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Managing Older Adults with Presumed COVID-19 in the Emergency Department: A Rational Approach to Rationing

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INTRODUCTION

The American Geriatric Society's (AGS) position paper on age-related considerations in resource allocation strategies during the COVID-19 era¹ and the expanded rationale² emphasizes the importance of not using age as a categorical exclusion during the allocation of scarce resources. Using age primarily may violate the ethical principle of justice as well as imply age discrimination. Older adults are heterogeneous in baseline activities and functional, cognitive, and medical status. Prior research has demonstrated that other vulnerability factors, such as frailty,³ functional trajectory,⁴ and multi-morbidity⁵ are more strongly associated with death and poor outcomes than chronological age alone. Though research on COVID-19 is just beginning, we are likely to find in this disease as well, that these vulnerability factors are more predictive of poor outcomes than is chronological age. As a result, making rationing decisions informed primarily by chronological age is extremely problematic and, we believe, unethical. The AGS position paper outlined additional important considerations for the allocation of scarce resources. These include discussing goals of care, creating triage teams devoted to operationalizing rationing decision-making, and using a multi-factor strategy to assess both in-hospital mortality and conditions that would limit life regardless of the acute illness in the primary triage scoring algorithm.

We recognize that many initial decisions about allocation of ventilators, intensive care unit (ICU) beds, and hospital beds, as well as decisions about how to treat critically ill patients are occurring and will likely continue to occur in the Emergency Department (ED). Given this, we describe our current experience and reflect on how ideas from the AGS position paper may be operationalized in the ED. Much of what we discuss is also highly relevant for decision-making later during a hospitalization.

COVID-19 CARE DECISIONS MADE IN THE ED

The ED is often the first location where decisions about care for older adult patients with presumed or confirmed COVID-19 are made. These commonly include decisions about intubation and resuscitation after cardiac arrest. Geriatricians and other outpatient primary care providers have been managing patients at home, attempting to keep them out of the hospital unless absolutely necessary. Unfortunately, the course of COVID-19 is unpredictable, particularly for older adults, who may be managing well with the disease for several days and then acutely decompensate. Therefore, when patients arrive to the ED, the severity of their illness is often high, and they may already be in respiratory distress, requiring swift decision-making.

The ED in Not an Optimal Environment for Decision-Making Regarding Rationing, Particularly for Older Adults.

The ED might seem at first glance to be an ideal place to make decisions about rationing. Providers working in EDs are trained in disaster medicine, triage, and resource prioritization and are comfortable rapidly caring for multiple critically ill patients simultaneously. The setting requires bedside collaboration, with intensivists, hospitalists, and other specialists routinely co-managing patients in the ED. Also, social workers and nurses contribute significantly to patient care as part of an interdisciplinary team. Unfortunately, however, there are many reasons why making rationing decisions in the ED is far from ideal.

ED decisions are complicated by lack of critical data, insufficient time for careful consideration, new or existing cognitive impairment, and barriers to effective communication. Care in the ED is often provided with limited knowledge of the patient, their history, their prognosis, their values, and other factors that may inform a rationing of care decision. In many cases, even with significant effort, this information is difficult to

obtain from charts and telephone calls. In addition, decisions may need to be made quickly before these details can be reviewed carefully and thoughtfully. COVID-19, similar to other infections, may cause acute delirium in an older adult,⁶ particularly in the setting of hypoxemia. This might impact the patient's decisional capacity and be incorrectly interpreted by the care team to be baseline cognitive impairment. Many older adults with hearing and visual impairment may have difficulty communicating with providers who are wearing masks, goggles, and other personal protective equipment (PPE). Therefore, even thoughtfully designed rationing strategies, such as those described in the AGS position paper may be difficult to operationalize effectively in the ED.

This process is made even more challenging during the pandemic because many EDs have implemented limitations on visitor policies to minimize spread of infection. Fortunately, EDs and hospitals have recently begun to recognize that caregivers and advocates for patients with cognitive impairment are a critical part of the care team, and they should be permitted to accompany patients after taking proper infectious disease precautions. They can also help provide valuable information about the patient to make more informed clinical decisions.

What is nearly always known, though, is a patient's chronological age. Unfortunately, the team caring for the patient in the ED may not know critical facts. Does the 83-year-old patient breathing at 28 breaths per minute in front of them have advanced cancer and mild cognitive impairment or no medical problems and recently ran a half marathon? Without access to other information, the team may use chronological age consciously and subconsciously to guide clinical management decisions. A recent study examining the effectiveness of rapid scoring systems in predicting mortality from COVID-19 presented findings separately for patients aged <65 and ≥65,⁷ negatively reinforcing the perceived importance of age in prognosis.

Another piece of information typically known immediately on patient presentation to the ED, but often misinterpreted, is that they were transferred from a "facility." Skilled nursing facilities (SNFs) often house older adults who are frail, chronically ill, and living in long term care residence. However, many of these facilities also house otherwise healthy older adults receiving short-term rehabilitation after a surgery or hospitalization. There is also a distinction between long-term SNF residents and those largely independent older adults who reside in assisted living facilities or senior housing. Unfortunately, teams providing care in the ED may inadvertently presume a patient from a "facility" has impaired baseline functional, cognitive, and medical issues.

