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COVID-19 in Older Adults: Key Points for Emergency Department Providers

Michael L Malone, MD, Teresita M Hogan, MD, FACEP, Adam Perry, MD, Kevin Biese, MD, Alice Bonner, PhD, RN, FAAN, Patti Pagel, RN, Kathleen T Unroe, MD, MHA

Box 1: Patient Scenario 1

The daughter of an 82-year-old community-dwelling, woman calls the ED nurse hotline regarding her mother. The patient has a past medical history of diabetes mellitus and multiple comorbid illnesses. During the past week the patient had a cough, runny nose, and a slight fever. No temperature has been taken today. Her cough has worsened over the last week. The patient has not recently traveled, however family members from Europe visited the patient three weeks ago. They were not ill. The patient's fingerstick blood glucose has been running higher than baseline and the daughter feels that the patient globally looks a bit worse than baseline.

- Should this patient be sent to the ED?
- Should she receive COVID-19 testing?
- Are there alternative sites for her testing and treatment?
- What systems should be in place to address her care?

BACKGROUND

As of noon March 18, 2020, 7,038 cases of COVID-19 have been reported in America.¹ Numbers are predicted to increase dramatically due to increases of testing. There have been 116 deaths, mostly in older adults. There are 106 patients now reported as fully recovered. Twenty-three older adult deaths were a cluster from one nursing facility in Washington state.² Currently, 49 states have reported cases of COVID-19 infection, and President Trump has declared a National State of Emergency. Without widespread containment measures, the number of cases is projected to double every 6.4 days.³

COVID-19 differs from other viral URI's because of virulence. The virus lives on surfaces for up to 9-days and is more contagious than influenza. There also exists no herd immunity for this novel infection, and to date no vaccine exists.⁴

This manuscript presents two common case scenarios to illustrate the central role of the Emergency Department (ED) in the diagnosis, acute management, and community care coordination of complex older adults in this rapidly changing situation.

WHAT IS UNIQUE ABOUT COVID-19 & OLDER ADULTS?

Due to physiologic changes of aging, decreased immune function, and multimorbidity, older adults are at significantly increased risk from COVID-19.⁵ See Appendix 1 for *Key Points for Patients*. Older adults are more susceptible to the infection itself and are more likely to suffer from the severe form of COVID-19 disease and to have complications.

Aging may also complicate diagnosis, as older adults with respiratory viruses often present atypically. The median duration from symptom onset to death is 11.5 days in persons >70 years vs. 14 days in younger persons.⁶

The definition of fever may need to be altered for older adults. Please see the section on what is fever below. A careful fever evaluation is essential in older adults as based on a new report by Cao et.al.⁷ Cao showed rapid increases in visits, with 40% of all ED visits for fever evaluation. Based on such numbers, administrators would anticipate the depletion of personal protection equipment effecting majority of ED providers.

A recent World Health Organization report found that the case fatality rate for COVID-19 patients older than 80 years in China was 21.9%, while patients of all ages with no underlying chronic conditions had a fatality rate of only 1.4%.⁸ It should be considered that issues such as inadequate ED or ICU care, or lack of resources could also adversely affect mortality and that age is one of many such factors.

Mortality data emerging from Italy reveals the staggeringly high risk of this virus for older adults.⁶ In Italy, where 23% of the population is over 65 years, 89% of COVID-19 deaths are over 70 years old (31% between 70-79 and 58% are over 80 years old).⁷

On the hopeful side, 103-year-old Zhang Guangfen was admitted to Wuhan's Liyuan Hospital March 1st and has completely recovered.

WHAT IS FEVER IN OLDER ADULTS?

Should we use a temperature of only 100° F to screen for disease in older adults? COVID-19 symptom

screenings often use fever as an important sign of illness. Data from China inform that fever is the most common sign, with 83% of 99 inpatients with mean age 55 (15% over 70) exhibiting fever.⁹

However, fever may not be a sufficiently sensitive sign in older adults, as it is frequently blunted or absent even in serious infection.¹⁰ Lacking specific data from the evolving COVID-19 epidemic, influenza, another respiratory virus with significant mortality in older adults, also informs the sensitivity of fever in older adults. One ED-based study shows that only 32% of patients over 60 years with proven influenza had triage temperatures >100° F.¹¹ Temperature may be even less sensitive among our most frail older adults, those in senior living, who carry the highest risk from infection.

