



## **COVID-19 Infection Prevention Team**

### **Webinar 2: Personal Protective Equipment (PPE)**

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**Funded by OCHCA and CalOptima**

# COVID-19 Nursing Home Prevention Team

- Jointly funded by OCHCA & CalOptima
- Led by UC Irvine faculty & project coordinators
- Distinct from the OCHCA COVID Outbreak and Response Team
- Goals
  - Outfit OC nursing homes to prevent COVID-19 in time for fall surge
  - Provide expertise on infection prevention for COVID-19/SARS-CoV-2
  - Provide guidance, protocols for preventing spread of COVID
  - **Support training on how to stock and use protective gear**
  - Develop high compliance processes for protection of staff and residents

# COVID-19 Prevention Team: Scope of Work

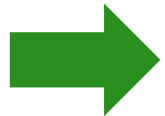
- Create a practical toolkit for COVID-19 prevention  
<https://www.ucihealth.org/stopcovid>
  - Signage and posters
  - Protocols, FAQs, monitoring tools
  - Publicly posted, downloadable, editable
- Provide webinars and consultative support
- Provide enhanced training to 12 nursing homes



# Toolkit and Webinar Sequence

- **Stage 1: All About Staff**

- How does COVID spread?
- How to prevent?
- What if you test positive?
- Air? Clothing? Hair? Shoes?
- Which symptoms matter? Testing?
- How to protect coworkers & family?



- **Stage 2: Personal Protective Equipment (PPE)**

- Masks, what kind, when?
- Face shields and goggles
- Gowns and gloves
- What are aerosol generating procedures?
- When and how to safely re-use PPE
- Calculating burn rates

- **Stage 3: Environmental Cleaning and Assessment Tools**

- Cleaning protocols
- Assessment, validation tools
- Picture perfect rooms
- Top 10 mistakes



# OC Nursing Home COVID Prevention Toolkit

<https://www.ucihealth.org/stopcovid>



For Orange County nursing homes only – [schedule a consultative session](#) with the OC Infection Prevention Team

## 1. Introduction – Preventing COVID-19 in Nursing Homes

- Roadmap – Key Strategies for Preventing COVID-19 in Nursing Homes (PDF) (DOC)
- FAQs – Overview of COVID-19 (PDF) (DOC)
- FAQs for Staff – Concerns About COVID-19 Exposure (PDF) (DOC)
- FAQs for Staff – Monitoring Yourself for Infection Symptoms (PDF) (DOC)
- Video – What is COVID and How Does It Spread?

## 2. Visitors

- COVID-19 Visitor Policy for Nursing Homes (PDF) (DOC)
- FAQs – Visitor Policy (PDF) (DOC)
- No Visitor Policy – Letter to Family (PDF) (DOC)

## 3. Social Distancing, Masking, and Shared Activities

- Poster – How to Properly Wear a Mask (PDF)
- Guidance for Residents – Social Distancing, Masking, Activities (PDF) (DOC)
- Guidance for Staff – Social Distancing, Universal Masking, and Breaks (PDF) (DOC)
- FAQs for Staff – Social Distancing, Universal Masking, and Breaks (PDF) (DOC)
- Video – What is Social Distancing?
- Video – Errors in Social Distancing and Masking
- Video – Masking Nursing Home Residents
- Video – Errors in Breakroom Etiquette
- Video – Correct Breakroom Etiquette
- Video – Three’s a Crowd: Correct Breakroom Etiquette
- Video – Safety in the Breakroom: Storing your Mask with Proper Hand Hygiene
- Video – 8 Steps to Breakroom Safety

## 4. Universal Symptom and Temperature Screening

- Staff Entry Symptom and Temperature Screening Protocol (PDF) (DOC)
- Poster – Health Alert – Know COVID Symptoms (PDF)
- FAQs for Staff – What to Know if You Have COVID-19 (PDF) (DOC)
- FAQs for Staff – Keeping Family Safe if You Have COVID-19 (PDF) (DOC)

## 5. Universal COVID PCR Screening

- FAQs for Staff – What to Know if You Have COVID-19 (PDF) (DOC)
- FAQs for Staff – Keeping Family Safe if You Have COVID-19 (PDF) (DOC)

