IMPROVING ADVANCED CARE PLANNING THROUGH PROPER IMPLEMENTATION OF THE POLST PARADIGM: AN INTEGRATIVE REVIEW

A Scholarly Project

Submitted to the

Faculty of Liberty University

In partial fulfillment of

The requirements for the degree

Of Doctor of Nursing Practice

By

Charles Hunter Shomo II

Liberty University

Lynchburg, VA

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Scholarly Project Chair Approval:

Dr. Vickie Moore, RN, DNP, FNP-C Date

ABSTRACT

End of life planning is critical to ensure enactment of patient wishes, ethical patient treatment, and improved family acceptance of death. As such, this project addressed integration of reviewed literature of advanced planning directives to influence end-of-life care. Implementation guidelines and incorporation of the Physician Orders for Life Sustaining Treatment (POLST) paradigm was the central focus of this project. Addressing best implementation practices of the POLST paradigm should increase advanced care planning and ultimately positively impact patient and surrogate decisions regarding end of life management and care. Completion of this integrative review has provided substantial implicative evidence regarding best practice standards related to the POLST paradigm. The need for robust end-of-life discussions, the universal applicability of the POLST paradigm form, and widespread adaptation suggest the POLST paradigm should be used when advanced care planning. The literature also suggests some troubling findings such as form misinterpretation, misapplication, and overall inconsistencies of use. Also, of note was the universal applicability of the POLST paradigm spanning racial, cultural, and medical diversity. Given the review question and project goals, implementation strategies such as standardized and comprehensive education, consistent form completion, and appropriate advanced care planning conversations can avoid pitfalls experienced with prior POSLT rollouts and mitigate many of the common themes found in the reviewed articles.

Keywords: POLST paradigm, POLST, DDNR

Dedication

I would like to dedicate this manuscript to my wife, Dana. Without her sacrifice and support, this doctoral project and degree would have been unachievable. Through Dana's strength and resilience, God's blessing, and sheer brute force, this project and degree came to fruition. Also a special thanks to Dr. Vicky Moore and Mrs. Shirley Lee for their support and expert guidance.

Table of Contents

List of Abbreviations

Physician Order for Life-Sustaining Treatment (POLST)

Physician Order for Scope of Treatment (POST)

Durable Do Not Resuscitate Order (DDNR)

Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)

Continuous Positive Airway Pressure (CPAP)

Biphasic Positive Airway Pressure (BiPAP)

Iowa Physician Order for Scope of Treatment (IPOST)

Medical Orders for Life-Sustaining Treatment (MOLST)

Cumulative Index to Nursing and Allied Health Literature (CINAHL)

Collaborative Institutional Training Initiative (CITI)

Institutional Review Board (IRB)

Current Procedural Terminology (CPT)

Emergency Medical Services (EMS)

Primary Care Provider (PCP)

Improving Advanced Care Planning through Proper Implementation of the POLST Paradigm: An Integrative Review

SECTION ONE: FORMULATING THE REVIEW QUESTION

End of life planning is critical to ensure enactment of patient wishes, ethical patient treatment, and improved family acceptance of death (H. Kim, et al., 2017). As such, this project addressed the integration of reviewed literature of advanced planning directives to influence end-of-life care. Implementation guidelines and incorporation of the Physician Orders for Life Sustaining Treatment (POLST) paradigm are the central focus of this project. Addressing best implementation practices of the POLST paradigm should increase advanced care planning and ultimately positively impact patient and surrogate decisions regarding end-of-life management and care.

Background

The POLST paradigm was originally created and implemented on the west coast of the United States in the early 1990s as a way to improve end-of-life care discussions and ensure ethical enactment of patient preferences (Braun, 2016). In the early 2000s, this initiative grew to the national level and was adopted by nearly all states (Braun, 2016). Virginia endorsed the POLST paradigm in November of 2016 as the Physician Order for Scope of Treatment (POST) (Definitions, 2020). The POLST paradigm is endorsed by the Institute of Medicine (Vandenbroucke et al., 2017). Prior to endorsement and adaption of the POLST paradigm in Virginia, the Durable Do Not Resuscitate (DDNR) order was the primary source of guidance for end-of-life directives, in addition to traditional advanced directives.

Virginia POST

The Virginia POST form, found in Appendix E, is a portable and durable quick form advanced directive that covers immediate life-prolonging issues. The Virginia POST addresses, using a stepwise lettered fashion, cardiopulmonary resuscitation, desired medical interventions, and artificial nutrition. The header section of the Virginia POST reflects patient demographics for quick confirmation by healthcare providers of patient identity. Section A reflects cardiopulmonary resuscitation wishes using two options, attempt resuscitation or do not attempt resuscitation. If do not attempt resuscitation is marked, this form carries the weight of the previous DDNR (Virginia POST Collaborative, 2016).

Section B of the form articulates medical wishes. Three options are included however only one can be selected to avoid conflicting orders. The three options are comfort measures, limited additional interventions, or full interventions.

Comfort measures reflect patient dignity through medications, wound care, positioning, suction, and limited hospital transfer. Comfort measures should be included in all aspects of care regardless of POLST form presence or level of intervention noted on the POLST form. Limited additional interventions include comfort measures yet expands to include continuous positive airway pressure or CPAP and biphasic positive airway pressure or BiPAP devices, additional medical interventions, and antibiotic use. Hospital transfers are permitted. Full interventions reflect comfort measures yet include aggressive airway management such as intubation and mechanical ventilation, as well as defibrillation and cardioversion. Transfer to hospitals and intensive care units is permitted.