The Infectious Disease Society of America recommends modifying the definition of fever for older adults to:

- A single oral temperature over 100° F, or
- 2 oral repeated temperatures over 99° F or
- an increase in temperature of 2° F over the baseline temperature.¹²

should receive preferential access.²¹ Follow CDC protocols.

FORWARD TRIAGE & THE DECISION TO TRANSFER TO THE ED

Forward triage is the EMS sorting of from senior living (nursing home, assisted living facility, independent living communities) and of homebound older adults. This triage is critical to optimizing emergency and inpatient resources while minimizing risk of harm to patients.¹⁵ Decisions to transfer older adults from facility-based care are often variable and site specific. To limit demands that could overwhelm EDs, transfer decisions may be adapted based on comorbid illness burden or frailty.⁴ Ideally, preexisting protocols for transfer can be cooperatively augmented by the hospital, the ED, EMS, public health officials, and referring facilities and agencies to address COVID-19 specific concerns.¹³ Decisions may change as based on disease activity, and hospital and community diagnostic and treatment capacity.¹⁴

Resources for community-based forward triage varies by region, and may include telehealth, community paramedicine, home-based primary care, home health nursing, and facility-based complex care management.

Older adults needing only COVID-19 and influenza testing, or those with less acute medical needs should be referred to testing locations or medical settings outside of the ED. People experiencing only subtle symptoms may be observed/ monitored by caregivers where they live, with follow up by telephone to support any changes in condition. However, all patients at risk of COVID-19 should be appropriately isolated from other vulnerable older adults.

IMPORTANT SYSTEM-BASED CHANGES & IMPLICATIONS

Transfers of older patients' to and from assisted care is critical in the management of those most vulnerable in our society. Care from the ED may become delayed by nursing facilities' ability to receive transfers back of their own patients. On March 12, 2020, CMS waived an important restriction to nursing home and skilled nursing facility (SNF) access called the "the 3-day rule".²⁴ This CMS regulation required 3 days of inpatient hospitalization for a patient to qualify for CMS payment of admission into SNF rehabilitation.

Relaxation of this rule with this waiver now allows direct transfer of appropriate stable older adults to SNF from the ED. The implications of this new transfer ability to free both ED and inpatient resources is clear and may greatly reduce burden of stable patients who require only skilled care.²⁴

SNFs may have limited ability to isolate patients with suspected COVID-19 infection as many have limited private rooms. Proactive planning between hospitals and area SNFs around infection control resources and capacity is high priority during this outbreak. Guidance has been provided by the CDC, CMS and trade associations to reduce risk of transmission.

Training of SNF and NH workers in appropriate

Box 2: Patient Scenario 2

An 86-year-old man is transferred from a skilled nursing facility (SNF) with two-day history of cough and progressive shortness of breath. PMH is significant for COPD, atrial fibrillation, and dementia (non-ambulatory, oriented to person and place, two-person assist for ADLs.) EMS informs that there are "dozens" of people with URI symptoms at the facility. Your ED is holding ICU patients for an average of 20 hours.

Supplemental History: There are no cases of COVID-19 in your county. There are three in an adjacent county. The patient's daughter is in route to the ED. His POLST form states "DNR; apply all other measures."

Evaluation: Awake, alert, moderately increased respiratory effort. Temp 100 F (tympanic), RR 27, Pox 87% RA, HR 108, BP 102/62. Fair air movement, diffuse wheezes. He frequently removes the facemask placed by EMS.

- Do standard COPD interventions change with circulating COVID-19? Should he be intubated if his respiratory status deteriorates?
- Should the "dozens" of other patients from the facility come to the ED?
- If his status improves, or his daughter requests, can the SNF accept him back without a negative COVID-19 test?

CRITERIA FOR TESTING & UNIQUE CIRCUMSTANCES FOR OLDER ADULTS

Currently COVID-19 testing is limited, and variable site dependent guidelines exist. Restrictions on who can be tested will decrease as test availability increases. As of March 16, 2020, the CDC recommends *priority COVID-19 testing* for older adults, individuals with chronic medical conditions, and immunosuppressed individuals.²³ In practice, this means that older adults with fever and/ or respiratory symptoms who test negative for influenza should be considered for priority COVID-19 testing. If the individual has stable vitals and no, or only mild, clinical symptoms, it is wise to test in locations other than the ED when possible. Even when testing becomes more available older adults

techniques is paramount. Instructions for implementation of isolation/contact precautions can be found at: <https://www.cdc.gov/hai/containment/PPE-Nursing-Homes.html>. See Appendix 1 for additional systems-based resources.

