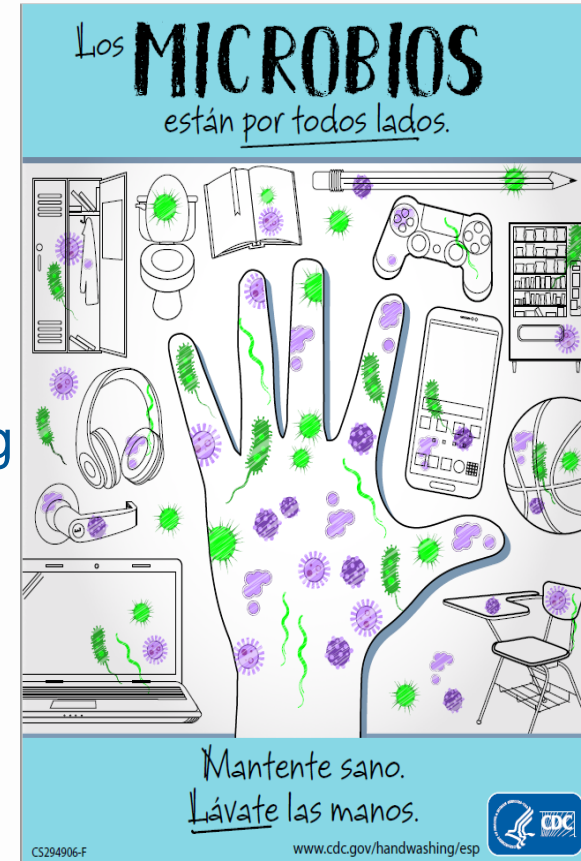
- Trouble breathing	- Inability to wake or stay awake
- Persistent pain or pressure in the chest	- Bluish lips or face
- New confusion	

This list is not all possible symptoms. Please call your healthcare provider for any other symptoms that are severe or concerning to you.

Centers for Disease Control and Prevention [cdc.gov/coronavirus](https://www.cdc.gov/coronavirus)

# Other mitigations measures

- Outdoor sessions/ meetings
- Signages in smoking areas
- For sleeping arrangements- head to toe sleeping
- Education/ Informationals for residents and staff
- Mask breaks
- Trusted community members for equitable messaging





# Resources

- Shelter Assessment Tool/ checklist:

<https://sharedsystems.dhsoha.state.or.us/DHSForms/Served/le3463.pdf>

- Shelter Infection Control consultation form:

<https://app.smartsheet.com/b/form/a3bb7e03fba6431988ce1d77cd306229>

- Winter Shelter Resource strategy:

<https://www.oregon.gov/ohcs/Documents/winter-shelter/OHCS-Winter-Severe-Weather-Shelter-Resources-Strategy.pdf>

# Resources and References

- [https://www.oregon.gov/ohcs/get-involved/Documents/committees/HTF/COVID-19%20Public%20Health%20Recommendations-%20Houseless%20Shelters%20\(6-30-21\).pdf](https://www.oregon.gov/ohcs/get-involved/Documents/committees/HTF/COVID-19%20Public%20Health%20Recommendations-%20Houseless%20Shelters%20(6-30-21).pdf)
- <https://www.oregon.gov/oha/PH/DISEASESCONDITIONS/COMMUNICABLEDISEASE/REPORTINGCOMMUNICABLEDISEASE/REPORTINGGUIDELINES/Documents/Novel-Coronavirus-2019.pdf>
- [https://sharedsystems.dhsoha.state.or.us/DHSForms/Served/le2256\\_R.pdf](https://sharedsystems.dhsoha.state.or.us/DHSForms/Served/le2256_R.pdf)
- <https://www.oregon.gov/ohcs/get-involved/Pages/oregon-unhoused-response-recovery-network-covid-19-wildfires.aspx>

