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COVID-19 in Older Adults: Transfers Between Nursing Homes and Hospitals

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Box 1: Patient Scenario

An 80-year-old nursing home patient with moderate dementia, COPD, and HTN develops a new cough and low-grade fever on Friday evening. There has been an increase in COVID-19 cases in the region. The nurse notifies the on-call physician who orders placement of patient in isolation, respiratory viral panel (RVP), CBC, a stat portable CXR, and every 4-hour vital signs. At the time of the call, the patient has otherwise normal vital signs and appears clinically stable.

On Saturday afternoon the CXR is returned as "COPD changes, mild interstitial edema, clinical correlation advised." Labs are within normal limits, she remains afebrile, and RVP is negative. The patient's daughter is concerned the advanced practice nurse will not be in the building until Monday morning and insists EMS be called for transfer to the hospital. There are no documented advance directives regarding transfer, intubation, or CPR. The on-call physician instructs the nursing home staff to transfer to the hospital.

On ED presentation, she is alert and oriented to self only. Vital signs temperature 98.9, HR 92, RR 22, BP 130/87, pulse ox 91% RA. Lung exam reveals fair air movement, diffuse expiratory wheeze and rhonchi. The CXR and labs are consistent with Friday's findings. She is admitted to the hospitalist service and placed in isolation with the diagnosis of COPD exacerbation. The ED is holding admitted patients. No visitors are allowed. COVID-19 testing is sent, which is taking 2-4 days.

On Monday morning she develops significant respiratory distress and hypoxia with decreased alertness. Repeat CXR reveals bilateral reticular opacities. The hospitalist notifies the daughter of her worsening status who states, "We haven't really discussed her wishes if she were to become sicker. What do you think her chances are?" There are currently no ICU beds available and three remaining ventilators in the 350-bed hospital.

- What are the current recommendations for addressing COVID-19 in nursing homes?
- What are the important differences between nursing homes, skilled nursing facilities, sub-acute rehabilitation facilities, long-term acute care hospitals, and assisted living facilities regarding capacity to manage patients with potentially infectious respiratory illness?
- If the recommendations were to discharge after initial ED evaluation, would this patient be able to return to the nursing home without a negative COVID-19 test?
- How is information transferred between the nursing home and ED clinician regarding this patient's HPI, PMH, and goals of care? How should the conversation between nursing home and ED providers occur in the COVID-19 era?
- Should she have been transferred to the ED? Should she be intubated? How can the ED and nursing home providers collaborate in her care, and plan for similar cases?
- How would advance care planning (e.g. – Physician Orders for Life Sustaining Treatment POLST or similar tools) guide care in this case?

INTRODUCTION

The COVID-19 pandemic is uniquely devastating for frail older adults who live in communal settings, such as nursing homes. Fatality rates are highest in persons > 85 years, ranging from 10-27%¹. From a March 21st reference, approximately 25% of American deaths from COVID-19 have been among nursing home patients².

The COVID-19 era demands close and ongoing collaboration between acute care and communal facilities. The virus is spreading through nursing homes nationwide; creating simultaneously decreased staffing and decreased ability to accept admissions. Many nursing homes are not admitting new patients, and are not accepting patients back from the ED or hospital without negative testing³. Other nursing homes are choosing to stop taking admissions citing the need to reduce exposure during the physical care transition; or out of a fear that they will struggle to maintain sufficient staff to care for patients already in-house⁴.

This article describes the impact of COVID-19 on this diverse, vulnerable population living in communal facilities. We outline key issues that will predictably arise between nursing homes and EDs in the COVID-19 era. Recommendations including reengineering nursing home-ED communication, coordinating hospital and non-hospital-based emergency care, and considerations in acute resource limitation, are discussed. Though these issues are universal, evolving solutions are necessarily local. This manuscript may guide conversations and planning now between nursing homes, health care systems, EDs, and state agencies.