UNIQUE NEEDS OF AN OLDER ADULT LIVING IN A SENIOR LIVING FACILITY

Older adults living in senior living facilities are at highest risk of mortality from COVID-19, given their baseline co-morbidities and exposures resulting from their congregate setting. Of the 120 residents at LifeCare Center in Kirkland, WA, 63 tested positive for COVID-19; 13 died in the hospital with confirmed COVID-19 and 11 died at the center without results of postmortem testing.² Over four dozen staff members were also infected. Because of close interpersonal interactions among residents, and between residents and staff members, teams in these living arrangements should check CDC and Department of Public Health websites for updated instructions on limitation of transmission.

Assisted living facilities and SNFs across the country have curtailed access to their facilities for family and friends, as well as vendors. Facilities are limiting activities, as well as congregate meals and reducing the number of patients' individual staff work with, when possible. Of note, assisted living facilities provide a lower level of care than SNFs. While most SNFs can provide oxygen, IV medications, and nebulizer treatments, assisted living facilities have much less nurse staffing, clinician presence and decreased ability to provide medical care.

TELEHEALTH & CARE IMPLICATIONS

Telehealth is more important than ever during the COVID-19 pandemic. Utilizing telehealth can keep patients safer by minimizing exposure to infection. Telehealth can serve to triage patients to best care and testing locations, avoiding the ED when appropriate. Finally, telehealth can also provide care for certain routine medical appointments.

Telehealth in senior living models exist and show promising results. Shah and colleagues described a telehealth model in which long term health workers, in partnership with emergency physicians, provided a basic assessment of changes in vulnerable older adults' condition.¹⁶ Other systems such as Avera Health¹⁷ and Dartmouth Hitchcock¹⁸ have advanced telehealth systems providing acute care over long distances. The West Health Foundation has considerable expertise in telehealth.¹⁹

The spread of telehealth has been limited by lack of consistent Medicare coverage; however, CMS reduction of regulations during the COVID-19 crisis will increase available telehealth options rapidly.²⁰ All health care systems should be actively implementing telehealth systems as telehealth is clearly a useful component of the strategy to fight the spread of COVID-19.

The Center for Medicare Services reported March 17th that it will immediately expand coverage for telemedicine nationwide to help seniors with health problems stay home to avoid COVID-19 infection.²⁰ This

new option will allow millions of older people to address ongoing medical problems as well as new concerns, while heeding public health advice to stay home during the outbreak.

RESOURCE LIMITATION PREPARATIONS

All attempts should be made to limit spread to and among patients. Rapid spread will create acute resource limitations. Overcrowded EDs increase risk of viral spread.²⁵ Plans to separate patients with respiratory illness from others should be immediately enacted. Triage of those not requiring emergent evaluation should be implemented wherever possible. The possible establishing of COVID-19 units, rapid discharge of non-COVID "well" patients, and postponement of elective surgeries can all be useful in decreasing ED overcrowding and limiting viral spread.²¹

All attempts should be made to limit spread to and among providers. Lack of personnel protective equipment (PPE) has been reported at many hospitals. PPE includes surgical masks, N95 respiratory masks, goggles, face shields, gloves, and gowns. Emergency clinicians are in the forefront of initial patient contact and care during disasters. The American College of Emergency Physicians has reported two emergency physicians are now in intensive care with COVID-19 disease.²⁶ Society cannot afford to lose the pivotal care of those on the front line. Therefore, it is imperative that we all practice careful use of PPE with correct donning and doffing of equipment and take needed self-care measures for health especially during times of disaster.

The current and future potential limitation of facilities and equipment should be immediately addressed. Many countries with active COVID-19 are experiencing shortages of ventilators and ICU or inpatient beds. Given the current data on the severity of disease in older adults, this shortage will disproportionately affect older adults.

ED providers make difficult decisions regarding life-sustaining interventions and admission, including which patients should, or should not be intubated. Anticipating the specifics of these choices will help us prepare for these difficult decisions. Addressing advanced directives early will facilitate end of life decision making. All EDs should have plans in advance to deal with low-resource situations and emergency plans should include perspectives from ED, ICU, administration, referring facilities, palliative care, hospice, and medical ethics in order to best allocate scarce resources.