STRATEGIES TO IMPROVE DECISION-MAKING IN THE ED IF RATIONING IS REQUIRED

Despite challenges, interdisciplinary care teams

working collaboratively in the ED should make every effort to obtain additional information about an older adult to guide decision-making especially if rationing is required. This includes talking with family (in the waiting room if necessary), making telephone calls to the health care proxy/surrogate decision maker, outpatient providers, and skilled nursing facility providers, and also extensively reviewing charts including information from outpatient visits and other hospitals if available.

We support the ongoing efforts in many states, health systems, and hospitals to design rationing frameworks that attempt to avoid using age as a primary criterion. These triage frameworks aim to use objective criteria to assess likelihood of survival, such as the Sequential Organ Failure Assessment (SOFA) score,⁸ which relies on laboratory values. The Clinical Frailty Scale (CFS) tool can be used before the return of laboratory values, making it useful in urgent ED decision-making. Recognizing that baseline functional status is an important predictor of survival of critical illness, the CFS is a 9-item pictorial scale that may be applied in the ED. It provides a pre-acute illness description of a patient's functional baseline as robust, vulnerable or frail.⁹ This scale is used as an early decision point in the assessment algorithm recommended by the National Institute for Health and Care Excellence in the United Kingdom.¹⁰

We offer below additional suggestions to assist in optimal decision-making for older adults. These include first, involving triage teams, other disciplines and providers, and administrative leadership in decision making. Second, providers should be aware of advance directives and have goals of care conversations. Finally, providers may consider delaying intubation when possible to allow for more informed decision-making.

The Value of Dedicated Triage Teams, Interdisciplinary Collaboration, and Inclusion of Administrative Leadership in Decision-Making.

Whenever possible, the care team in the ED should not be making the decision about whether to intubate or resuscitate a patient independently. The AGS position statement advocates for triage teams who are not involved in clinical care to support and assist with the decision making if rationing is necessary. Health systems should be developing these teams and related protocols immediately in preparation for potential resource shortages. Decisions about activating these teams should be made at the administrative level, since hospital and health system leadership may have knowledge that frontline providers don't have regarding when resource demand exceeds supply.

It is possible however, that such teams may not be available and frontline providers may still be responsible to make decisions about rationing of resources. If decision-making by frontline providers is necessary, these decisions are ideally made collaboratively between disciplines. In many EDs,

pulmonary/critical care physicians, hospitalists, anesthesiologists, geriatricians, palliative care clinicians and other specialists have become more involved in ED patient care during this pandemic. This interdisciplinary approach which allows for integration of different viewpoints and expertise, has been formalized with protocols in some hospitals. Pulmonary/critical care specialists, in particular, are likely to be aware of current and future resource availability. They have experience with longer-term treatment strategies and prognosis of critically ill COVID patients. In larger EDs, we recommend that, whenever possible, providers discuss cases with other professional colleagues who are not part of the patient's care team for another perspective and support, reducing the burden on any individual. Also, the ED care team should consider reaching out to the Administrator on Call, who can give advice and activate the hospital's ethics and legal teams. Protocols, procedures, and resources change frequently during the COVID pandemic, and health system and hospital leadership should ensure that providers from all disciplines, including trainees, are aware of any updates.

CRITICAL ROLE OF ADVANCED DIRECTIVES & GOALS-OF-CARE CONVERSATIONS

Geriatricians and other outpatient providers have an important role to play assisting ED clinical decisions that are appropriate, and patient centered. The AGS position statement recommends that widespread and urgent advance care planning discussions are critical, and if possible, should be initiated before patients are exposed to or contract COVID. Advance Care Planning (ACP) is not rationing, but proactively identifies patients who do not wish to receive aggressive, invasive interventions. The patient's ACP directives should be clearly documented in an easily accessible location along with family phone numbers, as providers may need access to this information quickly to make appropriate decisions and avoid inappropriate intubations. For patients coming from a skilled nursing facility, a Medical Orders for Life-Sustaining Treatment (MOLST) or Physician Orders for Life-Sustaining Treatment (POLST) as well as a Health Care Proxy form should be included with the transport paperwork. The care team should be aware of these documents and they should be reviewed to guide clinical care. SNFs and Emergency Medical Services (EMS) transporting the patient may assist the ED by having this information easily accessible.

These forms do not supplant a conversation with the patient and family. Care teams should not automatically assume patients who already have advanced directives in place do not wish aggressive care to manage COVID. It is possible that the advanced directive envisioned a very different scenario far in the future rather than a potentially survivable acute viral infection. In the setting of severe illness or disease progression, patients may also change their minds.

Advanced care plans, even if previously documented, should be reviewed and affirmed throughout the disease course.