BACKGROUND

The initial American nursing home COVID-19 outbreak was noted on February 19th, 2020. As of March 20th, 80% of patients in the home tested positive and 30% of those have died⁵. Since then, outbreaks have occurred in facilities in other states⁶ and are expected to rise. In a recent JAMA article detailing ICU outcomes in a largely nursing home cohort, the authors reported that survival is unlikely

in those who develop respiratory failure requiring intubation⁷.

Many older Americans who require assistance with Activities of Daily Living (ADLs) live in some type of congregate setting. These patients are particularly vulnerable to outbreaks of infectious disease, given close proximity of living quarters, frailty, functional dependence, and co-morbidities. About half of nursing home patients have dementia⁸, which complicates communication about symptoms, increases risk of delirium, and creates additional challenges around compliance with isolation or protective equipment.

The focus of this article is on nursing homes, a term used interchangeably in this paper, with other types of communal facilities including skilled nursing facilities. It is important for the ED provider to understand the requirements and capabilities of these settings in order to efficiently provide emergency care and effectively transition patients back to these facilities. There are important differences among the populations served and the medical capabilities offered in each type of facility. Settings where people receive long-term care and/or rehabilitation differ largely based on patient needs and payor source. A simple checklist of the available programs and services at each nursing home may be extremely helpful to busy ED staff and may facilitate decision-making and discharge options.

Nursing homes are heavily regulated by federal (CMS) guidelines. There are approximately 15,600 licensed nursing homes in the United States occupied by 1.4 million people. A typical nursing home is comprised of a combination of long-term care patients, as well as patients receiving shorter-term skilled nursing or rehabilitative services following a hospitalization. In these facilities, strict infection control practices are mandated and monitored through regular governmental inspection⁹. These procedures have been modified and enhanced for COVID-19¹⁰.

Nursing homes are required by federal and state regulations to have medical and nursing oversight, and most have some diagnostic and therapeutic capacity, although this varies widely. Most nursing homes rely on outside pharmaceutical delivery, mobile X-rays and labs. "Stat" orders may have a turnaround time of 4-6 hours or longer. To date, some nursing homes have contracted for on-site COVID-19 testing¹¹ alternatively, health departments are sending teams into nursing homes to test¹². The current turnaround time is typically a matter of days.

Every nursing home must have an administrative leader (Executive Director or Administrator), a Director of Nursing, and a physician Medical Director. A key role of the Medical Director is to review and participate in quality assurance activities and oversee patient safety and care coordination. In addition to the Medical Director, patients receive primary care from physicians and/or advanced practice providers (APPs). Many of these providers care for patients in multiple facilities. These providers may in addition serve an ambulatory or hospital-based practice. There are currently few physician practices in the United States focused exclusively in the nursing home setting ("SNFists"). An APP may be dedicated to one building to provide continuity of care. There should exist a

covering provider available on call for the staff 24/7. Some nursing home companies have contracts with third party companies for telehealth to provide overnight and weekend coverage¹³⁻¹⁵.

In most nursing home settings, direct care is provided primarily by certified nursing assistants (CNAs); CNAs provide personal care to multiple patients and may work in multiple facilities. The staffing ratio of CNA to patients varies widely, depending on numbers of skilled patients and time of day (e.g. 1 CNA per 7-10 patients during the day, 20-25 patients overnight).

Assisted and independent living facilities are less regulated congregate settings designed for people with greater independence compared to nursing homes. These settings have less diagnostic and therapeutic capacity. They also have fewer federal regulations controlling them, and display more variation in services across settings. There are over 800,000 Americans in assisted living facilities, most over 85 years old. Forty-two percent have dementia¹⁶; therefore, many of these facilities have dedicated memory care units.

Assisted living facilities may only have one licensed practical nurse for the entire facility. Further, there should be no expectation that independent senior living communities have any on-site medical support. Long term acute care hospitals (LTACHs), in contrast, care for patients with significant medical needs including long-term ventilation and thus have a higher level of medical provider coverage⁸.