Section C of the Virginia Post form is directed at nutrition. While oral fluids and foods are always permitted if the patient is able, Section C highlights the patient's or surrogate's

wishes related to artificially administered nutrition. Three options are available however only one may be selected. No feeding tube, defined trial feeding tube, and long-term feeding tube are the options for prolonged nutrition. If a defined trial is selected, a specific goal must be selected with the treating physician.

Section D of the Virginia POST is for provider signature and patient or surrogate signatures. For provider signatures, a physician or advanced practice provider is permitted to sign. For patient signature, the patient or authorized person is permitted to sign, in correlation with Virginia Code 54.1-2986.

The opposite side of this single page form provides instructions, including for completion od, use of, changes to, and revocations of the form. This form is not valid without signatures. Also, only one selection per section is permitted, and the patient's signature cannot be revoked for Section A.

Ultimately, this form provides a quick and easy-to-use format for providers to reference to provide care by enacting patient wishes. Using a simple five step process starting with correctly identifying the patient, reviewing Section A-D, and then confirming signatures allows multiple providers across the medical spectrum to enact appropriate care. The portability, inclusivity, and single-page design make this form ideal for advance directives.

POLST vs DDNR

As noted, the Virginia DDNR order continues to be used as a directive for resuscitation. This single-page form addresses only one clinical question, whether resuscitation is desired or not desired. The POLST form addresses this clinical question in Section A, yet also includes type of care desired. The POLST Section A or the DDNR is only applicable for cardiovascular or pulmonary collapse leading to the need for cardiopulmonary resuscitation. It is important to note

that the DDNR in no way directs treatment, except regarding resuscitation, thus healthcare providers must provide all care pending patient or surrogate clarification. This limits the usefulness of the DDNR, making the POLST form a more encompassing option to direct care, especially regarding time sensitive issues.

Defining Concepts and Variables

POLST is an inclusive term used to address this particular portable end-of-life care document. Physician Orders for Life Sustaining Treatment or POLST is the name of the original document yet state-specific variations occur. Virginia terms their version as POST, or Physician Order for Scope of Treatment (Definitions, 2020), Iowa uses IPOST, and New York calls their form as MOLST for Medical Orders for Life Sustaining Treatment (Clemency et al., 2017). Given the widely variable naming, these terms may be used interchangeably throughout this document to address the POLST paradigm.

Rationale for Conducting the Review

The phenomenon of interest, broadly noted, is the need to increase end-of-life care discussions. Specifically, this project addressed implementation of the POLST paradigm as a way of increasing these end-of-life discussions. As an added benefit, the POLST paradigm offers a portable and legal document to aid in application of end-of-life wishes, making successful implementation a critical piece of overall patient management.

Despite the Virginia endorsement of the POLST paradigm, national adoption, and updated Virginia Code that directs completion of the POST form in conjunction with a DDNR, regional uptake in Virginia is lacking. Lack of use contradicts the Virginia Code (Definitions, 2020), might cause ethical burden on patients and families, and creates undue burden on

healthcare workers faced with end-of-life patient care. As such, creating best practices for implementation of the POLST paradigm was essential.

Purpose of the Project

The purpose of the project was to address best implementation practices, through an integrative review of the POLST paradigm, for future implementation. This integrative review addresses the benefits of the POLST paradigm, challenges of use, surrogate use, and pitfalls experienced by other adaptations of the POLST paradigm. Ultimately, the purpose of this project was to create a solid foundation for implementation to facilitate widespread adoption.

Review Question

Given the importance of the POLST paradigm for end-of-life care, what implementation strategies can be utilized to avoid challenges and pitfalls experienced through previous implementation and use at the national level?

Project Goals:

The goals of this project are as follows:

- To determine if there is evidence supporting best practice strategies for implementation of POLST.
- To investigate the challenges experienced by practitioners in previous POLST implementation and recommended strategies to decrease their occurrence for future implementation.

Conceptual Framework

To guide the scholarly project, a conceptual framework was used. The Whittemore and Knafl (2005) methodology framework for integrative review provided the primary source of conceptual framework. The Whittemore and Knafl (2005) methodology allows for multiple

guides to influence the research. Instead of restricting influences to science-based literature, the Whittemore and Knafl (2005) methodology allows for integration of conceptual theories to influence outcomes. This broader methodology has the potential to further impact evidenced-based research (Whittemore & Knafl, 2005).

Theoretical Framework

The theoretical framework for this scholarly project was grounded in the self-efficacy model. The self-efficacy model directs patient engagement and is intended to influence overall outcomes (Ramezani et al., 2019). As applied to the POLST paradigm, the self-efficacy model allows patients to direct their end-of-life care to meet their needs and expectations rather than be directed by their healthcare provider.

SECTION TWO: LITERATURE REVIEW

Information Sources and Search

A literature review was conducted using the online Jerry Falwell Library. Additionally, traditional resources were used, as appropriate, to facilitate a clear review of available data. At first, the data obtained were too broad, necessitating the need for search modifiers and inclusion and exclusion criteria.

Search modifiers were used to limit search results. The search was modified to return only peer reviewed scholarly materials, full text materials, journal articles and publications within five years of the search date. Key words were also limited for ease of navigation.

Using the online Jerry Falwell Library, many databases were searched for high quality, peer-reviewed, scholarly articles. These databases included, but were not limited to, CINAHL, ProQuest, PubMed, EBSCO, Cochrane, and Ovid. The results were screened using the PRISMA reporting tool found in Appendix B (Moher et al., 2009).

Key words were used to modify search parameters. These key words included POLST, POLST paradigm, and DDNR. Key words were used separately or in combination, to elicit searches in various databases.

