

Lessons Learned From the TRIAD Research Opportunities to Improve Patient Safety in Emergency Care Near End of Life

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The combination of a growing elderly population with chronic illnesses and an acute illness with care needs has created a new patient safety concern and a need for clarity in establishing goals in patients presenting for emergency care. In the emergency department (ED), understanding and integrating patient desires for care at abrupt end-of-life (EOL) events—perceived or real—must occur in a rapid and accurate fashion.

With absent effective understanding and communication, patients may receive inappropriate care, with either overaggressive or underaggressive treatments.¹ The overaggressive treatments include care that is not beneficial or desired, even if having potential benefit. These can inflict pain, trigger later needs that might not have existed otherwise, generate costs disproportionate to benefit, and divert resources away from other care opportunities.² The underaggressive treatment harm is obvious, with lost opportunity for improvement. Both overaggressive and underaggressive treatments represent medical errors, impact patient safety, and necessitate a need to discuss the barriers and opportunities for EOL planning and deployment in unscheduled acute care.

THE LIVING WILL, DO NOT RESUSCITATE, AND THE PHYSICIAN ORDERS FOR LIFE-SUSTAINING TREATMENT ARE NOT THE SAME

Living wills are broad documents, created by attorneys as part of an estate plan or by patients independently. Living wills have defined triggers for activation and are intended as conversation starters—not detailed maps—to direct care when patients are unable to speak for themselves. In contrast, Do Not Resuscitate (DNR) orders are a physician's explicit prescription not to intervene with certain lifesaving attempts if otherwise indicated, often when cardiopulmonary arrest is present in any form. Created as a recent option to guide care, the Physician Orders for Life Sustaining Treatment (POLST) fills a niche between unstructured care direction and the living will. In contrast to a living will, a POLST is an immediately actionable medical order set to be followed when patients interact across the health care continuum. The POLST form can be a granular guide to emergency care providers, right when the most important decisions are needed, but this utility assumes that many things are in place.

DO PROVIDERS UNDERSTAND WHEN TO USE A LIVING WILL OR A POLST?

A living will can be used with varying populations and illnesses, whereas a POLST has specified indications for its use, such as being a frail elderly patient or being expected to die within 1 year. There is debate over which one is more effective. Both help control expenses, decrease in-hospital deaths and increase the use of hospice.^{3,4} The POLST may be more effective at the location, timing, and overall percentage of death in compared with living wills.^{5,6}

The POLST forms have varying uptake and understanding across the United States, impairing their utility. Currently, these originate from states that choose to embrace this tool, meaning dissimilarity based on geography is abundant. Experts advocate for a singular, simple national POLST as one solution to guide care at these critical moments.⁷ One concern is that even if a POLST documents accurately reflect patient wishes, it may trigger interpretation errors on the part of medical professionals, undermining the value and fomenting undertreatment or overtreatment.^{8–10}

Recent research reveals that the choice between creating a living will or POLST is poorly understood by the various medical providers, such as the confusion over what each means regarding care. A living will is a legal document guiding care and must be triggered into action. Those triggers are being not able to speak for oneself and being afflicted with an “End Stage Medical Condition,” or a being in a persistent vegetative state. The only medical provider afforded the ability to interpret the living will is a physician.

A POLST is a medical order and is immediately actionable, allowing all providers to follow including paramedics and nurses. When EMS providers were presented with a living will, 90% interpreted the document as a “Do Not Resuscitate” (DNR) order; a DNR was equated with end of life care on 92% of

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occurrences.¹¹ As EMS understanding relates to POLST, there was a baseline level of confusion, which repeatedly led to both over and under resuscitation in the clinical scenarios.¹² Based on the results of TRIAD II and VII, prehospital providers should be afforded the ability to act with guidance provided by medical command physicians.

END OF LIFE AND CRITICAL ILLNESS ARE NOT ALWAYS THE SAME

These terms overlap but are not synonymous. For many, critical illness is a condition with profound physiologic alteration that may lead to rapid death often or be resolved with a return to the baseline (or near baseline) patient functional status. For others, an initial EOL event seems less critical and evolves into a process of spiraling that leads to death despite seeming compensation at the start. A common example is the elderly patient with a ground-level fall; the event unmasks hidden dysfunction resulting in eventual death without recovery, seen by family as “the hip fracture that caused everything to go downhill.” Those resuscitated from cardiac arrest or in the throes of septic shock clearly benefit from planning review or creation as early as possible, including in the ED. Planning needs to consider both scenarios and follow established society guidelines to ensure that mortality does not falsely elevate.^{13,14} Planning is often best done at wellness visits or when a change in health trajectory is seen. In the ED, some providers have initial goals of care discussions pertinent to the diagnosis leading to the admission, but often, this is either omitted or logistically a challenge. Despite this, the ED can be the place where plans start—either to be considered, created, or implemented—and further honed as care and responses progress.¹⁵

WHAT CARE SHOULD BE GUIDED?