NURSING HOME RESPONSE TO COVID-19

Nursing home teams commonly care for patients with acute infections (e.g. urinary tract infections, pneumonia, cellulitis) and exacerbations of chronic disease (e.g. heart failure, chronic obstructive pulmonary disease). Influenza outbreaks are a concern every year. However, widespread outbreaks of illness such as the lower respiratory infection caused by COVID-19 present untested challenges for many nursing home staff. While older adults appear to be more susceptible to serious illness from COVID-19, younger individuals who are asymptomatic may have come in contact with staff or patients thereby spreading this infection.

In response to the current challenge, nursing home leaders and point-of-care teams are receiving additional training in infection surveillance and prevention. They are learning procedures for use of personal protective equipment (PPE) and isolation, and receiving guidance for changes to visitation policies. CDC and state departments of public health, as well as several national trade associations, have published guidelines for these settings on their websites below and are distributing them to stakeholders. These are being updated regularly (in some cases daily)¹⁷⁻¹⁹. [See table 1.]

In addition to infection prevention and management of patients, nursing home teams need to become familiar with rapidly changing guidance on how to adjust staffing patterns in the event of staff members developing symptoms or being exposed to the virus. This is crucial in order to provide essential care.

Table 1: Prevention of Community Spread of COVID-19

- Frequent hand hygiene and disinfection
- Limited staff – patient interactions
- Social distancing within facilities (eliminate communal dining, use of virtual staff meetings)
- Restriction of visitors and non-essential personnel
- Logging names of healthcare personnel who work in multiple clinical settings
- Screening staff for symptoms, strict work restrictions if symptomatic
- Offering telehealth whenever possible
- Active screening of patients for common and less common symptoms
- Placing symptomatic patients on an active monitoring protocol
- Supplying and offering training on use of PPE
- Isolation pending testing of respiratory viruses, and COVID-19
- Consultation with local health department if suspect or identify COVID-19 case
- Transferring to the hospital only if increased severity of illness and unable to care for in the facility consistent with goals of care

REENGINEERING THE TRANSITION BETWEEN NURSING HOMES & THE ED

Lack of structured communication and absence of shared decision making between nursing home settings and EDs^{20,21} are particularly unacceptable in the COVID-19 era. Risk/benefit decisions surrounding transfer and admission have changed during this public health emergency. These sites must better coordinate care plans given the risk of transmission, significant morbidity and mortality of COVID-19, and potential resource limitations.

The transition of a complex older adult from a nursing home setting to the ED has long been suboptimal from the perspective of providers on both sides^{22,23}. Older adults, many with cognitive impairment, arrive in the ED via EMS with documentation averaging 24 pages. There is frequently missing information basic to the ED evaluation²¹ including reason for transfer, baseline cognitive status and goals of care. If returned to the nursing home, details of the ED evaluation and treatment plan, including diagnoses and needed follow-up, are often inadequately communicated to the nursing home providers.

The convoluted path of information transfer is one reason the transition between nursing home and ED providers remains challenging²⁴. Prior to reaching the ED provider, information describing the patient's acute change in condition is relayed among nursing home front-line staff, to the nursing home provider on call, then to EMS, who may relay it to the ED triage RN, then the ED treating RN, and finally the ED medical provider. Patients are often unable to speak for themselves due to baseline dementia or acute illness. Families may not be available to add context and will be physically unavailable due to COVID-19 visitor restrictions. Add in shift changes, and the patient's story is often relayed among six people by the time a disposition decision is made. Professional

societies, including American Medical Directors Association, have recommended a “warm handoff” conversation between medical providers at each care transition or change in site of care,²⁵ as is standard in all other medical transfers of care.

COVID-19 requires a new interdisciplinary alliance to support nursing home patients during acute illness. This model will include reducing ED transfers through forward triage, reframing the transfer as an “emergency consult,” and incorporating nursing home provider expertise in disposition decisions and focused goals of care discussion. Direct communication lines between treating ED providers and nursing home providers are needed²⁶.

Forward triage describes the mechanisms nursing homes and other post-acute care facilities employ to ensure only those patients most likely to benefit from ED resources are transferred to the ED. These vary by location, to include community paramedics/APPs, telehealth, and, in the COVID-19 era, triage outside the hospital. Some systems have also established expedited imaging, including CT scans, for nursing home patients, enabling them to bypass the ED.