A preliminary key word search of the databases identified 301 articles. After inclusion and exclusion criteria were applied the review yielded 255 articles. Upon analysis of the remaining articles, 15 were selected for final inclusion in the integrative review. These articles were based on the review questions which sought to discover implementation strategies that can be utilized to avoid challenges and pitfalls experienced during previous implementations.

Inclusion and Exclusion Criteria

Inclusionary criteria used with the search modifiers included perceived relevance to the discussion topic and review question. Articles must have been peer reviewed, published within the past five years, and contain the key words. Articles were previewed for applicability if they surpassed the exclusionary criteria. Exclusionary criteria included non-English language articles and articles that failed to specifically mention the key words, were outdated, or were deemed irrelevant to the specific clinical question. Additionally, newspaper articles, book reviews, and dissertations were excluded from the review.

Critical Appraisal

Reviewed literature was critically appraised for applicability to the project and clinical question. Though numerous search results were found, many were excluded using a systemic approach due to their lack of relevance to the topic. The research appraisal is outlined in Appendix A. Though some of the noted articles have a relatively low level of evidence (Melnyk and Fineout-Overholt, 2015), they speak to implementation difficulty and strategies to improve implementation, thus answering the clinical question.

Level of evidence tables, such as the one outlined by Melnyk and Fineout-Overholt (2015), allow for the discernment of the strongest data markers. A higher the level of evidence indicates stronger data, as the data were more rigorously achieved. Level 1 evidence includes meta-analyses of randomized control trials and systemic reviews, while Level 7 evidence consists of expert opinions. This document would be considered a Level 5 evidence as it is an integrative review of descriptive and qualitative studies (University of Michigan Library, 2021).

Within the reviewed literature, a variety of levels of evidence were noted. The chosen literature included one Level 3, nine Level 4, two Level 5, and two level 6 articles. Additional literature includes one level 7 expert opinion. included one level The majority of articles, nine, were Level 4. Two level 5 and two level 6 articles were obtained. Also, one article was a level 7 expert opinion and another article was a Level 3. Most of the articles had relatively low levels of evidence as most were retrospective studies instead of randomized control studies. Randomized control studies would be difficult to accomplish given the topic nature.

PRISMA

The PRISM guide was developed to add clarity and transparency to systemic reviews and meta-analyses (Moher et al., 2009). The PRISM guide offers a 27-item checklist and four-phase flow diagram to add in transparency of data articulation (Moher et al., 2009). The flow diagram, included in Appendix B, clarifies excluded and included data based on search results from the key words. Given the expansive and ever-growing online database of articles, the PRISM guide allowed transparency of the elimination process.

Summary Measures

The phenomenon of interest, broadly noted, is the need for increased end-of-life care discussions. Specifically, this project addressed implementation of the POLST paradigm as

a way of increasing these end-of-life discussions. As an added benefit, the POLST paradigm offers a portable and legal document to aid in application of end-of-life wishes, making successful implementation a critical piece of overall patient management. As such, reviewing literature through a historical perspective provided a solid foundation on which to make recommendations for best practices regarding the POSLT paradigm and implementation strategies.

Synthesis of Results

To answer the clinical question, the reviewed articles were synthesized for conclusions related to implementation of the POLST paradigm. From the articles listed in Appendix A, the overall conclusion is that there has been widespread uptake of the POLST paradigm (Jennings et al., 2016), yet implementation practices and compliance have been poor. Key principles noted throughout the research include the need for increased end-of-life discussions with patients and surrogates (Pirinea et al., 2016) to ensure patient wishes are enacted, the importance of widespread education for implementation success to ensure correct interpretation of advanced directives, and low rates of end-of-life discussions despite revenue potential (P. Kim et al., 2019), as incorporation into work flow was limited.

Summary

The integrative review examined the literature surrounding implementation of the POLST paradigm, the utilization of evidenced-based practices, and the implementation of the paradigm, including for community adaptations and future use. The literature review was conducted, using the Whittemore and Knafl (2005) methodology as a guide to identify best practices for future implementation. The data were analyzed carefully to ensure appropriate methodologic rigor (Toronto & Remington, 2020).

SECTION THREE: RESULTS

Study Selection

A rigorous and well-defined review methodology was critical to ensure relevance and factual dissemination of literature (Whittemore & Knafl, 2005). An exhaustive review of the literature surrounding advanced directives was conducted using appropriate methodologic rigor (Toronto & Remington, 2020). Common themes were developed based on the reviewed literature to address best implementation practices. These themes comprise positive and negative aspects of advanced care planning, which all correlated to the clinical question and implementation strategies.

Themes of Individual Studies

Enactment of Patient Wishes/ End of Life Discussions

Multiple studies highlighted the importance of advanced care planning through positive enactment of patient wishes. Turnbull et al. (2018) noted improved admission order entry complementing patient wishes when a MOLST form accompanied the patient. Additionally, advanced planning discussions occurred sooner in the admission process when patients presented with a MOLST form (Turnbull et al., 2018), further enhancing care. This study of a racially and socio-economically diverse population study highlights the applicability of the POLST paradigm to many population subtypes (Turnbull et al., 2018). Tuck et al. (2015) also found a positive relationship between a completed POLST form and enactment of patient wishes regarding death location. Similarly, Verhoeff et al. (2018) found that early advanced care planning reduced trauma patient Intensive Care Unit admissions. This study further illuminates the link between advanced care planning and enactment of patient wishes, while also providing insight into a potential reduction of healthcare burden related to elderly trauma patients (Verhoeff et al., 2018)

as well as medically admitted patients (Turnbull et al., 2019). Chen et al. (2019) noted surrogate decision makers were more likely to direct limited treatment compared to patients, highlighting the need for early patient and surrogate discussion related to advance directives.