MEDICATION MANAGEMENT

Access to prescription medication is important. Older adults in the community may have difficulty accessing necessary medications after discharge. Some EDs have the resource to provide medications directly to patients,²⁷ which can not only enhance access but decrease spread by eliminating trips to the pharmacy. Many pharmacies offer home delivery. Caregivers should be instructed to review patients' medication to

ensure adequate supply. Organizations recommend having additional drugs on hand for quarantine situations. 30-day supplies are typical and often covered by insurance. However, people with difficult access should consider having physicians prescribe a 90-day supply.²⁸ A “quantity limit exception insurance form” may allow patients early refills. Such Medicare forms can be found at: <https://www.express-scripts.com/art/medicare16/pdf/CoverageReviewFaxForm.pdf>. Fortunately, many plans already allow these exceptions for the COVID-19 National State of Emergency.

Over the counter medications are also important especially those used for control of viral symptoms and fever. Please ensure adequate acetaminophen is available for fever control.

BEHAVIORAL HEALTH IMPLICATIONS

All people may feel anxious as they hear repeated news reports of the COVID-19 pandemic and deal with quickly changing circumstances. Up to 30% of older adults have age related cognitive impairment.²⁹ Rapidly evolving situations are more difficult to navigate for these older adults.

Sleep and maintenance of circadian rhythms are critically important to immune function.³⁰ Sleep deprivation affects various components of the immune system, such as the percentage of CD4+ and CD8+, subpopulations, and cytokine levels.³¹ One of the simplest recommendations we can make to older adults to help prevent disease transmission and mitigate anxiety is to sleep well. Healthcare providers are also encouraged to protect their own sleep during this stressful time.

Anxious patients often reach out to their health providers. It is important to direct such calls appropriately. Ensure that clear, easily accessible directions are provided. Family and caregiver check-ins for patients who are vulnerable and have cognitive limitations are essential as this provides baseline information for clinician decision making that if absent may lead to overtreatment.

IMPLICATIONS OF SOCIAL ISOLATION

Social isolation and anxiety generating news reports may take an emotional toll in older adults and their care partners. Many experience isolation at baseline, due to institutionalization, and impaired function and cognition, and thus face loneliness and anxiety with little reserve. Lack of family visitors may limit the most meaningful part of an older person’s life. Lack of regular interactions may decrease ability for a caregiver to pick up on changes in cognition and function. Additionally, isolation may restrict needed access to food and medication, and lead to unrecognized falls or health deterioration.³² If possible, regular phone calls or video conferencing with caregivers can be very helpful. Additionally, all of us should reach out by telephone or video, to older adults in our sphere, and encourage others to do the same.

Table 1: Key Points

1. Older patients, particularly those with multiple co-morbid illnesses, have the highest mortality rate with COVID-19 with a case fatality in China for patients over 80 years of 21.9%.
2. Health care systems and community health providers should have rapidly accessible alternatives for COVID-19 testing other than the ED. Opportunities to expand and utilize telehealth care in the evaluation of patients will limit risk of exposure and spread to those most vulnerable, and decrease overcrowding.
3. Per current Centers for Disease Control (CDC) guidelines, symptomatic (fever, cough) older adults and those with chronic medical conditions or who are immunosuppressed should have a low threshold for testing for COVID-19. Test for influenza first.²¹
4. During a shortage of testing kits and their reagents, criteria should be followed to ensure those who are at highest risk receive testing.
5. The Centers for Medicare and Medicaid Services (CMS) has instituted emergency measures to expedite evaluation and disposition of older adults. These included expanding availability of telehealth and waiving the three-day hospital rule prior to SNF placement.
6. Because risk of COVID-19 spread is high in the ED and resources may become limited, protocols should direct well patients to other alternatives, including drive-through testing and telehealth assessments. ED resources should be reserved for seriously and critically ill older adults who are frail, have multiple co-morbid illnesses, and/or significant functional impairments that may need greater medical attention that cannot be addressed at alternatives.
7. As much as possible, place older patients with non-respiratory symptoms in a separate part or zone of the ED, away from those with suspected respiratory infections. This will reduce risk of exposure to potential COVID-19.
8. With the use of masks in the ED and healthcare setting (both by patients and clinicians), be sure to communicate slowly and clearly for those with sensory or cognitive limitations. Patients will no longer be able to read lips and clinicians and caregivers wearing masks may be disorienting for those with dementia and other cognitive impairment.
9. Ask patients and caregivers about their expectations and goals of care early in the evaluation. Now is the time to ask and document advanced directives patient and wishes in preparation for potential severe or critical illness.
10. Because testing is followed by recommendations for quarantine or isolation, the ED provider should work with their Area Agency on Aging (AAA) and/or Department of Public Health (DPH) to provide community resources for home delivered groceries and medications.²² When available, social worker assistance for these cases will be very helpful and hospitals should increase social worker availability in the ED where possible.
11. ED and hospital administration should establish protocols with referring residential and nursing homes and senior living centers for transfers, communication standards, and a specific plan whether residents with URI symptoms may be accepted back to their facilities with or without COVID-19 testing. Stable COVID-19 patients do not necessarily need hospitalization.
12. Protocols should be implemented for paramedics to transfer patients from the community or facility to the most appropriate location for treatment or testing depending on the patient’s acuity and the need for testing.
13. Provide interpersonal support to older patients and caregivers who are at particular risk for anxiety and loneliness during quarantine. This includes referrals to online communities that encourage community connections.
14. During busy ED visits, continue to complete clinical history and examination of those who have the most complex needs, involving the multidisciplinary staff (Pharmacy, social work) as needed.
15. Check CDC, local Department of Public Health (DPH) and/or AAA websites DAILY for updates – the situation is rapidly changing.

