



EDUCATIONAL RESOURCES

PREVENTING THE TRANSMISSION OF COVID-19 IN THE HOME

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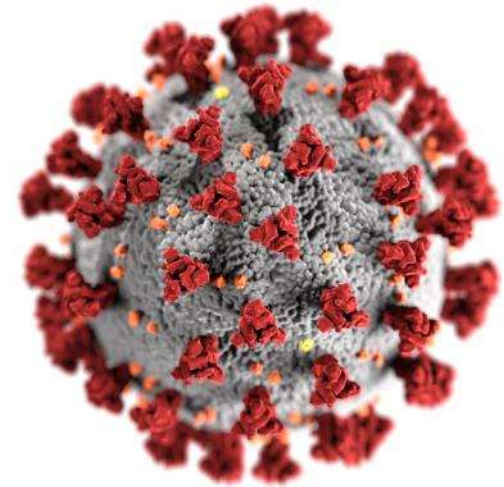
LEARNING OBJECTIVES

- At the conclusion of this webinar, the participant will be able to:
 - Describe infection prevention and control strategies to prevent the transmission of SARS-CoV-2 in the home.
 - Recognize common infection prevention and control breaches during care to patients in the home.
 - Describe best practice recommendations for managing PPE when supplies are limited.
 - More effectively prepare for caring for a patient suspected or confirmed of having COVID-19 in the home.

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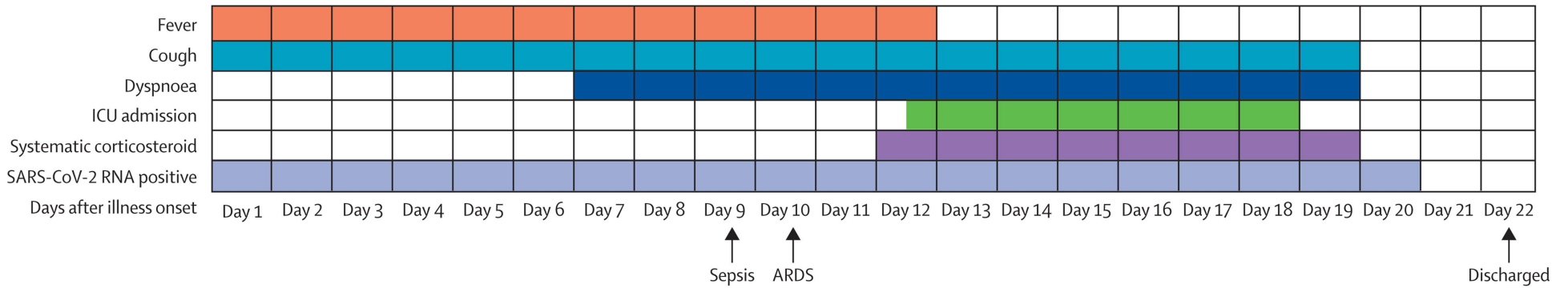
COVID-19: MODE OF TRANSMISSION AND SYMPTOMS

- Mode of transmission
- Symptoms can include:
 - Fever
 - Cough
 - Shortness of breath
- Time of onset to symptoms: 2 - 14 days