Flow and Reimbursement

Multiple studies demonstrate the importance of advanced care planning as it relates to healthcare flow and reimbursement. Dillon et al. (2017) noted the importance of advanced care planning among primary care providers as well as specialists, though they reported confusion regarding who should fill out the form. Dingfield and Kayser (2017) echoed the importance of advanced care planning in aligning healthcare decisions with patient wishes yet noted time and provider comfort with the topic as potential barriers. Medicare reimbursement and current procedural terminology (P. Kim et al., 2019) billing codes are designed to assist providers in incentivizing and recuperating costs of advanced care planning (Dingfield & Kayser, 2017).

P. Kim et al. (2019) found that over a nearly three-year period, the initial current procedural terminology code used for billing, code 99497, was only used a few times. This reveals either poor provider engagement with reimbursement or lack of advanced car planning. CPT code 99497 pays $80 to $86 dollars for 30 minutes of advanced care planning while CPT code 99498 pays $75 for each additional 30 minutes as a means to incentivize these discussions (P. Kim et al., 2019).

Form Misinterpretation and Failure

Advanced care planning document misunderstanding (Pirinea et al., 2016), incongruence of surrogate and patient wishes (Chen et al., 2019), lack of form completion (Clemency et al., 2017), and incompleteness of orders (Moore et al., 2016) were the most common findings noted across multiple studies. Completeness of completed advanced care directives was a noted

challenge in multiple studies. Clemency et al. (2017) examined 100 completed POLST forms and found that 69% of the forms were incomplete with 14% having contradictory information. Moore et al. (2016) found staggering rates of form misunderstanding and incompleteness. Pirinea et al. (2016) noted unacceptable rates of healthcare provider misunderstanding related to end of life wishes.

Contrary to these finding, Chiarchiaro et al. (2015) found that even a simple web-based training seminar was linked to higher rates of knowledge and acceptance, which speaks to the need for and applicability of a robust implementation system and standardized education. Regarding completing the form MacKenzie et al. (2018) noted a decline in form completion after initial implementation and Jennings et al. (2016) found length of long-term care facility residency was linked to a higher completion rate.

Implementation Strategies

Few articles specifically outlined implementation strategies that were used prior to a recognized failure point or success rate. Sebastian et al. (2015) reported training seminars and online education were used to prepare Registered Nurses, Advanced Practice Registered Nurses, and Social Workers for implementation. J. Kim et al. (2019) noted higher baseline patient education levels, more media information, and increased patient-provider conversations boosted form completion rates. Education prior to access to the approved form varies significantly across states.

Virginia requires training prior to POST form authorization (Virginia POST Collaborative, 2016). This is articulated as “short PCP training” with “floor staff attending a brief 20-minute introduction” (Virginia POST Collaborative, 2016). Yet the Virginia POST collaborative offers an eight-hour facilitator class, leading to some training discrepancies.

California allows unfettered access in a printable or downloadable format (California POLST, 2021). Maine requires an individual to complete a user agreement to receive permission to print the form however completion of the agreement only requires an attestation of the knowledge required to have an advance care discussion and ability to use a printer capable of "24lb Lime Green cardstock with black ink" (Maine Hospice Council and Center for End of Life Care, 2019).

The discrepancies of Virginia's varied education requirements, coupled with the variations found nationwide, speaks to the inconsistencies with implementation strategies. Some states require formal education which aids in form understanding and use yet might prohibit widespread implementation. Other states freely endorse the form for widespread use yet have no clear education strategy to ensure best practices.

Synthesis

The reviewed literature offered pertinent insight into the need for more robust end of life discussions, healthcare provider education, and ultimately strategies to direct meaningful implementation of the POLST paradigm. Within the reviewed literature, inconsistent use was one of the most staggering findings. Also of note was the universal applicability of the POLST paradigm spanning racial, cultural, and medical diversity. However, challenges to meaningful implementation and uptake exist despite national acceptance.

Predominate findings of the literature review include the education deficit for healthcare providers. Multiple studies noted that the POLST paradigm was misinterpreted (Pirinea et al., 2016), misapplied (Clemency et al, 2017), or not used (Jennings et al., 2016), based on either with simulated clinical vignettes or through retrospective data. This highlights the need for widespread meaningful implementation strategies for the POLST paradigm.

Ultimately, as evidenced by widespread adaptation and implementation, the POLST paradigm offers health care providers opportunities to discuss end-of-life care with patients, enact patient wishes, and provide ethical care. Through this integrative review, challenges to POLST implementation were noted. Using this information, a more robust implementation modality can be developed focusing on system-wide education and increased end of life discussions.

The synthesized results can be used to answer the clinical question as well as achieve project goals. The clinical question is as follows: What implementation strategies can be utilized to avoid challenges and pitfalls experienced through previous implementation and use at the national level? This question can be answered through the reviewed literature. Varied implementation practices regarding the POLST paradigm correlate to varied user understanding, use, and acceptance of the paradigm. The reviewed literature also spoke to a project goal which was to investigate the challenges experienced by practitioners in previous POLST implementations and identify recommended strategies to decrease their occurrence for future implementation as well as best practices for implementation.

Ethical Considerations

Ethical considerations were of the utmost importance, both to meet ethical and moral standards, and to ensure the validity of research during this integrative review (Toronto & Remington, 2020). This project was approved by the Liberty University Institutional Review Board. The Institutional Review Board approval letter can be found within Appendix C. Both the author and project chair completed the Collaborative Institutional Training Initiative (see Appendix D).