CARE FOR THOSE LIVING AT HOME

Older adults may have home care aides, therapists, or other professionals coming into their homes. Emergency providers may have the first or only opportunity to educate support personnel on infection precautions. Clear guidance must be provided to home care & home health agencies.²² It may be useful to refer to discipline specific websites for direction. These health care providers must also protect themselves and their patients from COVID-19 exposure.

CARE FOR THOSE WITH ALZHEIMER'S

Older adults with cognitive impairment will pose unique needs during isolation. Many dementia care supporters such as family or care partners, trained sitters, volunteer visitors may become limited secondary to illness or concern for spread of disease. Caregivers or medical personnel should understand that their use of personal protective equipment may be disorienting for the person with dementia. Further, as illustrated in the second vignette, it may be difficult concurrently to keep face masks or oxygen on patients who cannot understand the situation. Frequent prompting will be important to remind patients and caregivers of hygienic practices both in the ED and home care setting. Check with caregivers for alternative plans for care management if the primary caregiver should become ill. EDs should discuss the risk/benefit of allowing caregivers to be with older adults with cognitive impairment and consider whether to limit visitors for containment purposes.

The Alzheimer's Association has a 24/7/365 Helpline for care partners and health professionals, and local chapters that can provide additional support and resources.³³

CARE TRANSITION ISSUES

Older adults are particularly vulnerable to adverse events during care transitions (changing from one location or one set of care providers to another). These may include adverse drug events or medication errors, falls, abuse or neglect, pressure ulcers, dehydration. The risk of dehydration and delirium are increased with infections such as COVID-19. Protocols should include specific guidance on care transitions. Use of checklists and warm hand-offs, calling the next site of care to ensure coordinated transition, will help ensure essential steps are consistently followed.

FAMILY CAREGIVER NEEDS

Older adults may have family members, paid or unpaid care partners who are friends, neighbors or others in the community who provide care. There is anxiety around COVID-19, and caregivers need reassurance and information so that they know what steps they should take to protect themselves and the patient. They also need to know who to call or email for further direction. Simple 1-page, easily understandable written materials can be developed and distributed to care partners by the ED, nursing facilities and home care agencies. See Appendix 2.

OLDER ADULTS IN HEALTHCARE

Many physicians and nurses are themselves older adults and hence are at high risk during this pandemic. Those who have concerns for their health should be invited to "tap out" to allow for their younger counterparts to provide direct patient care or should consider using telehealth strategies to provide patients' care. The closure of schools in most states, will strain childcare needs and limit healthcare staff availability. Nursing administration may need to consider flexible staffing hours to fill openings. Health care workers who have COVID-19 symptoms (fever, cough, shortness of breath) should remain at home. Health professionals should be directed to the latest and reliable resources for COVID-19 testing and information. Also, see Table 1 and Appendix 3.

PATIENT SAFETY

Older patients who are sent to the ED, instead of being sent to alternate testing sites, will place patients at risk for exposure and potentially overextend limited ED resources. Review appropriate updated CDC criteria for testing and know the testing protocols. A remarkable aspect of the case series from China was the human-to-human hospital-associated transmission among 41% of cases.⁶ This high rate of transmission occurred to other patients and hospital workers.

COMMUNITY PARTNERS

The ED is a critical site of care coordination. In anticipation for a surge of patients in the ED, hospital administrators should consider many simultaneous strategies to keep patient flow safe and decrease overcrowding. Hospitals can collaborate with outpatient resources such as area SNFs, home health, primary care providers, office of aging, EMS, and hospice settings. The goal is to assist with transitions of COVID-19 affected older adults in an efficient and timely manner. Similarly, EDs must coordinate clear and rapid transitions to inpatient units especially intensive care units, and respiratory/pulmonary medicine. Use of palliative care resources can improve coordination of care and optimal use of the ED for those at greatest need. Initiating a 24/7 call line between the ED and individual SNF administrators will allow for coordinated care and decision making.