Many older adults will present to the ED without existing advanced directives. The ED is not the ideal location to set goals of care, but, during the COVID crisis, it is commonly necessary to initiate ED goals of care discussions. Providers should be prepared to have discussions to facilitate clinical decision-making aligned with the patient and family's wishes. Vital Talk (www.vitaltalk.org) and The Center to Advance Palliative Care (www.capc.org) both have helpful resources to guide clinicians in these challenging conversations. Providers should also consider discussing goals of care with older adults with mild illness, even those who do not require hospital admission, as many may experience deterioration of clinical trajectory.

A potential resource to assist with these goals of care discussions is a Palliative Care or Geriatrics consultation, if available. Geriatricians and Palliative Care providers are accustomed to navigating difficult conversations in seriously ill and vulnerable patients. Many hospitals have already deployed Palliative Care teams to the ED or expanded their existing role to assist with these conversations. Additionally, Palliative Care can contribute by providing guidance on symptom management for patients and developing or expanding existing Palliative Care and hospice units for patients who opt for non-invasive, supportive care. As the COVID crisis has increasing numbers of cases in rural areas with less well-resourced hospitals, it will be important to consider the telehealth availability of geriatrics and palliative care services to help with these challenging clinical scenarios.

Delaying Intubation May Allow for Better Decision-Making.

The decision whether or not to intubate a patient is the core decision most likely to drive rationing during the COVID crisis. Ventilators, the personnel and expertise to manage them, and the ICU beds required for care are the scarce resources during this pandemic. Therefore, understanding the evolving approaches to intubation during COVID is important. At the height of an outbreak, an ED can expect many patients in respiratory distress to arrive over a short period of time. Intubating patients early or determining if they do not want or should not be offered intubation, reduces the number of patients needing very close monitoring. Additionally, many of the tools typically used to temporize and potentially avoid intubation in patients with respiratory distress or respiratory failure such as nebulized medications, high flow nasal cannula, and Bilevel Positive Airway Pressure (BiPAP) can aerosolize the virus and are therefore may be discouraged during this pandemic. Further, successfully intubating a patient puts their respiratory system into a closed ventilatory circuit, protecting providers and other patients from aerosolized virus. Initial experience

suggested that patients did not improve on other therapies and early intubation improved outcomes.^{11,12} Rushed, emergent intubations, while not ideal for a patient under any circumstances, often increased the risk of COVID exposure to providers due to inadequate time to don PPE properly while racing to save the patient's life. As a result of this, early intubation strategies were adopted initially in the COVID crisis management in the US.¹³ Thus, the decision about whether to intubate a patient was often made early in the ED evaluation, sometimes minutes after initial arrival. These circumstances made it often very difficult to involve multiple disciplines, have informed goals of care discussion, or to assess adequately the patient's prognosis and the risk versus benefit of intubation.

As ED and critical care providers have learned more about COVID-19 and its initial management, it has been recognized that many of these patients may actually be maintained with external oxygen. Procedures such as proning, previously reserved for intubated patients, are now recognized to be effective for non-ventilated COVID patients who are able to self-monitor,¹⁴ and have been adopted into medical care. These treatment strategies have increased the amount of time available for interdisciplinary decision-making about whether intubation is necessary. Older adults should be considered as candidates for these additional procedures and respiratory strategies.

BALANCING MEDICAL FUTILITY AND EXPOSURE RISK

Attempting to resuscitate a patient after cardiac arrest, which may require emergent intubation and also involves aerosolization of secretions during chest compressions, is a high-risk procedure for providers during the COVID pandemic. As a result, part of "rationing" involves decisions about whether to initiate cardiopulmonary resuscitation (CPR) and what is considered acceptable duration of these resuscitation efforts. The decision to initiate and continue CPR requires the care team to weigh the risks and benefits to the patient, while also considering the potential risk to providers. Health systems and hospitals should have clear guidelines about circumstances in which CPR should be performed and how medical futility should be determined. These protocols should include the outline of specific steps to minimize the risk to providers from aerosolized particles during CPR. It is concerning that age may be used, even subconsciously, as a determinant when these decisions are made at the bedside. Age is only one small factor that informs likelihood of survival with a positive outcome after cardiac arrest.

STRATEGIES TO INCREASE ABILITY TO PROVIDE CARE

Finally, several strategies have been implemented to avoid the need for rationing. These include increasing ventilator access by developing safe split-ventilation

strategies and using anesthesia machines as ventilators. ICU capacity may be expanded by transforming operating rooms, Post-Anesthesia Care Units, and other spaces into ICU space, and setting up field hospitals. Health care providers may be recruited from other less-impacted regions. Furthermore, even proactive, upstream advanced care planning conversations may help avert the need for any rationing. We strongly endorse and encourage these efforts, as they are likely particularly to help older adults who may be among the first groups to suffer from rationing. As interdisciplinary health professionals, we wish to offer all of our patients, regardless of age, any and all treatments aligned with their goals of care, without ever having to make clinical decisions limited by resource scarcity.

KEY WORDS

COVID-19, Emergency Department, Rationing, Resource allocation, Older adults

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