SECTION FOUR: DISCUSSION

Summary of Evidence

Completion of this integrative review has provided substantial implicative evidence regarding best practice standards related to the POLST paradigm. The need for end-of-life discussions, the universal applicability of the POLST paradigm form, and widespread adaptation suggest the POLST paradigm should be used during advanced care planning. The literature also revealed some troubling findings, likely related to improper implementation. Implementation strategies are needed to mitigate various pitfalls that have been experienced with prior use. Form misinterpretation (Pirinea et al., 2016), failure to use the form (Jennings et al., 2016), and misapplication of the form (Clemency et al., 2017) are the most commonly cited difficulties.

The reviewed literature offered pertinent insight into the need for more robust end-of-life discussions, healthcare provider education, and ultimately strategies to direct meaningful implementation of the POLST paradigm. Within reviewed literature, inconsistent use was one of the most frequent findings. Also, of note was the universal applicability of the POLST paradigm spanning racial, cultural (Turnbull et al., 2018), and medical diversity (Tuck et al., 2015), however, challenges to meaningful implementation and uptake existed, despite national acceptance. Mitigation of these issues is needed to provide better implementation strategies.

The reviewed literature articulated several themes. These themes included enactment of patient wishes and end-of-life discussions, form misinterpretation and failure, implementation strategies, and workflow and reimbursement concerns.

Advanced care planning document failure was noted by several studies. This included document misunderstanding (Pirinea et al., 2016), incongruence of surrogate and patient wishes (Chen et al., 2019), poor form completion (Clemency et al., 2017), and incompleteness of orders

(Moore et al., 2016). Clemency et al. (2017) examined 100 completed POLST forms and found 69% of the forms were incomplete and 14% had contradictory information. However, Chiarchiaro et al. (2015) noted a simple training seminar was instrumental in providing higher rates of knowledge and acceptance of the POLST paradigm. This highlighted the need for a robust implementation program and relative simplicity of improving implementation practices.

Positive experiences with advanced care planning through enactment of patient wishes and increasing discussions regarding end-of-life care were noted in several articles. Improved order entry, diverse socio-economic and racial applicability (Turnbull et al., 2018), form completion and requested death location were linked through form completion (Tuck et al., 2015). Reduced healthcare burden (Verhoeff et al., 2018) was also found to be a result of completion and implementation of the POLST paradigm.

Workflow confusion and low reimbursement rates were noted in several articles. Though many specialties noted the benefits of their patient's having an advanced care plan, uncertainty regarding who should complete the form was present (Dillion et al., 2017). Dingfield and Kayser (2017) noted provider discomfort and time constraints as barriers to advanced care planning. P. Kim et al. (2019) found staggeringly low rates of attempted reimbursement despite straightforward CPT coding for potential billing.

Implementation strategies were rarely addressed in the reviewed articles. Sebastian et al. (2015) noted training seminars and online education were used for implementation. The Virginia POST Collaborative (2016) requires education prior to form access, yet no standardized education prior to use is implemented at any of the documented state levels. These thematic references and the summary of evidence speak to practice implications.

Implications for Practice

The thematic references and summary of evidence underscore the implications for practice. Primary implications include the need for provider-level education. This education can prevent discrepancies such as form incompleteness, conflicting orders, and misinterpretation of the POST form. This provider-level education can also cover the use of proper billing codes to incentivize advanced care planning discussions. Additionally, organization-level education and standardization of policies and expectations can bolster ownership of form completion and advanced care planning discussions.

Education at the provider level is a recommended starting point for improving POSLT paradigm implementation. All form interaction personnel should have role specific education. This would include providers competing and signing the form, all patient care level system nurses and clinical staff that would be involved in form retrieval, answering questions, and electronic health record uploading. Additionally, various localities such as Fire Departments, Emergency Medical Service personnel, and long-term care facilities should receive training as these front-line workers would interact with the form at some point in their workflow.

Implementation of a minimum education set, prior to form use and rollout, is critical for proper implementation. Not only direct provider education but system wide and end user education is needed. Jovner et al. (2020) recommended comprehensive education, consistent form completion, and appropriate conversations to avoid pitfalls experienced with prior POSLT rollouts.

Limitations

This integrative review has several limitations. Lack of reviewed article articulation of successful implementation strategies in the reviewed articles is this review's primary limitation

related to the reviewed articles. A secondary limitation was the relative low levels of evidence (Melnyk and Fineout-Overholt, 2015) in the reviewed literature. A potential limitation of advanced care planning, as noted by MacKenzie et al. (2018), was dwindling form completion rates, after an initially successful implementation. MacKenzie et al. (2018) research was completed using the Respecting Choices model of advanced care planning and not specifically the POLST paradigm.

Dissemination

Dissemination of this project into practice will be multifactorial. Initially, this document will be presented, as written, to various organizations upon request or articulated need. As evidenced by their letter of support (see Appendix F), Rockbridge Area Hospice will adapt the POLST paradigm into their practice model. Staff education, followed by community education, will be developed based on principles within this document.

Initially, robust Rockbridge Area Hospice staff education will be implemented. Once staff is competent in all aspects of the POLST paradigm, community education will commence. Local hospital systems and emergency medical services agencies will be the initial target groups of community education. Next, long-term care facility patients will be targeted. Individual facilities will be targeted until completion. Once all Rockbridge Area Hospice facility patients are educated on the form, newly enrolled residential patients will be targeted, with gradual expansion to existing residential patients based on social worker and primary nurse need or request.

After Rockbridge Area Hospice patients, both residential and facility, are educated, the Rockbridge Area Hospice palliative care patients will be targeted. Finally, Rockbridge Area Hospice will serve as a community resource for form use and community-wide adaption. Using

this step wise implementation strategy will ensure proper education, facility mastery, community adoption, and a standardized approach.