EMERGING AND EXPERIMENTAL TREATMENTS

Since older adults are most likely to require present with severe or critical presentations and require critical care it is important to acknowledge the limitations of current therapies and inform providers of evolving treatments. COVID-19 treatments are evolving on a daily basis. Providers must update themselves fully at the time of implementing any treatment strategies.

Severe patients present with dyspnea, tachypnea >30/min, saturation <90% and >50% develop lung infiltrates within 1-2 days.³⁴ Critical patients present with septic shock similar to that of sepsis from any cause, median duration from illness onset to dyspnea was 8 days and to mechanical ventilation was 10.5 days.

Antiviral drugs including oseltamivir, ribavirin, lopinavir, and ritonavir have been tried. Remdisivir was used in one United States case with good results.³⁵ Studies using corticosteroids did not show survival benefit and noted delay in viral clearance.^{36,37} Angiotensin converting enzyme 2 is critical for COVID-19 entry into host cells. The therapeutic potential of soluble recombinant ACE2 proteins³⁸ are being tried. Chloroquine phosphate has shown efficacy in COVID-19 associated pneumonia in clinical studies.³⁹

Box 3: Patient Scenario 1 Follow-Up

Q1: Does this older individual need to be taken to the ED?

A: At this time, no. Additional information such as temperature is important. Close monitoring of the patient by family is also important. A telehealth visit would be very helpful to establish how acutely ill the patient is and will now be reimbursed by Medicare.

Q2: Should she receive testing for COVID-19?

- If she has a fever and cough, she should receive influenza testing. If negative, she should receive COVID-19 testing. Ideally, if she is not acutely ill, these tests can be delivered outside the ED.
- Ensure you are constantly monitoring the CDC website as the COVID-19 testing guidance will likely continue to evolve rapidly.

Q3: Are there alternative sites for testing and treatment for this individual?

A: It is critically important that your health care system and community health partner work together to establish alternative sites to the ED for rapid testing and that all help lines and clinicians know this information.

Q4: What are the systems which need to be in place to address her care?

- 24/7 nurse help line armed with all information and treatment protocols.
- Telehealth for assessment without exposing the patient to potential infectious risks.
- EMS system empowered to transfer the patient to the right location of care.
- Partnership with Area Agency on Aging to deliver the social support that patients and families will need during this challenging time.

We hope that with the current level of attention and marshalling of our health care resources against this outbreak, we can limit harm to all our patients including the most vulnerable older adults.

Box 4: Patient Scenario 2 Follow-Up

Q1: Do standard COPD interventions change with circulating COVID-19?

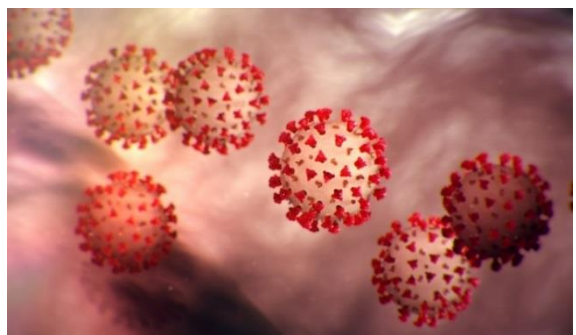
- Nebulizers and BIPAP are considered aerosolizing procedures that may increase risk of transmission. The decision to utilize these treatments in the ED is informed by local cooperation between ED, ICU, RT, and availability of PPE.
- The decision to intubate would ideally involve a discussion with his daughter/POA that includes his goals of care and likelihood of benefit.

Q2: Should the “dozens” of other patients from the facility come to the ED?

- Mass transfers of facility residents may overwhelm ED capacity and create unacceptable risk for frail older adults and other patients.
- The decision to transfer any one patient is the product of their goals of care, clinical stability, diagnostic and treatment capacity of the facility, and hospital capacity. ED providers should participate in discussions with facility providers to inform the harms, benefits, and alternatives to ED transfer for frail OA.

Q3: If his status improves, or his daughter requests, can the SNF accept him back without a negative COVID-19 test?

