

Infection Prevention & Control: Update! Safely Providing In-home Care to Patients
Presented by: Mary McGoldrick, MS, RN, CRNI



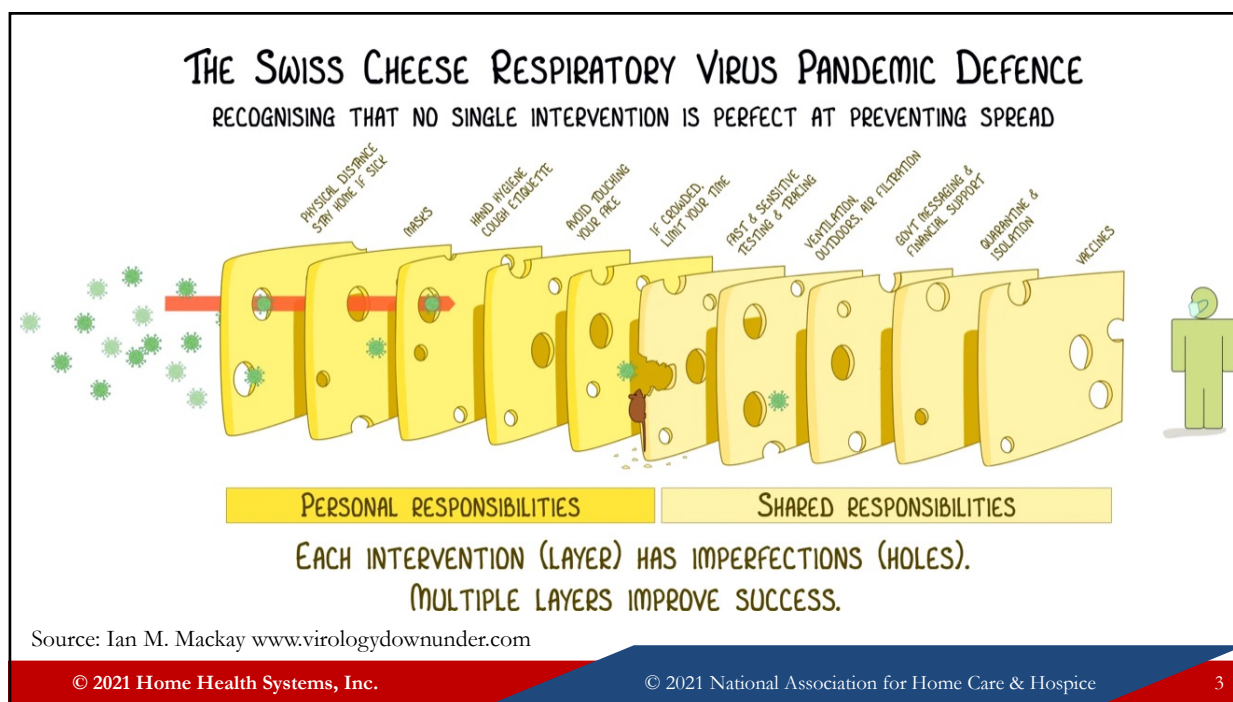
Infection Prevention & Control: Update!
Safely Providing In-home Care to Patients

January 19, 2021

Presented by: Mary McGoldrick, MS, RN, CRNI®
Home Care and Hospice Consultant
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Learning Objectives

- Outline how to reduce the risk of transmitting and being exposed to SARS-CoV-2 when caring for a patient with COVID-19 in the home
- Describe current CDC recommendations and OSHA regulations for the use and management of PPE in the home.
- Explain best practice recommendations for managing PPE and other supplies when inventory is limited.