## 6. Hand Hygiene

- Protocol – Hand Hygiene (PDF) (DOC)
- Video – Proper Hand Hygiene: How and When
- FAQs – Hand Hygiene (PDF) (DOC)
- Video – Washing Hands with Soap and Water

## 7. Personal Protective Equipment (PPE)

- PPE Weekly Burn Rate Calculator (XLS)
- COVID-19 Supply Preparation Checklist (PDF) (DOC)
- Protocol – Standard Mask (PDF) (DOC)
- Protocol – N95 Respirator (PDF) (DOC)
- Protocol – Mask Re-Use and Extended Use (PDF) (DOC)
- Protocol – Eye Protection (PDF) (DOC)
- Protocol – Eye Protection Re-Use and Extended Use (PDF) (DOC)
- Protocol – Donning COVID PPE (PDF) (DOC)
- Protocol – Doffing COVID PPE (PDF) (DOC)
- Protocol – Aerosol Generating Procedures (PDF) (DOC)
- FAQs for Staff – Masking (PDF) (DOC)
- FAQs for Staff – Aerosol Generating Procedures (PDF) (DOC)
- FAQs for Staff – COVID and Clothing, Shoes, and Laundry (PDF) (DOC)
- Video – Which Mask When?
- Video – Incorrect Mask Removal
- Video – Correct Mask Removal
- Video – Donning Face Mask
- Video – Donning Face Shield
- Video – Doffing Face Shield and Storing for Reuse
- Video – Donning COVID PPE
- Video – Doffing COVID PPE
- Video – Safe Glove Removal

## 8. Environmental Cleaning

- Overview – Cleaning Guidelines (PDF) (DOC)
- Protocol – Resident Room Cleaning (PDF) (DOC)
- Protocol – Common Area Cleaning (PDF) (DOC)
- Protocol – Folding Cleaning Cloths (PDF) (DOC)
- Protocol – Saturating Cleaning Cloths (PDF) (DOC)
- Protocol – Housekeeping Cart (PDF) (DOC)
- Overview – Housekeeping Compliance (PDF) (DOC)
- Protocol – Housekeeping Observations (PDF) (DOC)
- Protocol – UV Marking (PDF) (DOC)
- Housekeeping Skills Assessment Log (PDF) (DOC)
- UV Marking Log (PDF) (DOC)
- FAQs – Environmental Cleaning (PDF) (DOC)

# Webinar #2

## Personal Protective Equipment (PPE)

- **Zones for COVID Care**
- **PPE Checklist and Burn Rate Calculator**
- **PPE Protocols**
  - Which mask when?
  - Face shields and goggles
  - Gowns and gloves
  - Donning and doffing sequence
- **PPE Reuse and Extended Use**

# Zones for COVID Care

- **Red**
  - COVID diagnosed residents stay 14 days from confirmed test
- **Yellow**
  - Persons under investigation (PUI)
  - Convalescent residents who are likely no longer infectious
- **Green**
  - Usual care of residents

# PPE Checklist and Burn Rate Calculator



## COVID-19 Supply Preparation Checklist

This list provides a quick reference for products your facility needs to safely care for COVID residents.

### Personal Protective Equipment (PPE)

- Surgical masks, Level I/III masks – for general care of COVID-positive residents
- N95 masks – for aerosol generating procedures
- Protective eyewear options
  - o Face shields – covers full face including eyes and masks. Preferred since this protects masks from contamination and allows for extended reuse of masks.
  - o Goggles or safety glasses – covers eyes including complete side coverage.
  - o NOTE: eyeglasses are **not** acceptable protective eyewear.
- Gowns
  - o Washable or disposable gowns (Level 1 AAMI) are acceptable
  - o Must provide complete coverage for front and back
- Gloves

### Hand Hygiene

- Alcohol based hand rub/sanitizer – must contain more than 60% ethanol or 70% isopropanol
  - o NOTE: warnings exist against use of methanol, which is toxic
- Hand sanitizer dispensers – bottles and pumps for areas without wall mounted dispensers
- Hand soap – refills for sink liquid soap dispensers
- Paper towels for drying hands if using soap/water

### Personal Hygiene and Decolonization for Residents (CalOptima PIPQI program, Orange County, CA)

- 4% rinse-off chlorhexidine (CHG) for showers
- 2% leave-on CHG for bed baths
- 10% Iodophor nasal swabs