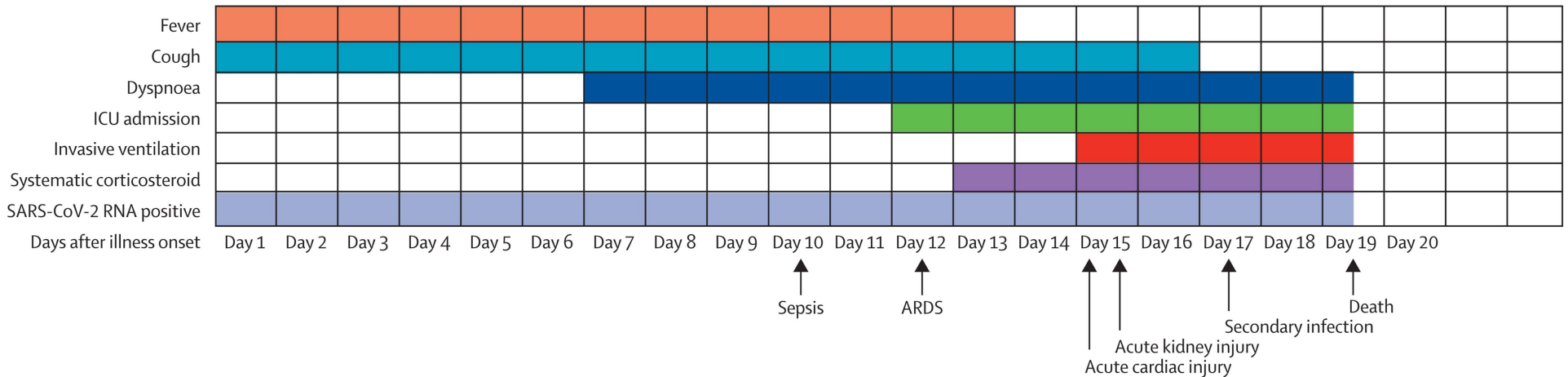


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Survivors



Non-survivors



Source: Zhou, F., Yu, T., Du, R., Fan, G., Liu, Y., Liu, Z., ... & Guan, L. (2020). Clinical course and risk factors for mortality of adult inpatients with COVID-19 in Wuhan, China: a retrospective cohort study. *The Lancet*. Published online March 9, 2020 © 2020 Elsevier Ltd.

COVID-19: PREPARING FOR THE HOME VISIT

- Pre-visit phone call
- Plan:
 - Equipment management and supplies
 - Personal protective equipment (PPE)
 - Disposal
 - Availability

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COVID-19: PPE USE AND OPTIONS FOR RE-USE IN THE HOME

PPE	Plan A	Plan B	Plan C (Worst Case Scenario)
N95 Respirator	<ul style="list-style-type: none">▪ Routine use▪ Single use▪ Aerosol-generating procedures	<ul style="list-style-type: none">▪ Face mask	<ul style="list-style-type: none">▪ Re-use

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COVID-19: AEROSOL-GENERATING PROCEDURES

- Examples of aerosol-generating or cough-inducing procedures
- Personal protective equipment
- Limit individuals present during aerosol-generating procedure
- Clean and disinfect patient care area promptly after performing

Source: McGoldrick, M. (2020). Isolation Precautions. Home Care Infection Prevention and Control Program.

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COVID:19 PPE USE AND OPTIONS FOR RE-USE IN THE HOME

PPE	Plan A	Plan B	Plan C (Worst Case Scenario)
Face Mask	<ul style="list-style-type: none"> Alternative to N95 respirator Single-use 	<ul style="list-style-type: none"> Re-use 	<ul style="list-style-type: none"> Reusable, washable Homemade Face shield only

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COVID-19: PPE USE AND OPTIONS FOR RE-USE IN THE HOME

PPE	Plan A	Plan B	Plan C (Worst Case Scenario)
Eye protection	<ul style="list-style-type: none"> Single-use 	<ul style="list-style-type: none"> Re-use 	<ul style="list-style-type: none"> Homemade
Gown	<ul style="list-style-type: none"> Disposable Single-use 	<ul style="list-style-type: none"> Cloth 	<ul style="list-style-type: none"> Re-use
Gloves	<ul style="list-style-type: none"> Single-use 	<ul style="list-style-type: none"> Re-use 	<ul style="list-style-type: none"> Alternative

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PPE REMOVAL: PREVENTING SELF-CONTAMINATION

- Doffing errors
- Staff are required to know:
 - 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

Source: McGoldrick, M. (in press, 2020). Personal Protective Equipment Removal: Preventing Self-contamination. *Home Healthcare Now*.