SARS-CoV-2:

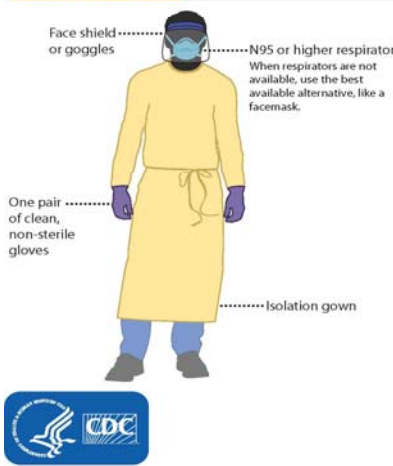
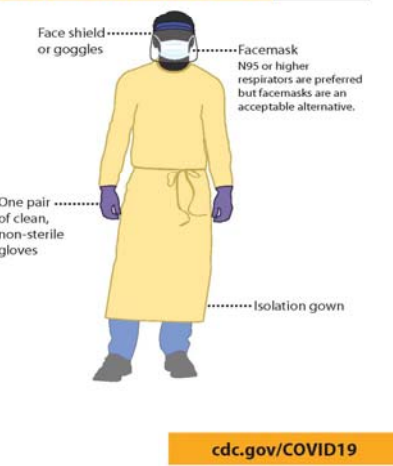
Preventing Occupational Exposures

- Cases and deaths among healthcare workers
- Occupational exposure criteria
- Universal (Pandemic) precautions:
 - Face mask
 - Eye protection
- Airborne/droplet and contact precautions

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COVID-19 Personal Protective Equipment (PPE) for Healthcare Personnel

Preferred PPE – Use	N95 or Higher Respirator	Acceptable Alternative PPE – Use	Facemask
	Face shield or goggles N95 or higher respirator When respirators are not available, use the best available alternative, like a facemask. One pair of clean, non-sterile gloves Isolation gown		Face shield or goggles Facemask N95 or higher respirators are preferred but facemasks are an acceptable alternative. One pair of clean, non-sterile gloves Isolation gown

cdc.gov/COVID19

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Airborne Precautions

Respirator Options:



Filtering Facepiece Respirator

Elastomeric Respirator (Half and Full facepiece)

Powered Air-purifying Respirator

Conserving Filtering Facepiece Respirators

- Limited reuse versus extended use
- When not to not reuse
- Alternative sources



Elastomeric Respirator

Full Facepiece Respirator

- Provides eye protection and effective face seal
- Reusable facepiece with replaceable cartridges or filters
- Fit testing required



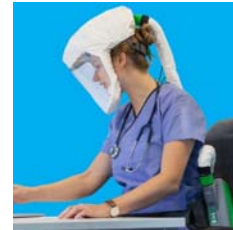
Half Facepiece Respirator

- Covers the nose and mouth only
- Reusable facepiece with replaceable cartridges or filters
- Fit testing required



Powered Air-Purifying Respirator (PAPR)

- Battery powered with blower that pulls air through filters or cartridges
- Reusable components and replaceable filters or cartridges
- No fit testing required for loose-fitting PAPR
- May be used for staff with facial hair



Management of Respirators with Exhalation Valves



Medical Device-related Pressure Injuries

- Causes
- Types of respirators
- Prevention

Respiratory Protection Storage

N95 Respirator and Face Mask:

- “New & never used” N95 respirator storage
- Options for interim storage in “re-use mode”:
 - Container
 - Temperature
 - Location



In-home Aerosol-generating Procedures

- Personal protective equipment required
- Cleaning and disinfection activities
- Considerations for family members

Examples of aerosol-generating procedures performed in the home

AGP	CDC	WHO	OSHA
Open suctioning of airways	X		X
Cardiopulmonary resuscitation	X	X	X
Non-invasive ventilation	X	X	
Manual ventilation	X		X
Nebulizer administration	X		X
High flow O2 delivery	X		