Aside from identifying who needs a care-directing plan or review in the acute setting, the care targeted is important, especially given the comprehension gap that can exist when attempting to deploy any plan. For many with an acute illness or event, the first challenge is determining options and goals for pain control. Next, what definitive actions should be guided? This is where a directed approach can aid, for example, defining the use of surgery, defibrillation, central venous access, closed chest massage, vasopressor, or mechanical ventilation use. If a patient has a living will with guiding principles of care but no specifics, should we withhold effective therapies in the acute setting? If they have a POLST—a more granular, directive document, did the patient understand what they consented to have done or withheld? Recent research reveals discordant understanding between patients and providers regarding POLST completion.¹⁵ Physicians are often in these complex scenarios, lacking extended time or the clarity of orders. This complex scenario represents risk of unintentional harm to patients.

HOW MUCH DOES EDUCATION ENSURE PROVIDER COMPETENCY WITH CARE GUIDES?

Medical providers often receive little training on what to do when they are confronted with a living will, DNR, or POLST. Much is self-taught, and even when training occurs, it is sparse and lacks durability. Previous TRIAD research reveals those with training may not outperform those without training. This research suggests that there should be a baseline level of education required for physicians and other independent practitioners, with re-education and assessing at intervals (such as at recertification or other landmarks).

WHAT QUALITY OVERSIGHT IS THERE FOR EOL DOCUMENTS AND ORDERS?

At present, the only published requirement is from the Joint Commission to document a conversation before a DNR order is written.¹⁶ This requirement does not speak to the quality or components of the conversation of the DNR or POLST. It also does not address if the order was appropriately created for the patient. Three examples of a need for quality oversight are described. The first is that it has been shown that most POLST forms are completed by nonphysician personnel.¹⁷ Second, many skilled facilities complete a POLST on all of its residents. Third, a POLST can be discordant with patient wishes.^{15,18} To improve acute care near or at the end of life, we need programs and standardized processes should be developed to ensure patient choice, disclosure, and accuracy of created orders.

BOTH OVERTREATMENT AND UNDERTREATMENT OCCUR WITH LIVING WILLS, DNR, AND POLST

The TRIAD living will and POLST research documented undertreatment and overtreatment errors of 50% or more. Specifically, undertreatment errors can range between 5% (cardiopulmonary resuscitation [CPR]/full treatment) and 50% (DNR/full treatment) and overtreatment between 14% and 17% (DNR/comfort measures only).¹² These described error rates pertain to POLST that were already completed and then evaluated in clinical scenarios. These reported rates do not apply to errors-related conversations by providers, which then generated a POLST with its choices depicted. For example, a DNR/comfort measures only that should have been formatted as CPR/full treatment or DNR/full treatment.

WHAT CAN IMPROVE A CLEARER UNDERSTANDING OF THE LIVING WILL OR POLST?

Video support tools can improve medical decision-making, particularly about CPR.^{19,20} Video tools help patients better understand their treatment choices by enabling them both to envision future circumstances and to deliberate about their decisions.²¹ Most of this research focuses on using videos to inform patients. TRIAD VIII studied videos to communicate patient wishes back to clinicians, made (with aid) by the patient and speaking in plain language.²² The nonverbal information in a patient-recorded testimonial can help both the healthcare team and the family understand (and accept) the patient's wishes. For example, a video testimonial allows doctors to see facial muscles, hear the inflection of a person's voice, and better understand nuances.²³ In contrast to these factors, written documents are subjected to degrees of interpretation with respect to current patient medical status and their desire for treatment. How scalable and effective in broader setting this novel approach is remains under study.

The living will and POLST have benefits and have also introduced a patient safety risk. Safely determining who requires a living will versus a POLST should be an individualized choice with the patient and/or health care agent. As we recommend POLST and living wills, we must be sure that those who will come into contact with them are adequately trained and educated. We must develop quality processes to check and verify the appropriateness of DNR or POLST orders. We must also approach these issues with the level of action and scrutiny that we place upon medical errors. Our focus should be to know and act on the patient's behalf and to do no harm. This approach is the best way to ensure patient care and safety.

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