Framing the transfer as an emergency consult can expedite the ED evaluation and ensure patient-centeredness and optimal resource utilization. In this model, the nursing home and ED providers have two conversations. Prior to the ED evaluation, they discuss the HPI, PMH, baseline mental and functional status, goals of care, current hospital resources, and nursing home treatment (and isolation) capacity. After ED evaluation, they consider risks, benefits, and alternatives to construct a disposition and communicate with family members. In the COVID-19 era, an acute change in condition severe enough to warrant the risk of ED transfer will benefit from this more intensive consultative approach.

Communication is most critical in nursing home patients with advanced disease and frailty and/or life-limiting disease (such as advanced dementia, heart failure or metastatic cancer). Given the significant morbidity and mortality of COVID-19 in this population, ED providers will be communicating the likelihood of benefit from intensive support. Often, they have to communicate with surrogate decision-makers over the phone, this is exacerbated due to visitor restrictions.

Resource triage guidelines will influence medical decision-making. Nursing home providers, who are familiar with the patient and experts in goals of care discussions, are well positioned to serve the patient by speaking with surrogate decision-makers and, if not admitted, coordinating subsequent outpatient care, such as return to the nursing home or referral to palliative care or hospice.

Many nursing home team members (nurses, social workers, pharmacists, physicians/APPs) may have limited experience in a hospital setting. Similarly, many hospital clinicians have never set foot in a nursing home. This challenges communication since terminology and expectations may vary between settings. Education about the critical elements to send with the patient may be done in each community and each setting²⁴. ED providers must understand patient goals and preferences, and what the nursing home is able to provide²⁷. Checklists, communication tools and

materials, when existing, must be adapted in the context of COVID-19.

THE ROLE OF PATIENT & FAMILY-CENTERED GOALS OF CARE

ACP does improve key patient-centered outcomes²⁹. Advance care planning (ACP) is a process by which patient goals and preferences for medical treatments are elicited and documented. A majority of nursing home patients have cognitive impairment²⁸, often relying on family members for medical decision-making. Knowing and honoring patient and family preferences is requisite to providing patient-centered care and is a regulatory requirement in nursing homes. Beyond code status, best practice for ACP for nursing home patients includes preferences for treatment in the hospital, ICU treatment, interventions such as tube feeding, and desire for antibiotics.

When hospitalization preferences are known, they are appropriately a significant factor in the decision to transfer nursing home patients³⁰⁻³³. The families of many patients with advanced disease, such as end-stage Alzheimer's dementia, request care that is focused on comfort and do not want aggressive medical interventions. Despite this, due to the lack of systematic ACP and documentation of preferences in American nursing homes, many patients do receive aggressive care near the end of life³⁴.

In the COVID-19 environment, there is new urgency around these issues. When preferences for medical treatment are known or documented it is critical that they be communicated across settings to all providers involved in the care of the patient. Forms for such documentation include: Physician Orders for Life-Sustaining Treatment (POLST) form (similar programs in other states include MOLST, MOST, POST, etc.; please see www.polst.org)

Further, new language and guidance is needed as providers in all settings are having conversations about immediate or anticipated medical decision-making. Communication with patients and families must acknowledge the limitations of what is possible to provide. A patient with advanced dementia who develops COVID-19 may not be able to remain in her semi-private room in the nursing home, even if that is the family's preference. Similarly, if triage protocols are implemented, it may not be possible to honor patient preferences for full intervention. This is because other criteria such as mitigation of transmission risk, take priority in decisions regarding access to a scarce resource. It is possible a patient or family member's previous preferences regarding hospital transfer or aggressive interventions may well have changed given the environment of COVID-19.