Current as of 1/8/2021

Droplet Precautions

Face Mask

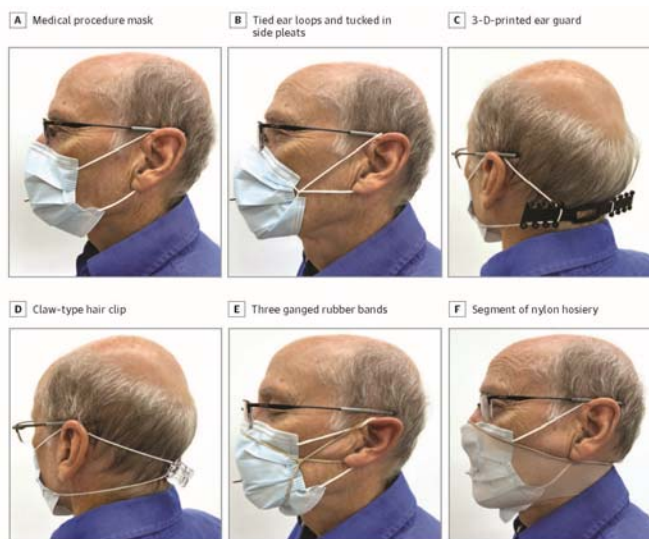
- May be alternative to respirator
- Extended use versus reuse
- Alternatives
- Prioritized use

Can you tell the difference?



Face Mask Efficacy

Source: Clapp, P. W., Sickbert-Bennett, E. E., Samet, J. M., Berntsen, J., Zeman, K. L., Anderson, D. J., ... & Bennett, W. D. (December 1, 2020). Evaluation of Cloth Masks and Modified Procedure Masks as Personal Protective Equipment for the Public During the COVID-19 Pandemic. *JAMA internal medicine*



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Protecting the Eyes

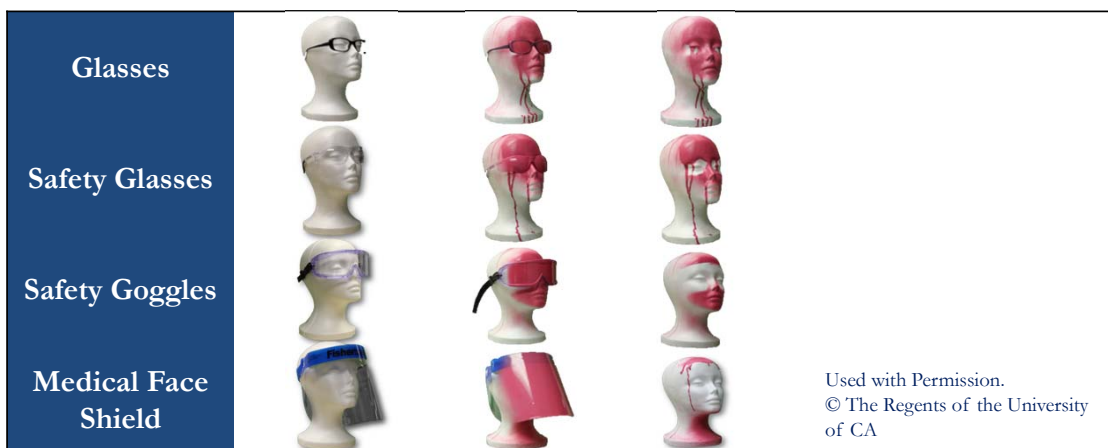
- Options with pros, cons and alternatives:
 - Face Shield
 - Goggles
 - Safety Glasses
- Considerations for wearers of eyeglasses and contacts
- OSHA



Face Shield Placement



Levels of Eye Protection



Eye Protection Management

- Removal
- Cleaning and disinfection
- Storage



Conserving Glove Usage



WHEN REQUIRED



WHEN NOT
REQUIRED

Glove Usage

- Alternatives
- Glove reuse options:
 - Hand sanitizer
 - Washing
 - Bleach dip

Isolation Gown

- Disposable versus cloth gown
- Extended use
- Gown alternatives

Cold Climate Donning and Doffing of PPE

- Where/how to don and doff PPE
- Staff knowledge:
 - How to recognize tasks that may involve exposure to blood or other potentially infectious materials and when PPE must be used
 - What kind of PPE is to be used
 - How to don PPE, adjust it, wear it, take it off and dispose of it
 - The limitations of the PPE
 - How to care for the PPE, maintain it, and how long it can be used
- Preventing self-contamination
- PPE disposal