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COVID-19: WHEN TO DISCONTINUE TRANSMISSION-BASED ISOLATION PRECAUTIONS

- When COVID-19 testing is available:
 - Resolution of fever without the use of fever-reducing medications; and
 - Improvement in respiratory symptoms (e.g., cough, shortness of breath); and
 - Negative test results from at least two consecutive nasopharyngeal swab specimens collected ≥ 24 hours apart (i.e., total of two negative specimens).
- When COVID-19 testing is not available:
 - At least 3 days (72 hours) have passed since recovery (i.e., defined as resolution of fever without the use of fever-reducing medications and improvement in respiratory symptoms [e.g., cough, shortness of breath]); and
 - At least 7 days have passed since symptoms first appeared.

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COVID-19: PPE USE AND OPTIONS FOR RE-USE IN THE HOME

Surface	SARS-CoV-2 Survival
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*.

INDICATIONS FOR PERFORMING HAND HYGIENE

- Before having direct contact with patients
- Before donning PPE
- After contact with a patient
- After contact with patient's immediate environment
- After contact with blood body fluids, or contaminated surfaces
- After removing PPE

Your Moments for Hand Hygiene Health care in a residential home



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HAND HYGIENE TECHNIQUE: COMMON COMPLIANCE ISSUES

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

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HAND HYGIENE PRODUCT USAGE AND STORAGE: COMMON COMPLIANCE ISSUES

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



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“OTHER” HAND HYGIENE COMMON COMPLIANCE ISSUES

- Rings and jewelry
- Nail polish
- Artificial nails
- Nail tip length
- Skin condition
- Bandages and splints



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THE HOME CARE NURSING BAG

- Unique aspect of care in the home
- Noncritical item
- Fomite for potentially pathogenic organisms



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THE NURSING BAG AS A FOMITE FOR PATHOGENIC MICROORGANISMS

- Outside nurses' bags:
 - 83.6% positive for human pathogens; 15.9% MDROs
- Inside nurses' bag:
 - 48.4% positive for human pathogens; 6.3% MDROs
- Patient care equipment inside nurses' bags:
 - 43.7% positive for human pathogens; 5.6% MDROs

Source: Bakunas-Kenneley, I., Madigan, L. (2009). Infection prevention and control in home health care: The nurse's bag. *American Journal of Infection Control*, 37(8), 687-8.

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“BAG TECHNIQUE”: BEST PRACTICES FOR COVID-19

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



Source: McGoldrick, M. (2020). Cleaning and Disinfection.

Home Care Infection Prevention and Control Program.

McGoldrick, M. (2017). Best practices for home care “bag technique” and the use of surface barriers.

Home Healthcare Now, 35(9), 478-484.

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COVID-19 BAG CONTENTS

- Personal protective equipment
- Disinfectant wipes
- Surface barriers
- Paper bags
- Hand hygiene supplies
- Supplementary items

Source: McGoldrick, M. (2016). Core and supplementary contents in the home care nursing bag. *Home Healthcare Now*, 34(8), 457.

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DISINFECTANTS FOR USE AGAINST SARS-COV-2

- What equipment to disinfect with product from EPA "List N"
- Contact time
- Manufacturer's instructions for use:
 - Personal protective equipment
 - Storage

STORAGE AND DISPOSAL: Store this product in flood areas with large quantities of water. Product or container disposal in a sanitary sewer. Nonrefillable container. Do not reuse or discard in trash.

EPA Reg No. 5813-21. EPA Est. No. 5813-CA-3 (A8), CA-58455-IN-1 (C6), IN-2 (01). Beginning of batch code indicates manufacturing date.

QUESTIONS OR COMMENTS? Visit us at www.clorox.com.
A list of this product's ingredients is available at www.clorox.com.
¿PREGUNTAS O COMENTARIOS? Visítenos en www.clorox.com.
Una lista de los ingredientes de este producto se encuentra en www.clorox.com.