### Cleaning Products – Resident and Staff Areas

- Disinfectant – any EPA registered household disinfectant
  - o <https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2-covid-19>
  - o Cleaning wipes
  - o Cleaning solution
- Alcohol swabs - to clean items between residents (e.g., glucometer, stethoscopes, face shields)
- Laundry hampers and trash bags for increased PPE laundry and disposal

### COVID Testing Supplies (generally provided by the laboratory)

- Nasal or nasopharyngeal swabs – sterile synthetic fiber swabs with plastic or wire shafts only
- Sterile transport tubes containing 2-3mL of either viral transport medium or sterile saline
- Lab specimen bags and labels

The Orange County Nursing Home Infection Prevention Team is coordinated by the University of California, Irvine Health and is jointly funded by Orange County Health Care Agency and CalOptima **Last Updated: 7/13/2020**

Calculator		Graphs		Instructions			
Box A		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Enter Week 1 Start Date		7/13/2020	7/20/2020	7/27/2020	8/3/2020	8/10/2020	8/17/2020
Number of Suspected and Confirmed COVID-19 Residents		20	20	28	26	35	36
Type of PPE	Size/Brand	How Many Full Boxes Are Remaining on the Given Day Each Week? Enter Below.					
Clean Gowns	Size 1	500	475	400	350		
	Size 2						
	Size 3						
Gloves	small						
	medium						
	large						
	extra large						
Surgical Masks							
N95 Respirators							
Face Shields							
Goggles							
Alcohol Hand Sanitizer							
Hand Soap (refill for sink)							
Disinfectant cleaning wipes							
Disinfectant cleaning solution							
Other inventory							

Box 1. Average Consumption of PPE in Boxes (Burn Rate) per Week		
Type of PPE	Size/Brand	Burn Rate (boxes/Week)
Clean Gowns	Size 1	50.00
	Size 2	
	Size 3	
Gloves	small	
	medium	
	large	
	extra large	
Surgical Masks		
N95 Respirators		
Face Shields		
Goggles		
Alcohol Hand Sanitizer		
Hand Soap (refill for sink)		
Disinfectant cleaning wipes		
Disinfectant cleaning solution		
Other inventory		

<https://www.ucihealth.org/stopcovid>



# Hand Hygiene is Key for PPE Safety

- **Soap and water vs hand sanitizer**

- Hand sanitizer more convenient, individual bottles can be in pocket
- Hand sanitizer less drying

- **Proper Technique: *Hand sanitizer***

- Front of hands
- Back of hands
- Between the fingers
- Both thumbs
- Wrists
- Tips of fingers



*Scrub between fingers*



*Clean wrists*



*Clean tips of fingers*



*Clean both thumbs*

- **Proper Technique: *Soap and water***

- Necessary for visibly soiled hands
- Rub with soap for 20 seconds, then rinse

# Critical Moments for Hand Hygiene

- ANY TIME your hands are visibly soiled
- BEFORE and AFTER touching your face or mask
- BEFORE and AFTER putting on/removing gloves
- BEFORE and AFTER eating
- AFTER using the restroom
- BEFORE and AFTER performing resident care needs:

✓ Feeding

✓ Oral care

✓ Giving medication

✓

Accessing devices

✓

Bathing/showering

✓

Toileting/incontinence care

✓

Dressing/undressing

✓

Transferring

*Clean hands save lives!  
Perform hand hygiene during  
these critical moments*

# Universal Masking

- **Prevents Infected Droplets from Reaching Others**
  - If both persons masked, not considered exposed even if one is ill
- **Important to Wear Mask Correctly**
  - Must cover nose *and* mouth
  - Use hand sanitizer before adjusting/touching
  - Do not “store” on forehead or under chin
  - Store in clean bag
- **Try to Mask Residents**
  - They are high risk for infection
  - Encourage repeatedly to get them used to it



# Which Mask When?

- **Cloth Masks**

- Comfortable and washable
- Spares medical mask supply
- For non-medical care staff, residents



- **Standard Medical Mask**

- Prevents droplet spread
- Use for resident care
- Safe reuse if not wet, soiled, damaged