A: The ability to accept a patient without negative COVID-19 testing will vary by facility and may evolve with public health guidelines and staff and bed capacity. Hospital and ED administration should establish criteria for transfer and return as the situation evolves, in collaboration with area SNFs.



COMPARISONS TO PAST EPIDEMICS AND FUTURE HOPES

Finally, prior pandemics from other corona viruses such as Severe Acute Respiratory Syndrome (SARS) in 2012, and Middle East Respiratory Syndrome (MERS) in 2002 have occurred. These corona viruses spread across populations in similar fashions. Although these pathogens are still active, they disrupted society for only short periods and have since shown limited impact on human populations. This is despite the fact that no commercial vaccines for MERS exist.⁴⁰ Fatality rates for MERS was >35% and SARS was >10% both significantly higher than current COVID-19 death rates.

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Co-Editors in Chief: Michael L. Malone, MD and Teresita M. Hogan, MD, FACEP

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AFFILIATIONS

Kevin Biese, MD
University of North Carolina Medical School

Alice Bonner, PhD, RN, FAAN
Institute for Healthcare Improvement

Teresita Hogan MD, FACEP
University of Chicago Medical Center

Patti Pagel and Michael L, Malone, MD
Advocate Aurora Health

Kathleen Unroe, MD, MHA
Indiana University School of Medicine
IU Center for Aging Research, Regenstrief Institute

MISSION

Improve emergency health care for older adults by providing open access, peer-reviewed, quality education and dissemination platform giving providers in all disciplines the evidence they need to enhance emergency care of older adults.

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APPENDIX 1- ADDITIONAL RESOURCES

- 1) LeadingAge (non-profit nursing homes, SNFs, assisted living residences, home care, housing):
<https://www.leadingage.org/>
- 2) AHCA (American Health Care Association (non-profit and for-profit nursing homes, SNFs, assisted living residences, home care, senior housing):
https://www.ahcancal.org/facility_operations/disaster_planning/Pages/Coronavirus.aspx
- 3) Provider Magazine Online (provides policy and regulatory updates):
<https://mail.google.com/mail/u/0/#inbox/WhctKJVqrrFlqNwxDTzpwDdjHHqXsJpnscbXWxNwwJszZBBsXbkMnTPRLtdtJpRnflqWNIB>
- 4) Local State Health Departments or HHS Departments/Command Centers by state.
Example from Massachusetts - new Command Center is being led by HHS Secretary Marylou Sudders:
<https://www.mass.gov/resource/information-on-the-outbreak-of-coronavirus-disease-2019-COVID-19>
- 5) CDC:
<https://www.cdc.gov/>
- 6) World Health Organization:
<https://www.who.int/emergencies/diseases/novel-coronavirus-2019>
- 7) American Geriatrics Society:
<https://www.americangeriatrics.org/publications-tools/week-review>
- 8) American Medical Directors Association/Society for Post-Acute and Long-term Care:
<https://paltc.org/COVID-19>
- 9) John A. Hartford Foundation:
<https://www.johnahartford.org/dissemination-center/view/coronavirus-disease-COVID-19-resources-for-older-adults-family-caregivers-and-health-care-providers>
- 10) Emergency Nurses Association
<https://www.ena.org/practice-resources/COVID-19>

APPENDIX 2- KEY POINTS FOR PATIENTS

1. Spread of COVID-19: COVID-19 is a corona virus. It spreads from person to person by the droplets that spew into the air when an infected person coughs, sneezes, or even spits while talking. A person becomes infected when these droplets contact their eyes, nose and mouth. Most often this results from the person touching the infected droplets on a surface and then touching their eyes, nose or mouth. It can also happen from inhaling the droplet from the air. These droplets do not stay in the air long but can live on surfaces for many hours.
2. Symptoms of COVID-19: the most common symptoms are *cough and fever*. Feeling short of breath is a troubling sign that means you should call your doctor for an evaluation.
3. Risk of COVID-19 for older adults: Older people are at high risk for developing the severe form of COVID-19 infection and having complications of this infection. Those who also have other illnesses especially asthma, lung problems, diabetes, or cancer are more likely to have complications.
4. What can you do to protect yourself?
 - a. Avoid contact with infected people.
 - b. Practice social distancing (minimize contact with people and 6-foot distance between you and others)
 - c. Avoid crowds and public places
 - d. Avoid public transportation
 - e. If you must go out, use hand sanitizer frequently especially after touching surfaces others have touched such as door handles, shopping carts, elevator buttons, and counter tops
 - f. WASH YOUR HANDS
5. Stay home whenever possible. If people with possible or known infection are also in your home, keep them to an isolated room if you can (their own specific chair, and eating utensils). Clean eating utensils and plates with soap and hot water/dishwasher. Clean any common surfaces several times a day with bleach or other disinfecting cleansers.
6. Check your medications: Be sure you have enough prescription medications for a 2-month supply (call your doctor and ask for refills for anything you are running low)
7. Prepare your "lists": medications, medical history (including allergies), advanced directives and goals of care
8. Keep your immune defenses up: Sleep well, stay hydrated, get good nutrition
9. What to do if you are not feeling well: Seek medical attention but call first. CALL your doctor and tell them your symptoms. This will help them take care of you. Call 911 if you believe you are having a medical emergency. Notify the operator you think you may have
10. If you think you may have COVID-19:
 - a. Call ahead before visiting a doctor. If you have a medical appointment, call your doctor's office or ED, and tell them you may have COVID-19. This will help them take care of you and help protect themselves and other patients.
 - b. Wear a face mask if you are sick. This will limit spreading the virus at home and when you see the doctor in the office or ED.