In-home Wearing of Respiratory Protection by Patient/Family



- When In-home Care Staff Present:
 - Who should wear respiratory protection, when, and what kind
 - Mask exemptions
 - Staff's respiratory protection

Best Practices for “Bag Technique”

- When not to bring in the home
- Hand hygiene
- Bag placement
- Routine sanitizing
- Management of equipment and supplies



COVID-19 “Bag Technique”

- Personal protective equipment
- Disinfectant wipes
- Surface barriers
- Paper bags
- Hand hygiene supplies
- Supplementary items:
 - Single-use items
 - Reusable items

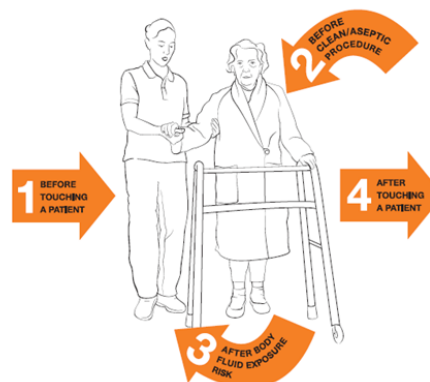


Performing Hand Hygiene

- When indicated:
 - Before and after having direct contact with patient
 - Before donning PPE
 - Before performing an aseptic procedure
 - After contact with patient's immediate environment
 - After contact with blood body fluids, or contaminated surfaces
 - After removing PPE
- Using correct technique

Your Moments for Hand Hygiene

Health care in a residential home



Hand Sanitizer Products

- Compounded hand sanitizer preparations expiration date
- FDA Safety Alerts:
<https://www.fda.gov/drugs/drug-safety-and-availability/fda-updates-hand-sanitizers-consumers-should-not-use#products>



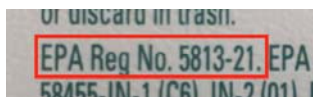
Persistence of SARS-CoV-2

Surface	SARS-CoV-2 Survival Time
Aerosols	≤ 3 Hours
Plastic	≤ 2-3 Days
Stainless steel	≤ 2-3 Days
Copper	≤ 4 Hours
Cardboard	≤ 24 Hours

Source: N van Doremalen, *et al.* (2020). Aerosol and surface stability of HCoV-19 (SARS-CoV-2) compared to SARS-CoV-1. *The New England Journal of Medicine*.

Cleaning and Disinfection

- Disinfect with product from EPA “List N”:
 - <https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>
- Contact time
- Manufacturer’s instructions for use:
 - Personal protective equipment
 - Storage



Best Practices for Device Management

- Device management
- Paper documentation
- Electronic visit verification:
 - Patient's skin contamination
 - Equipment contamination
- Disinfection



Source: McGoldrick, M. (2019). Electronic visit verification: Infection prevention breaches when capturing the patient's signature. *Home Healthcare Now*, 37(6), 260-261.

COVID-19: Policies and Procedures

- Update policies to minimally include:
- Transmission-based precautions:
 - Caring for a patient suspected or confirmed of having COVID-19 in the home or hospice IPU
 - Re-use and storage of PPE, including storage and maintenance
- Hand hygiene
- Management of equipment and supplies:
 - Bag technique
 - Cleaning and disinfection activities
- Respiratory protection plan
- Employee health screening and when staff need to be excluded from work

Secondary Household Transmission of SARS-CoV-2

- Assessment and PCR testing of positive patients and their household contacts:
 - 53% tested positive in the first 7 days of PCR testing
 - ~75% of secondary infections occurred within the first 5 days of index patient's illness
 - 60% of infected household contacts were asymptomatic

Source: Grijalva CG, et al. (November 6, 2020). Transmission of SARS-CoV-2 Infections in Households—Tennessee and Wisconsin, April -September 2020. *MMWR*, 69(44),1631-1634.