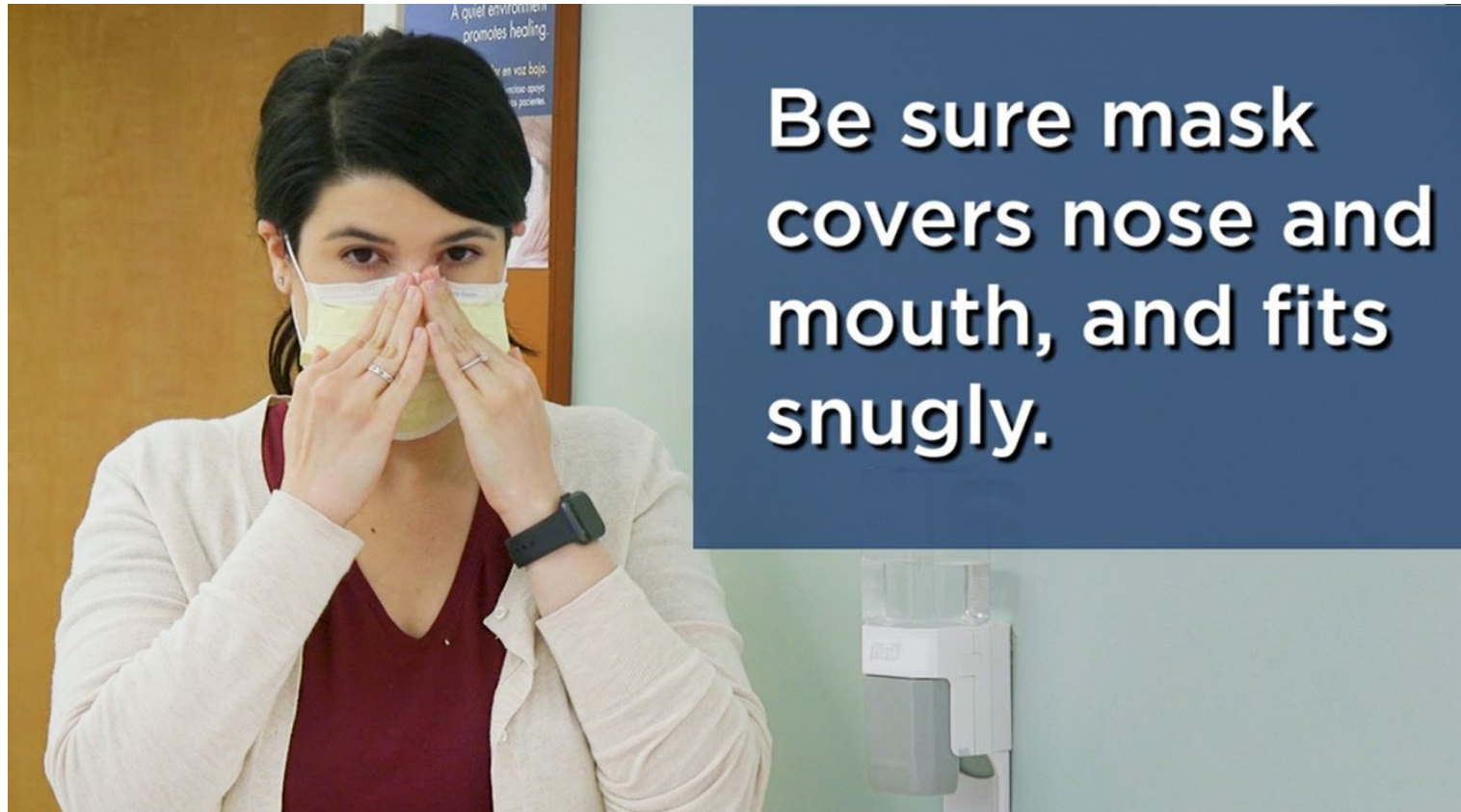


- **N95 Respirator**

- Use for aerosol generating procedures (rare)
- Safe reuse possible with CDC guidance



# Masking Reminder #1: Ensure Mask Fits Well



## Masking Reminder #2: Store Mask in a Clean Bag



Store mask in either clean breathable paper bag or a thin plastic bag left open to allow air/drying

# Masking Do's and Don'ts

## DO

- Wear community cloth mask on arrival to work and when going home
- Masks must be worn all day at work, even by non-direct care providers
- Cloth masks can be worn in non-resident care areas, during administrative time and breaks by direct care providers
- **Perform hand hygiene before and after putting on, taking off, or adjusting your mask**
- Remove mask by grasping ear loops or ties and directly removing away from face
- Store your mask in a clean, unsealed bag for reuse
- **Protect your mask under a face shield when caring for an unmasked resident and anytime when splash or spray could occur**