Education, for all care groups will consist of a PowerPoint style presentation, led by the project leader. A PowerPoint style presentation format was chosen as that medium results in improved information uptake through the combination of audio and visual aspects (Baker et al., 2018). Given various ordinances regarding gathering size at the time of this project, related to the novel coronavirus pandemic, the presentation format may be altered to a PowerPoint with voice over or through audiovisual communication mediums such as Zoom or Microsoft teams.

Conclusion

As outlined, end-of-life planning is critical to ensure enactment of patient wishes, ethical patient treatment, and improved family acceptance of death (H. Kim et al., 2017). As noted, successful implementation of the POLST paradigm is a way of increasing these end-of-life discussions. Given the review question and project goals, implementation strategies, such as standardized and comprehensive education, consistent form completion, and appropriate conversations (Jovner et al., 2020) can allow providers and patients to avoid pitfalls experienced with prior POSLT rollouts and mitigate many of the common problems found in the reviewed articles.

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Appendix A: Levels of Evidence Matrix

Article	Study Purpose	Sample	Methods	Study Results	Level of Evidence	Study Limitations	Would Use as Evidence to Support a Change?
Chen, E. E., Pu, C. T., Bernacki, R. E., Ragland, J., Schwartz, J. H., & Mutchler, J. E. (2019). Surrogate preferences on the physician orders for life-sustaining treatment form. *The Gerontologist, 59*(5), 811–821. https://doi.org/10.1093/geront/gny042	Compare surrogate vs patient POLST preferences	606 completed POLST forms	Examined 606 POLST forms from 3 facilities	Surrogates were more likely to limit treatment compared to patients	Level 4 (Melnyk & Fineout-Overholt,2015)	Single system study	Yes speaks to the importance of surrogate understanding of the form and patient ability at the time of signing
Chiarchiaro, J., Ernecoff, N. C., Buddadhumaruk, P., Rak, K. J., Arnold, R. M., & White, D. B. (2015). Key stakeholders' perspectives on a web-based advance care planning tool for advanced lung disease. *Journal of Critical Care, 30*(6), 1418.e7–1418.e12. https://doi.org/10.1016/j.jcrc.2015.09.001	Examine patient and surrogate use and acceptance of web based advanced care planning	50 stakeholders	Semi structured interviews with participants that included patients, surrogate and clinicians	Stakeholders rated the web-based services as highly acceptable and useful	Level 4 (Melnyk & Fineout-Overholt,2015)	Single geographic region	Yes, speaks to using web services for patient and family training prior to provider discussion to help shape contextual framework, save provider time, contextualize

Article	Study Purpose	Sample	Methods	Study Results	Level of Evidence	Study Limitations	Would Use as Evidence to Support a Change?
							the options available
Clemency, B., Cordes, C. C., Lindstrom, H. A., Basior, J. M., & Waldrop, D. P. (2017). Decisions by default: Incomplete and contradictory MOLST in emergency care. *Journal of the American Medical Directors Association, 18*(1), 35–39. https://doi.org/10.1016/j.jamda.2016.07.032	Evaluate inconsistencies, incomplete forms, and contradictions on POLST forms	100 POLST forms that presented to the ED	Descriptive cross sectional and convenience sample	69% of forms had incomplete sections, 14% of forms had contradictory orders	Level 4 correlational design (Melnyk & Fineout-Overholt,2015)	Limited sample size, single facility	Yes, speaks to the need for proper implementation including community education and provider knowledge
Dillon, E., Chuang, J., Gupta, A., Tapper, S., Lai, S., Yu, P., Ritchie, C., & Tai-Seale, M. (2017). Provider perspectives on advance care planning documentation in the electronic health record: The experience of primary care providers and specialists using advance health-care directives and physician orders for life-sustaining treatment. *American Journal of*	To understand provider incorporation of Advanced Care planning into flow	Structured interview with 13 providers that had varied degrees of ACP documentation	Chart review and interview	Primary care reported stronger use than specialists, desire of providers to have standardized practices for ACP implementation	Level 4 correlational design (Melnyk & Fineout-Overholt,2015)	One organization with one EHR	Yes, describes the lack of resources, consistency with locating information, time constraints

Article	Study Purpose	Sample	Methods	Study Results	Level of Evidence	Study Limitations	Would Use as Evidence to Support a Change?
Hospice and Palliative Medicine, 34(10), 918–924. https://doi.org/10.1177/1049909117693578							
Dingfield, L. E., & Kayser, J. B. (2017). Integrating advance care planning into practice. *Chest, 151*(6), 1387–1393. https://doi.org/10.1016/j.chest.2017.02.024	Integrating advanced care planning into practice	No sample, opinion paper	No methods, opinion paper	No results opinion paper	Level 7 expert opinion (Melnyk & Fineout-Overholt,2015)	No study	Yes, speaks to the limitations and benefits of incorporating advanced care planning, i.e. POLST
Jennings, L. A., Zingmond, D., Louie, R., Tseng, C., Thomas, J., O'Malley, K., & Wenger, N. S. (2016). Use of the physician orders for life-sustaining treatment among California nursing home residents. *Journal of General Internal Medicine: JGIM, 31*(10), 1119–1126. https://doi.org/10.1007/s11606-016-3728-9	To evaluate the use of the POLST paradigm post implementation	Nearly 300,000 nursing home residents in California	Review of state mandated reporting database	Increased completion rates were associated with longer length of facility stay	Level 4 correlational design (Melnyk & Fineout-Overholt,2015)	State specific, using data from 2011	Yes, speaks to the notion that despite state-wide implementation, use was (in my opinion) low. Interesting to note that use was equal across race and socioeconomic status