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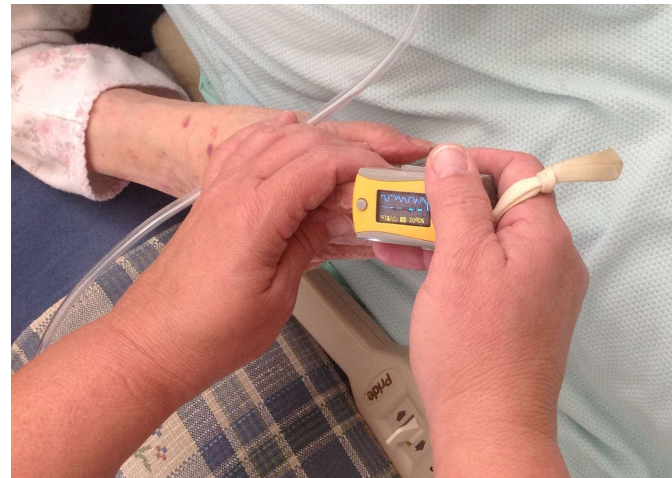
EPA REGISTERED DISINFECTANTS EFFECTIVE AGAINST *MYCOBACTERIUM TUBERCULOSIS* (TB)

- What equipment to disinfect with product from EPA “List B”:
 - https://www.epa.gov/sites/production/files/2020-03/documents/20200302listb_0.pdf
- Manufacturer’s instructions for use:
 - Personal protective equipment
 - Contact time

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CLEANING AND DISINFECTING NONCRITICAL EQUIPMENT

- Vital sign equipment
- Point of care testing equipment
- Electronic equipment



Source: McGoldrick, M. (2016). Preventing contamination of portable computers. *Home Healthcare Now*, 34(4), 221;
McGoldrick, M. (2016). Preventing the transfer of pathogenic organisms from the use of a mobile phone. *Home Healthcare Now*, 34(1), 45.

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ELECTRONIC VISIT VERIFICATION

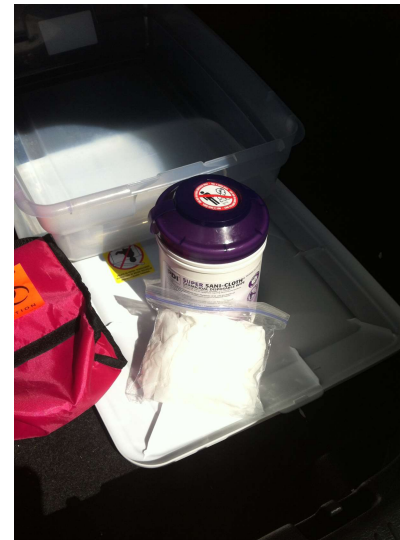
- Patient's skin contamination:
 - Tablet/laptop's mousepad/mobile phone surfaces not cleaned and disinfected prior to direct contact by the patient
 - Stilet not cleaned and disinfected prior to the patient's use
 - Hand hygiene not performed after contact
- Equipment contamination:
 - Mobile device placed directly on a surface in the home and no cleaning and disinfecting after use

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

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HOME CARE DISINFECTION FOR SARS-COV-2: COMMON COMPLIANCE ISSUES

- Repackaging
- Single vs. roll
- Antiseptic vs. disinfectant
- Towelette size vs. surface area
- Skin contact
- First aid



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

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IN-HOME DIAGNOSTIC RESPIRATORY SPECIMEN COLLECTION

- Specimen collection location
- Personal protective equipment
- Individuals present during collection

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HOME VISIT WRAP-UP

- Equipment management and supplies
- Personal protective equipment

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STAFF ASSIGNMENT: KNOWN OR SUSPECTED COVID-19 PATIENT

- Essential home visits
- Limit general staff exposure
- Staff exclusion
- “Recovered” staff
- Scheduling of home visits