## DON'T

- Don't touch or adjust your mask with unclean hands
- **Don't remove mask by grasping the front of it**
- **Don't reuse your mask if it is wet, soiled, damaged, loses function (e.g. unable to breathe through) or the fit cannot be maintained**
- Don't wear mask on chin, top of head or hanging over one ear
- **Don't double mask**
- Don't wear your community cloth mask into resident rooms if you are a direct care provider

# When to Use an N95 Respirator: Aerosol Generating Procedures (AGPs)

- **COVID-19 is spread by droplets and is not considered an airborne disease. However, some procedures can generate very small particles that can hang in the air and be inhaled.**
- **Aerosol Generating Procedures (AGPs) Include All 3 of the Below:**
  - Involves the respiratory tract PLUS
  - Involves a resident with contagious respiratory symptoms PLUS
  - Involves a procedure that generates aerosols (very small particles that hang in the air) around the operator



# Use an N95 Respirator with Eye Protection for AGPs

## Ventilation

- Cardiopulmonary resuscitation
- Intubation
- Extubation
- Manual ventilation
- Non-invasive positive pressure ventilation (BiPAP, CPAP)
- Disconnection of ventilator circuits (e.g., changing ventilator tubing)

## Respiratory Therapy Procedures

- Sputum induction
- Open airway suctioning, such as tracheostomy suctioning (not in-line suctioning or suctioning of oral mucosa)
- Nebulizer therapy (use metered dose inhalers (MDI) instead, when possible)
- High flow nasal cannula (HFNC) oxygen (>15L)

# Use an N95 Respirator with Eye Protection for AGPs

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High Flow Nasal Cannula

– Day suctioning, such as  
– Suctioning (not in-line  
or suctioning of oral mucosa)  
– Inhaler therapy (use metered dose inhalers  
ahead, when possible)  
– High flow nasal cannula (HFNC) oxygen (>15L)

# Donning an N95 Respirator



**Always check seal:**

- 1. Cup hands around mask edge**
- 2. Blow out hard**
- 3. Ensure no air escapes around mask**
- 4. If air leaks, re-don mask and check seal again**

# Doffing an N95 Respirator

Remove





## Mask Reuse and Extended Use

- **Reuse** refers to the practice of using the same PPE for multiple encounters with different residents, but removing it ('doffing') after each encounter
- **Extended use** refers to the continuous wear of the same PPE (e.g., N95 respirator) for serial or repeated close contact encounters involving multiple residents, without removing the PPE between resident encounters. For the COVID-19 pandemic, extended use of standard masks is in place for universal masking.

***NOTE: If splash, spray, or aerosol generation occurs, replace mask.***

# Mask Reuse and Extended Use

Reuse	
<ul style="list-style-type: none"><li>• Clean and dry</li><li>• Nosepiece intact</li><li>• Straps intact</li><li>• Fit maintained</li><li>• No tears in mask</li><li>• No deformation in shape</li><li>• No visible soilage</li></ul>	
Discard	
<ul style="list-style-type: none"><li>• Detached/fractured nosepiece</li><li>• Torn, damaged</li><li>• Deformed, no longer fits</li><li>• Visibly soiled, contaminated</li><li>• Broken or stretched straps</li></ul>	

# Eye Protection

- **Protect Your Eyes from Splash or Spray**
  - Face shields or goggles must cover both the front and sides of your eyes
  - Face shields are preferred over goggles because they also protect your mask from contamination
- **When to Use Eye Protection**
  - When providing direct care for confirmed or suspected COVID residents
  - Remove eye protection when leaving resident room or COVID dedicated area
  - Clean with alcohol pads and store in clean bag for reuse



# Gown Types

**With Ties**



**With Snaps**



**PPE Protocols Included for Both**



# Donning COVID PPE - Video



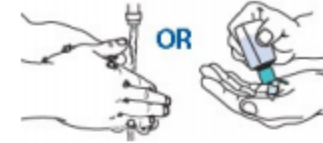
<https://vimeo.com/438355628/0151aec5af>