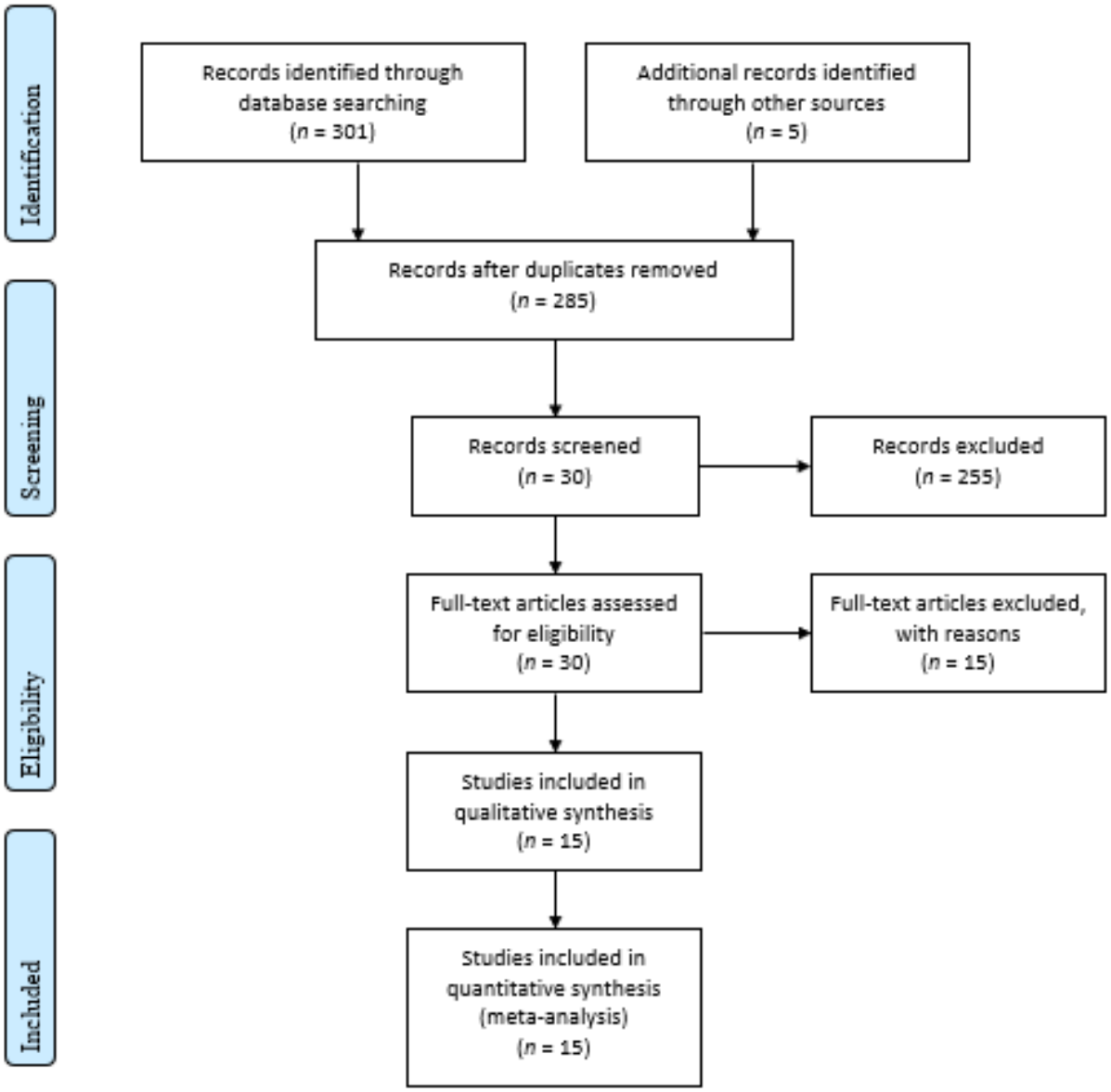
Article	Study Purpose	Sample	Methods	Study Results	Level of Evidence	Study Limitations	Would Use as Evidence to Support a Change?
Kim, J. W., Choi, J. Y., Jang, W. J., Choi, Y. J., Choi, Y. S., Shin, S. W., Kim, Y. H., & Park, K. H. (2019). Completion rate of physician orders for life-sustaining treatment for patients with metastatic or recurrent cancer: A preliminary, cross-sectional study. *BMC Palliative Care, 18*(1), Article 84. https://doi.org/10.1186/s12904-019-0475-9	Determine POLST completion rate at physician prompting	101 advanced cancer patients in South Korea	Cross sectional descriptive study	71.3 % agreed to complete the form, increased education increased compliance	Level 6 (Melnyk & Fineout-Overholt, 2015)	Small study, involved active cancer treatment patients	Yes, speaks to willingness of patients to complete the form upon prompting, even with active treatment
Kim, P., Daly, J. M., Berry-Stoelzle, M., Schmidt, M., & Levy, B. T. (2019). Use of advance care planning billing codes in a tertiary care center setting. *Journal of the American Board of Family Medicine, 32*(6), 827–834. https://doi.org/10.3122/jabfm.2019.06.190121	To examine reimbursement for EOL planning after CMS initiated a reimbursement scale	1 tertiary teaching hospital system	Chart review over a 33 month period	17 CPT codes were submitted, reimbursed 4 times	Level 4 correlational design (Melnyk & Fineout-Overholt, 2015)	Single hospital system	Yes, speaks to the underutilization of CPT codes for care planning, use of the POLST form and implementation will address this for broader implementation