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STAFF EXPOSURE TO COVID-19 PATIENT: RISK ASSESSMENT

High-risk Exposure	Medium-risk Exposure	Low-risk Exposure
<ul style="list-style-type: none"> • Prolonged contact with patient who was not wearing a mask and staff was not using any PPE or not wearing a face mask/N95 respirator 	<ul style="list-style-type: none"> ▪ Prolonged contact with patient who was wearing a mask and staff was not using any PPE ▪ Prolonged contact with patient who was wearing a mask and staff was not using any PPE or not wearing a face mask/N95 ▪ Prolonged contact with patient who was not wearing a mask and staff was not using eye protection ▪ Staff not wearing an N95 respirator during an aerosol-generating procedure 	<ul style="list-style-type: none"> ▪ Prolonged contact with patient who was wearing a mask and staff was not wearing: <ul style="list-style-type: none"> ▪ Eye protection, gown, and gloves ▪ An N95 respirator and wearing a face mask, gown, gloves and eye protection ▪ Prolonged contact with patient who was not wearing a mask and staff was not wearing <ul style="list-style-type: none"> ▪ Gown or gloves ▪ An N95 respirator and was wearing a face mask, gown, gloves and eye protection ▪ Brief interaction with patient and staff not wearing all recommended PPE, regardless of whether patient was wearing a facemask are considered low-risk

STAFF EXPOSURE TO COVID-19 PATIENT: RISK-EXPOSURE AND WORK ASSIGNMENT

High- and Medium-risk Exposed Staff	Low-risk Exposed Staff	All Staff
<ul style="list-style-type: none"> ▪ Exclude from duty for 14 days after exposure; or ▪ When staffing limitations, allow asymptomatic staff who had exposure to a COVID-19 patient to continue to work; and ▪ Consider asking staff to wear a face mask for 14 days after exposure when working (and PPE is available) 	<ul style="list-style-type: none"> ▪ Do not exclude for duty 	<ul style="list-style-type: none"> ▪ Report recognized COVID-19 exposures ▪ Regularly self-monitor or actively monitor for fever and symptoms of respiratory infection ▪ Results for “exposed staff” reported and monitored by Clinical Manager ▪ Not report to work when ill

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SUSPECTED OR CONFIRMED COVID-19 POSITIVE STAFF: RETURN TO WORK

COVID-19 Testing is Available

- Resolution of fever without the use of fever-reducing medications; **and**
- Improvement in respiratory symptoms (e.g., cough, shortness of breath); **and**
- Negative test results from at least two consecutive nasopharyngeal swab specimens collected ≥ 24 hours apart (i.e., total of 2 negative specimens).

COVID-19 Testing is Not Available

- At least 3 days (72 hours) have passed since recovery (i.e., defined as resolution of fever without the use of fever-reducing medications and improvement in respiratory symptoms [e.g., cough, shortness of breath]); **and**
- At least 7 days have passed since symptoms first appeared.

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WORK RESTRICTIONS AND INFECTION CONTROL STRATEGIES AFTER RETURNING TO WORK

- Wear a facemask at all times while in the office, IPU, or in the home until all symptoms are completely resolved or until 14 days after illness onset, whichever is longer
- Be restricted from contact with severely immunocompromised patients until 14 days after illness onset
- Adhere to hand hygiene, respiratory hygiene, and cough etiquette
- Self-monitor for fever and respiratory symptoms
- Seek re-evaluation if symptoms recur or worsen

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SUMMARY

- Infection prevention and control strategies to prevent the transmission of SARS-CoV-2 in the home.
- Common infection prevention and control breaches during care to patients in the home.
- Best practice recommendations for managing PPE when supplies are limited.
- Preparing for caring for a patient suspected or confirmed of having COVID-19 in the home.

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QUESTIONS?



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