Secondary Household Transmission

- Meta-analysis: 54 studies with 77,758 participants
- Secondary transmission higher in households with:
 - Symptomatic patient
 - Adults
 - Spouses
 - Household with one contact

Source: Madewell, Z. J., Yang, Y., Longini, I. M., Halloran, M. E., & Dean, N. E. (2020). Household Transmission of SARS-CoV-2: A Systematic Review and Meta-analysis. *JAMA network open*, 3(12), e2031756-e2031756.

Preventing Secondary In-home Spread of SARS-CoV-2

- Individualized infection prevention and control patient/family education
- How to avoid transmission of COVID-19:
 - All household members wear a mask in shared spaces around others
 - Keep at least 6 feet apart
 - Provide information from CDC's web pages:
 - "Interim Guidance for Implementing Home Care of People Not Requiring Hospitalization for Coronavirus Disease 2019 (COVID-19)"
 - "If You are Sick or Caring for Someone"
 - "Protect your Home from COVID-19"
 - Get vaccinated (for both COVID-19 and influenza)

Steps to Successful Management of In-home COVID-19

01

Leadership prioritization of infection prevention and control *

02

Provide access to PPE, hand hygiene, and disinfection, and other supplies

03

Provide IC training and observe staff's competence on the proper use of PPE and other IC principals

04

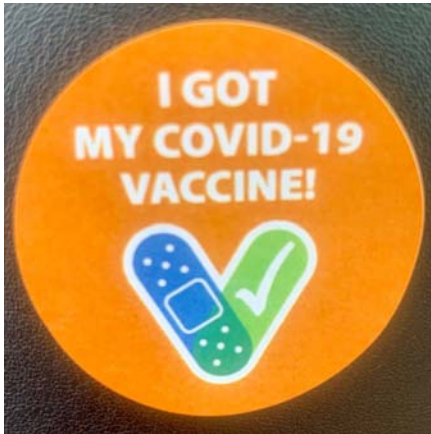
Arrange for COVID-19 testing following occupational exposure or symptom development

05

Arrange for COVID-19 vaccination

*Source: Pogorzelska-Maziarz, M., Chastain, A.M., Mangal, S., Stone, P.W., and Shang, J. (2020). Home health staff perspectives on infection prevention and control: Implications for Coronavirus Disease 2019." *Journal of the American Medical Directors Association*, 21(12), 1782-1790.

COVID-19 Vaccination



- Encourage vaccination
- Educate staff to reduce vaccine hesitancy
- Stagger scheduling of the vaccine
- Be aware of COVID-19 risk and timeframe for full immune response

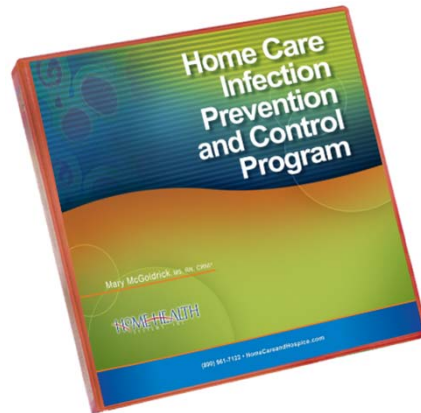
Summary

- Reduce the risk of transmitting and being exposed to SARS-CoV-2 when caring for a patient with COVID-19 in the home
- Management of PPE in the home based on CDC recommendations and OSHA regulations
- Best practice recommendations for managing PPE and other supplies when inventory is limited



Questions

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Upcoming Events



February 23, 2021 | 12:00-6:00 PM EST | Virtual

Upcoming Webinars

PDGM: Lessons Learned from 2020

Tuesday, January 26, 2021 | 2:00-3:00pm Eastern

HHFMA Innovations: Innovative Payment Models: Panel Discussion of Industry Trends and One Organization's Journey

Wednesday, February 3, 2021 | 2:00-3:00pm Eastern

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