



EDUCATIONAL RESOURCES

# INFECTION PREVENTION & CONTROL UPDATE: CARING FOR A PATIENT WITH COVID-19 IN THE HOME

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# LEARNING OBJECTIVES

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- At the conclusion of this webinar, the participant will be able to:
  - 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 TRANSMISSION

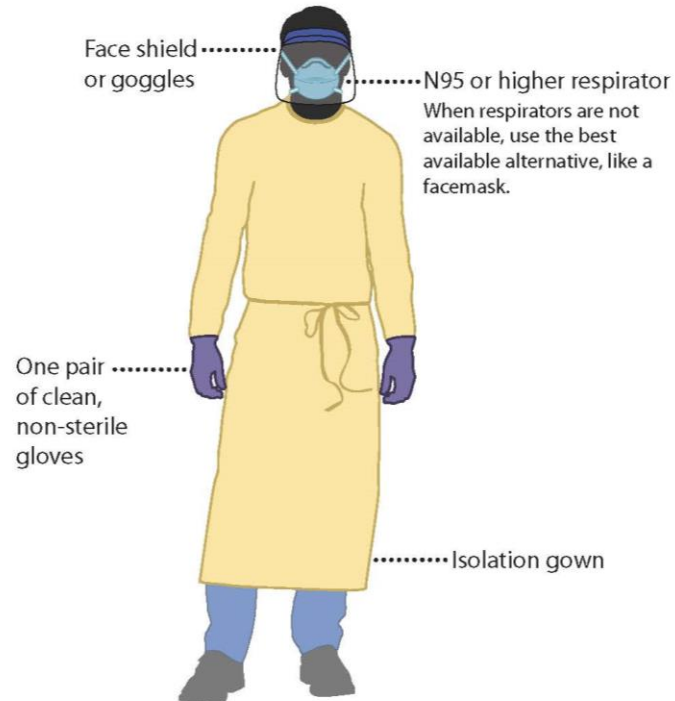
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Modes of Transmission:

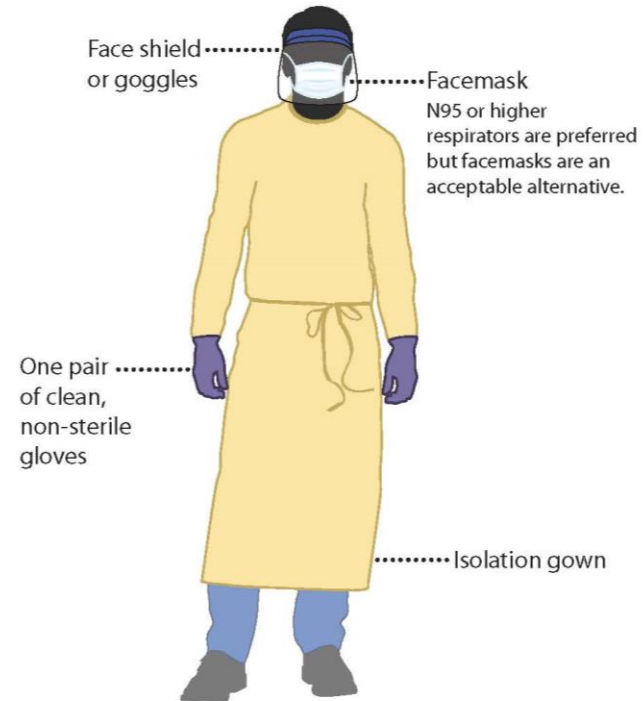
- Inhalation of virus
- Deposition of virus on exposed mucous membranes
- Touching mucous membranes with soiled hands

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

## Preferred PPE – Use N95 or Higher Respirator



## Acceptable Alternative PPE – Use Facemask



CS 315818-C 03/23/2020

[cdc.gov/COVID19](https://www.cdc.gov/COVID19)

# FILTERING FACEPIECE RESPIRATORS

- Fit testing and medical questionnaire
- Limited reuse versus extended use
- Inspection