Documentation of ACP, including asking each patient "What Matters to You?" is critical, and must be standardized so as to routinely share across settings and within clinician teams. Each nursing home must have robust policies about where this information is documented and how it may be accessed and shared with ED/hospital teams during an emergency. For guidance on how to discuss preferences for medical decision-making with patients and families, clinicians should consult:

- Vital Talk: www.vitaltalk.org
- CAPC: www.capc.org

Tools specific to COVID-19 conversations are available on these websites. Other validated resources for ACP include:

- The Conversation Project: theconversationproject.org
- Prepare: prepareforyourcare.org
- Respecting Choices: respectingchoices.org

Table 2: Top Ten Points for Safe Care Transitions Between NHs and Emergency Departments During the COVID-19 Pandemic

1. People residing in Nursing Homes (NHs) are at high risk for infection with COVID-19, as they live in close quarters with others and interact with multiple caregivers. Risk of mortality is subsequently increased given underlying medical conditions, advanced age and frailty.
2. NH providers and staff often treat infections in house, however, COVID-19 presents unique challenges given access to PPE, limited private rooms, and high patient to staff ratios.
3. While diagnostic testing and medical treatments can be provided in NHs, the turnaround time of several hours for "stat" labs or chest x-rays, and intensity of care differs from hospital settings. Delays in obtaining COVID-19 testing and results have placed additional stress on NHs.
4. NHs leaders are responding to the COVID-19 pandemic by enhancing their infection control policies and enacting screening and management protocols for persons suspected of, or diagnosed with, COVID-19.
5. The Center for Disease Control (CDC) and organizations such as AMDA-The Society of Post-Acute and Long-Term Care Medicine, American Health Care Association (AHCA) and National Center for Assisted Living (NACL) are regularly updating their COVID-19 guidelines specific to the care of persons residing in NHs and assisted living facilities.
6. Medically stable patients who are appropriately isolated should not be transferred to the emergency department (ED). Close and proactive communication with the ED, and the NH physician/APN provider can support NHs in providing care in place.
7. NH providers urgently need to address advance care planning with every patient and family in the context of COVID-19. Resources exist and are being adapted to support these efforts.
8. NH personnel should consider the risks and benefits of transferring residents with a febrile respiratory illness to an ED. This includes an evaluation of the patient's current state of health, patient-centered goals, and an assessment of prognosis in the context of the COVID-19 illness.
9. NH providers should consider "forward triage" when considering patients for transitions of care. This involves assessing the resident's level of acuity and where their care needs can most appropriately be met. This should involve a conversation with the ED physician who would otherwise be receiving the resident.
10. Warm hand-offs are critical – NH and ED providers need to communicate prior to a transfer and as medical decisions are being made, including the ability of the NH to safely accept a patient back. Emergency Departments should establish a process to accept and welcome calls from NH colleagues. NH providers need to make this bi-directional communication essential practice.

EXISTING RESOURCES TO SUPPORT CARE TRANSITIONS

Studies over the past few decades have described poor outcomes related to care transitions (from nursing home to hospital/ED or hospital/ED to nursing home)³⁵. Transition related adverse events are commonly, adverse medication events, medication errors, falls with injuries, pressure ulcers, delirium and dehydration.

In an effort for early recognition of change, and to reduce unnecessary ED transfers, a number of programs and services have been developed and studied. They include:

- **INTERACT** (Interventions to Reduce Acute Care Transfers)^{36,37}
- **BOOST** (Better Outcomes for Older Adults through Safe Transitions)³⁸
- **ProjectRED** (Re-Engineered Discharge)³⁹
- **OPTIMISTIC** (Optimizing Patient Transfers, Impacting Medical Quality, and Improving Symptoms: Transforming Institutional Care)^{40,41}

All these involve nursing training home staff on early identification of change in condition and how to communicate with the patient, ED providers, primary care team and (if appropriate) care partners. In many cases, sustaining gains made in these programs involves implementation support and adequate manpower.

These programs have websites, many with publicly available tools, checklists and other materials free of charge. Program leaders may be contacted for more information and to determine whether the initiative would be helpful for a particular nursing home community and how they may be adapted to support during this public health emergency.

Box 2: Patient Scenario Follow Up

Q1: What are the current recommendations for addressing COVID-19 in nursing homes?