APPENDIX 3- KEY POINTS FOR ED CLINICIANS

ED Clinicians:

1. Older patients, particularly those with multiple co-morbid illnesses, have the highest mortality rate with COVID-19 with a case fatality in China for patients over 80 years of 21.9%.
2. Health care systems and community health providers should have rapidly accessible alternatives for COVID-19 testing other than the ED. Opportunities to expand and utilize telehealth care in the evaluation of patients will limit risk of exposure and spread to those most vulnerable, and decrease overcrowding.
3. Per current Centers for Disease Control (CDC) guidelines, symptomatic (*fever, cough*) older adults and those with chronic medical conditions or who are immunosuppressed should have a low threshold for testing for COVID-19. Test for influenza first.
4. During a shortage of testing kits and their reagents, criteria should be followed to ensure those who are at highest risk receive testing.
5. The Centers for Medicare and Medicaid Services (CMS) has instituted emergency measures to expedite evaluation and disposition of older adults. These included expanding availability of telehealth and waiving the three-day hospital rule prior to SNF placement.
6. Because risk of COVID-19 spread is high in the ED and resources may become limited, protocols should direct well patients to other alternatives, including drive-through testing and telehealth assessments. ED resources should be reserved for seriously and critically ill older adults who are frail, have multiple co-morbid illnesses, and/or significant functional impairments that may need greater medical attention that cannot be addressed at alternatives.
7. As much as possible, place older patients with non-respiratory symptoms in a separate part or zone of the ED, away from those with suspected respiratory infections. This will reduce risk of exposure to potential COVID-19.
8. With the use of masks in the ED and healthcare setting (both by patients and clinicians), be sure to communicate slowly and clearly for those with sensory or cognitive limitations. Patients will no longer be able to read lips and clinicians and caregivers wearing masks may be disorienting for those with dementia and other cognitive impairment.
9. Ask patients and caregivers about their expectations and goals of care early in the evaluation. Now is the time to ask and document advanced directives patient and wishes in preparation for potential severe or critical illness.
10. Because testing is followed by recommendations for quarantine or isolation, the ED provider should work with their Area Agency on Aging (AAA) and/or Department of Public Health (DPH) to provide community resources for home delivered groceries and medications. When available, social worker assistance for these cases will be very helpful and hospitals should increase social worker availability in the ED where possible.
11. ED and hospital administration should establish protocols with referring residential and nursing homes and senior living centers for transfers, communication standards, and a specific plan whether residents with URI symptoms may be accepted back to their facilities with or without COVID-19 testing. Stable COVID-19 patients do not necessarily need hospitalization.
12. Protocols should be implemented for paramedics to transfer patients from the community or facility to the most appropriate location for treatment or testing depending on the patient's acuity and the need for testing.
13. Provide interpersonal support to older patients and caregivers who are at particular risk for anxiety and loneliness during quarantine. This includes referrals to online communities that encourage community connections.
14. During busy ED visits, continue to complete clinical history and examination of those who have the most complex needs, involving the multidisciplinary staff (Pharmacy, social work) as needed.
15. Check CDC, local Department of Public Health (DPH) and/or AAA websites *DAILY* for updates – the situation is rapidly changing.

APPENDIX 4- DISCLAIMER

The situation with COVID-19 is changing rapidly and many national and state websites are providing daily or more frequent updates. Please check those websites daily for any updated information and check the date that the website was most recently revised.

The content provided above is current as of 3-17-2020.

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