# FILTERING FACEPIECE RESPIRATOR

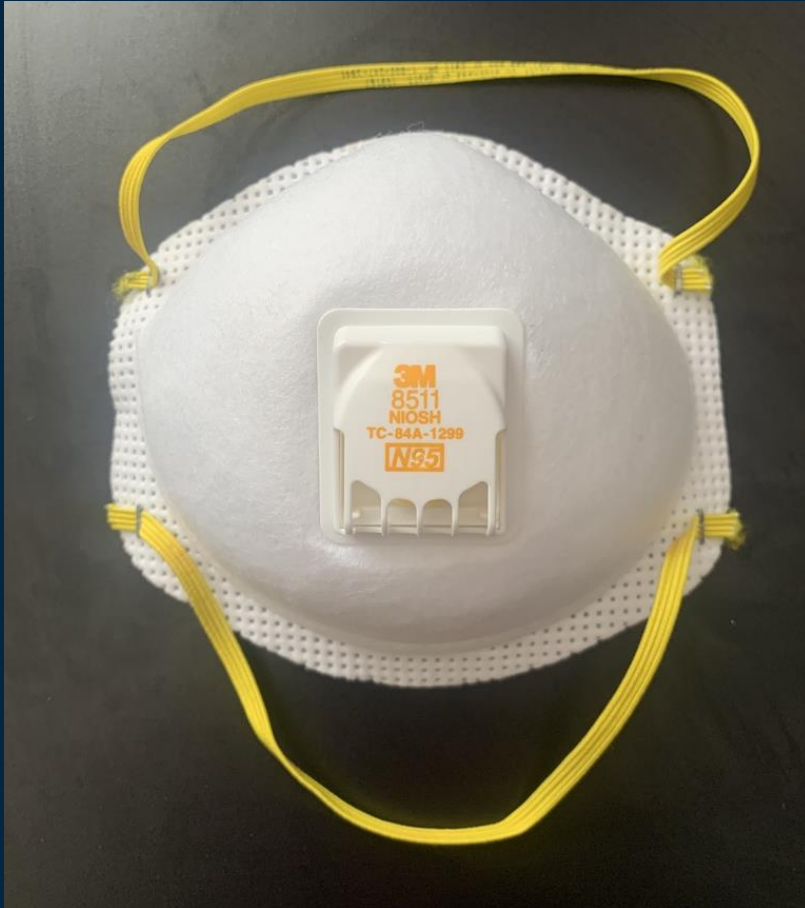


# ELASTOMERIC HALF FACEPIECE RESPIRATOR

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

# MANAGEMENT OF RESPIRATORS WITH EXHALATION VALVES





# RESPIRATORY PROTECTION STORAGE: N95 & FACE MASK

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



# 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*.

# AEROSOL-GENERATING PROCEDURES

- Staff knowledge
- Wear N95 or higher-level respirator, eye protection, gloves, gown for:
  - Performing AGPs and/or
  - Any procedures that are likely to generate splashes or sprays of blood or body fluids and *COVID-19 is suspected*
- Potential for staff exposure
  - Perform aerosol-generating procedures cautiously
  - Limit the number of staff present
  - Conduct AGPs in a private room with the door closed
  - Clean and disinfect surfaces promptly
- Considerations for family members

# PERFORMING CPR IN THE HOME

Airway  
management

Chest only  
compressions



# DROPLET PRECAUTIONS: FACE MASK



Droplet precautions versus source control



Extended use versus reuse



Well-fitting

# FACE MASK EFFICACY

A Medical procedure mask



B Tied ear loops and tucked in side pleats



C 3-D-printed ear guard



D Claw-type hair clip



E Three ganged rubber bands



F Segment of nylon hosiery



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*

# DROPLET PRECAUTION: EYE PROTECTION

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- Options:
  - Face Shield
  - Goggles
  - Safety Glasses
- Management

# EYE PROTECTION





# CONTACT PRECAUTIONS

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- Gown:

- Disposable versus cloth gown
- Prioritized use

- Gloves:

- Alternatives
- Glove reuse options
- Compliance issues

# CONSERVING GLOVE USAGE



When Required



When Not Required

# DONNING AND DOFFING OF PPE

Preventing self-contamination

Staff knowledge

Where/how to don and doff PPE

PPE disposal

# SOURCE CONTROL MEASURES

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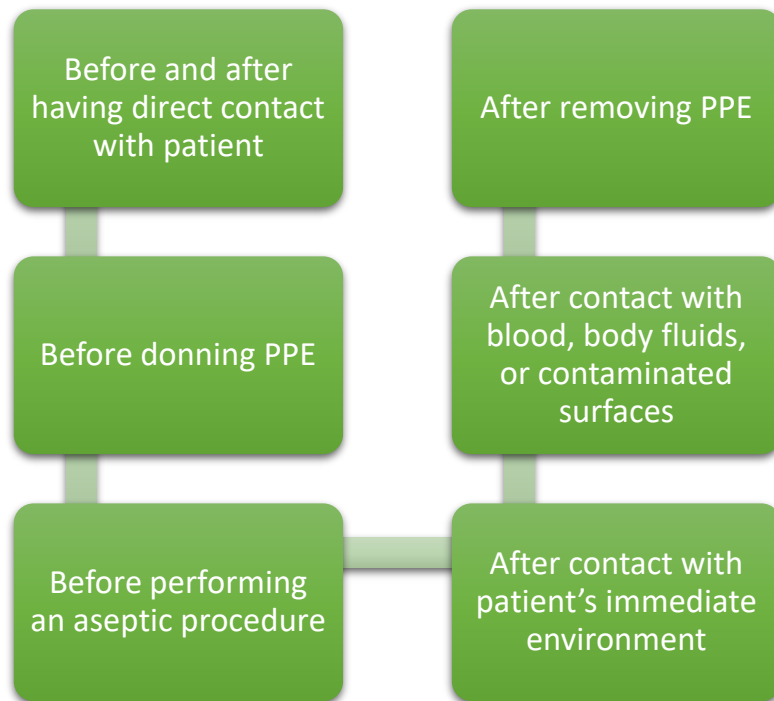
- Personal protective equipment:
  - Well-fitting face mask at all times
  - Eye protection under certain circumstances

# COVID-19 “BAG TECHNIQUE”

- Personal protective equipment
- Disinfectant wipes
- Surface barriers
- Hand hygiene supplies
- Single-use items
- Reusable items:
  - Use dedicated or disposable noncritical patient-care equipment, or if not available, clean and disinfect according to manufacturers’ instructions



# PERFORMING HAND HYGIENE: PERFORMING WHEN INDICATED



## Your Moments for **Hand Hygiene** Health care in a residential home



# HAND HYGIENE: TECHNIQUE

- Soap and water:
  - Rub hands together vigorously for a minimum of 20 seconds covering all surfaces
  - Hand drying
  - Use towel to turn off faucet/tap
- Alcohol-based hand hygiene product:
  - Cover all surfaces of hands & fingers, until hands are dry



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McGoldrick, M. (2017). Hand hygiene in the home setting: Technique matters. *Home Healthcare Now*, 35(9), 454-455.

# HAND HYGIENE: PRODUCT USAGE AND STORAGE

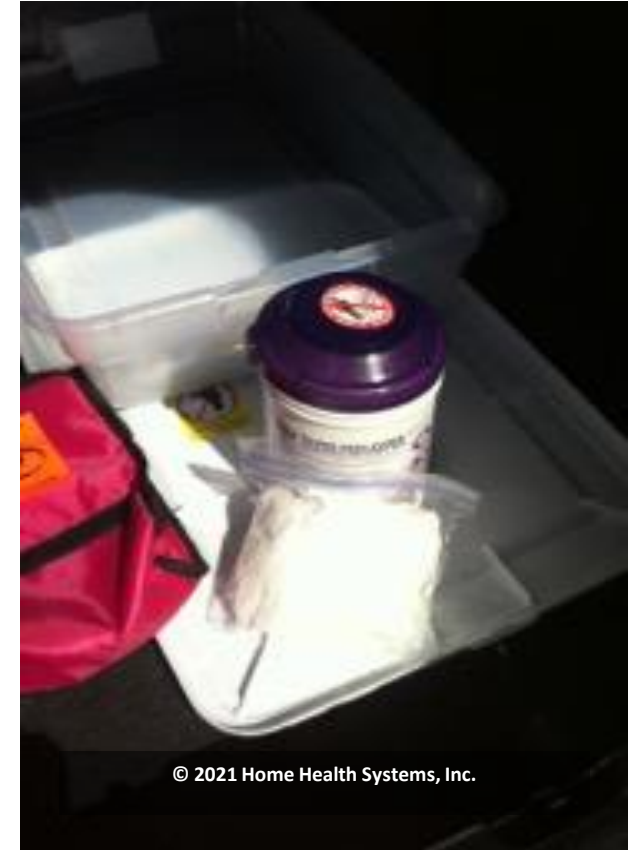
- Product used
- Hand lotion or cream access
- Partially empty soap container
- Alcohol-based hand hygiene:
  - Storage location
  - Expiration dating
  - Compounded BUD
  - When not to use