A: As outlined in this article, government agencies and trade associations have issued guidance to providers in this setting, to reduce risk of outbreaks and encourage care out of the hospital when appropriate. There are federal standards for nursing homes, although medical coverage and capabilities will vary locally; assisted living facilities have less access to medical care and services in place.

Q2: What are the important differences between nursing homes, skilled nursing facilities, sub-acute rehabilitation facilities, long-term acute care hospitals, and assisted living facilities regarding capacity to manage patients with potentially infectious respiratory illness?

- The most important differences in these settings involve the numbers/availability of staff to provide surveillance of patients who have developed symptoms of a respiratory illness.
- Long-term acute care hospitals (LTACH) have resources similar to acute care hospitals, including availability to manage patients on ventilators.
- Skilled nursing facilities (also known as subacute rehabilitation facilities) fall under the commonly used term “nursing homes.”

Box 2 (cont.): Patient Follow Up

- Assisted living facilities are less strictly regulated than nursing homes, with variable staffing by state. They have the lowest nursing:patient ratio, often with one LPN or RN on staff to pass medications and perform vital signs on 20 or more patients.
- Many of these facilities can manage infections in place; however isolation procedures may be hampered by room availability and low supply of PPE. Diagnostics are largely ordered from an outside service, which leads to a delay in resulting of a “stat” lab and xrays for several hours.

Q3: If the recommendations were to discharge after initial ED evaluation, would this patient be able to return to the nursing home without a negative COVID-19 test?

A: Given the high risk to the population and limitations in PPE, it is likely nursing homes may be hesitant to accept COVID-19 pending patients and this will need to be discussed in local environments. With limited personnel and bed availability, it is equally likely that EDs may be hesitant to act as a waiting room for test results. Enhanced communication between the ED and nursing facility is critical especially prior to referring the patient to the ED.

Q4: How is information transferred between the nursing home and ED clinician regarding this patient’s HPI, PMH, and goals of care? How should the conversation between nursing home and ED providers occur in the COVID-19 era?

- Quality and quantity of information transferred from nursing homes to EDs is unfortunately uneven and warm hand-offs between clinicians are not standard practice. The pandemic exponentially ramps up urgency to address broken communication systems.
- All patients transferring from nursing homes should include the following elements:
 - Information regarding the patient’s baseline functional and cognitive status.
 - ACP documentation, including details of goals of care conversations pertaining to COVID-19.
 - A “warm handoff” from a nursing home clinician to the ED. Tools can be helpful; but a direct conversation will be most accurate and time efficient.

Q5: Should she have been transferred to the ED? Should she be intubated? How can the ED and nursing home providers collaborate in her care, and plan for similar cases?

A: The decision to transfer or intubate this patient should be guided by ethical principles, informed by goals of care and, in this environment, protocols for finite resource utilization.

Q6: How would advance care planning (e.g. – Physician Orders for Life-Sustaining Treatment (POLST) or similar tools) guide care in this case?

A: Having discussed and documented preferences for care in advance is invaluable in these difficult and rapidly evolving medical situations. The work is lost, however, when not conveyed across settings of care. In addition to transferring patients across settings with clearly written advance directives, a “warm hand off” between care settings would greatly enhance patient care.

SUMMARY

Emergency departments and nursing homes are facing unprecedented challenges during the COVID-19 pandemic. Optimal care for nursing home patients in this era requires an enhanced partnership between providers in both care settings.

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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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 3. State Department of Public Health (list of state contacts) <https://wonder.cdc.gov/wonder/prevguid/statedir.html>
 4. AHCA/NCAL https://www.ahcancal.org/home_operations/disaster_planning/Pages/Coronavirus.aspx
 5. Altarum <https://altarum.org/>
 6. CMS website with multiple care transition programs for SNF/NF: https://partnershipforpatients.cms.gov/p4p_resources/toolpreventablereadmissions/toolpreventablereadmissions.html.
 7. National Center for Assisted Living www.ahcancal.org/ncal/facts/Pages/Patients.aspx

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ADDITIONAL RESOURCES

1. CDC <https://www.cdc.gov>