# Donning COVID PPE

## Before Entering Room/COVID Dedicated Area

### 1 Perform hand hygiene (alcohol hand rub or soap/water)

- Ensure cleaning of all surfaces of the hands, including front, back, in between the fingers, the thumbs, the wrists, and the tips of all fingers



### 2 Put on clean gown

- Ensure gown is clean. Do not put on a used gown previously used by you or anyone else.
- Secure at back of neck and waist
- Ensure cuffs cover wrists



### 3 Perform hand hygiene again

- Ensure cleaning of all surfaces of the hands, including front, back, in between the fingers, the thumbs, the wrists, and the tips of all fingers

# Donning COVID PPE

## 4 Put on standard mask (already on if extended use) or N95 respirator

- Reserve N95 for aerosolized generating procedures
- If using an N95, check seal by cupping hands around mask and blowing to see if air leaks around mask. If air leaks, readjust mask and check seal again. If unable to seal, replace N95



## 5 Put on face shield (or safety glasses or goggles)

- May already be on if applying extended use in COVID dedicated areas

## 6 Perform hand hygiene again

- Ensure cleaning of all surfaces of the hands, including front, back, in between the fingers, the thumbs, the wrists, and the tips of all fingers

## 7 Put on gloves

- Extend to cover wrist on top of gown



# Doffing COVID PPE - Video



<https://vimeo.com/438370503/73a49946e1>

# Doffing COVID PPE

## Before Exiting Room/COVID Dedicated Area

- 1 Determine doffing process, which depends on whether
  - A) Gown can be removed by tugging from front to unsnap
  - B) Gown must be untied by reaching up behind neck or behind back

OPTION A (gown can be tugged off from front)	OPTION B (must reach behind neck/back)
<ol style="list-style-type: none"><li>2 Remove gown<ul style="list-style-type: none"><li>○ Grasp front of gown at upper chest or waist level. Tug to remove.</li><li>○ Turn gown inside out, bundle and place in proper container</li></ul></li><li>3 Remove gloves</li><li>4 Perform hand hygiene</li></ol>	<ol style="list-style-type: none"><li>2 Remove gloves</li><li>3 Perform hand hygiene</li><li>4 Remove gown<ul style="list-style-type: none"><li>○ Unsnap or untie at neck and back</li><li>○ Turn gown inside out, bundle and place in proper container</li></ul></li><li>5 Perform hand hygiene</li></ol>

- **When removing gloves**, use glove in glove technique (see “Glove Removal Video”)
- **When performing hand hygiene**, ensure cleaning of all surfaces of the hands, including front, back, in between the fingers, the thumbs, the wrists, and the tips of all fingers

# Doffing COVID PPE

**NEXT, complete PPE removal with the following steps:**

**1 Remove face shield**

- Tilt your head forward, hold the top of your face shield with one hand, and pull the shield off the top of your head
- Clean face shield/goggle if reusing (see “Eye Protection Reuse Protocol”)

**2 Remove mask/N95 respirator**

- Under universal masking, retain standard mask unless soiled, wet, or damaged
- Remove N95, store per “Mask Reuse Protocol”, don standard mask

**3 Perform hand hygiene**



# Safe Glove Removal



<https://vimeo.com/438389295/cdfb99a59a>

# COVID Trends: Why Prepare Now?

- **Why Worse in Fall?**
  - Businesses continue to reopen based on Governor's plan
  - OC schools reopening September 22 → 4-6 weeks later, expect start of 2<sup>nd</sup> wave
  - COVID likely seasonal, worse when temperature, humidity drops
- **What is Needed?**
  - Assess PPE supplies and prepare for second wave
  - Practice makes perfect: PPE, hand hygiene, speaking up about symptoms



# Your Role: Nursing Home Leadership

- **Educate, Address Fear**
  - Correct errors in masking, hand hygiene, breakroom safety
  - Care about mild symptoms
  - Remind them of coverage for COVID sick days
- **Lead by Example**
  - Praise those who speak up
  - Encourage others to correct your behavior, show how to respond well
- **Next Steps**
  - Email [COVIDTeamOC@gmail.com](mailto:COVIDTeamOC@gmail.com) to request free COVID symptom poster clings
  - Review [www.ucihealth.org/stopcovid](http://www.ucihealth.org/stopcovid) materials and email for consultation

# Questions?



**(949) 824-7806 or [COVIDTeamOC@gmail.com](mailto:COVIDTeamOC@gmail.com)**