# CLEANING & DISINFECTION

- Product selected:
  - EPA List N
  - Antiseptic vs. disinfectant
- Storage:
  - Repackaging
  - Labeling
  - Closure
  - Temperature
- Personal protective equipment
- Contact time
- First aid



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Source: McGoldrick, M. (2016). Protecting the staff when using disinfectants in the home. Home Healthcare Now, 34(9), 523.

# 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.

# UNDIAGNOSED RESPIRATORY ILLNESS & COVID-19: POLICIES AND PROCEDURES

- Standard and Transmission-based precautions
- Hand hygiene
- Management of equipment and supplies
- Respiratory protection plan
- Employee health
- Reporting to local/state public health officials
- Emergency management

# 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 SAR-COV-2

- Individualized infection prevention and control patient/family education
- How to avoid transmission of COVID-19:
  - 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 to prevent COVID-19

# INFECTION SURVEILLANCE

- Surveillance plan implemented:
  - Collect and monitor COVID-19 surveillance data (Medicare-certified providers)
- Management interviews:
  - Knowledge of how many patients currently diagnosed with COVID-19 (suspected and confirmed)
  - Knowledge of how to communicate with local/state public health officials
- Staff interviews:
  - IPC concerns identified, reported, and acted upon

# SUMMARY

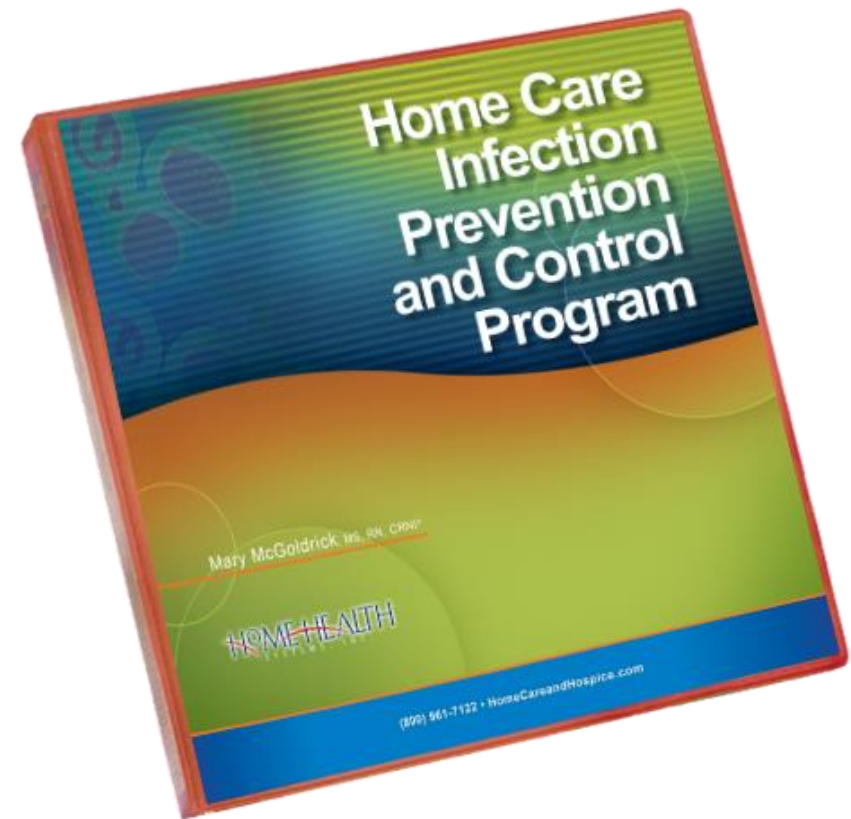
- How to reduce the risk of transmitting and being exposed to SARS-CoV-2 when caring for a patient with COVID-19 in the home
- Current CDC recommendations and OSHA regulations for the use and management of PPE in the home
- Best practice recommendations for managing PPE and other supplies when inventory is limited





# QUESTIONS?

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**THANK YOU!**