Article	Study Purpose	Sample	Methods	Study Results	Level of Evidence	Study Limitations	Would Use as Evidence to Support a Change?
MacKenzie, M. A., Smith-Howell, E., Bomba, P. A., & Meghani, S. H. (2018). Respecting choices and related models of advance care planning: A systematic review of published evidence. *American Journal of Hospice and Palliative Medicine, 35*(6), 897–907. https://doi.org/10.1177/1049909117745789	To evaluate the outcomes of an advanced planning program for ultimate use of advanced directives and POLST forms	18 articles from 16 studies were reviewed	Systematic review of research articles	Despite an initial promising outcome, advanced directive and POLST completion rates were low	Level 5 systematic review (Melnyk & Fineout-Overholt, 2015)	Might have missed articles, limited studies on their model of interest	Yes ,speaks to the need for robust implementation protocols and stakeholder buy in
Moore, K. A., Rubin, E. B., & Halpern, S. D. (2016). The problems with physician orders for life-sustaining treatment. *JAMA: The Journal of the American Medical Association, 315*(3), 259260. https://doi.org/10.1001/jama.2015.17362	To detail the incompleteness and potential controversy of POLST	Integrative review of more than 23 studies	Integrative review	Inconsistencies with POLST documentation and received treatment, inconsistent understanding of POLST	Level 5 (Melnyk & Fineout-Overholt, 2015)	More or less a negative opinion based on the evidence while overlooking the positives	Yes, speaks to need for robust implementation strategy and ongoing education modalities
Pirinea, H., Simunich, T., Wehner, D., & Ashurst, J. (2016). Patient and health-care provider	Identify misunderstanding in	Anonymous multiple choice survey with	Prospective survey of patients, families,	Over half of the patients and families were unable	Level 4 correlational design (Melnyk	Single institutional study, limited end	Yes, speaks to the need of more robust end of life

Article	Study Purpose	Sample	Methods	Study Results	Level of Evidence	Study Limitations	Would Use as Evidence to Support a Change?
interpretation of do not resuscitate and do not intubate. *Indian Journal of Palliative Care, 22*(4), 432–436. https://doi.org/10.4103/0973-1075.191784	end of life discussions	687 respondents	and physicians	to distinguish between DNR and DNI, while 30-40% of health care providers were unable to accurately distinguish	& Fineout-Overholt, 2015)	of life discussions prior to survey, majority of healthcare providers were nurses	discussion, standardized verbiage, and end of life training for all healthcare providers
Sebastian, P., Freitas, B., & Fischberg, D. (2015). Provider orders for life-sustaining treatment implementation and training in nursing facilities in Hawai'i. *Hawai'i Journal of Medicine & Public Health, 74*(9 Suppl 2), 8–11.	Determine establishment and protocols for implementation of the POLST paradigm	23 nursing facilities in Hawaii	Cross sectional telephone survey	96% of facilities has at POLST program in place with 50-100% resident completion rate	Level 6 single descriptive survey (Melnyk & Fineout-Overholt, 2015)	Response bias	Yes, speaks to the need for wide spread implementation to be effective
Tuck, K. K., Zive, D. M., Schmidt, T. A., Carter, J., Nutt, J., & Fromme, E. K. (2015). Life-sustaining treatment orders, location of death and co-morbid conditions in decedents with Parkinson's disease. *Parkinsonism and Related*	Examine the relationship of PD/POLST	1073 patients with Parkinson disease	Compare deaths with PD and without respective of POLST completion in 2010-2011	POLST and PD were less likely to die in a hospital, compared to no POLST and PD	Level 4 correlational study (Melnyk & Fineout-Overholt, 2015)	Single state, retrospective database analysis	Yes, speaks to the importance of POLST regardless of disease

Article	Study Purpose	Sample	Methods	Study Results	Level of Evidence	Study Limitations	Would Use as Evidence to Support a Change?
Disorders, 21(10), 1205–1209. https://doi.org/10.1016/j.parkreldis.2015.08.021							
Turnbull, A. E., Ning, X., Rao, A., Tao, J. J., & Needham, D. M. (2019). Demonstrating the impact of POLST forms on hospital care requires information not contained in state registries. *PloS One, 14*(6), Article e0217113. https://doi.org/10.1371/journal.pone.0217113	Determine the actual impact of POLST forms and admission	1507 adult participants	Chart review to determine association of POLST forms and patient orders	Improved care time and orders, protective of patient wishes if they are unaccompanied	Level 4 perspective cohort study (Melnyk & Fineout-Overholt, 2015)	Single site design	Yes, speaks to improved continuum of care, enactment of patient wishes, and protective nature when unaccompanied
Verhoeff, K., Glen, P., Taheri, A., Min, B., Tsang, B., Fawcett, V., & Widder, S. (2018). Implementation and adoption of advanced care planning in the elderly trauma patient. *World Journal of Emergency Surgery, 13*(1), Article 40. https://doi.org/10.1186/s13017-018-0201-6	Using early advanced care planning to direct goals of geriatric trauma patients	471 patients with a mean age of 76.	Before and after implementation design to address outcomes	Decreased ICU admissions	Level 3, quasi experiential design (Melnyk & Fineout-Overholt, 2015)	Single facility	Yes, speaks to the need for advanced care implementation prior to illness, challenges of acute care implementation, need for surrogate input

Appendix B: PRISMA



Appendix C: Institutional Review Board Approval

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

February 25, 2021

Charles Shomo
Vickie Moore

Re: IRB Application - IRB-FY20-21-619 Improving Advanced Care Planning through Proper Implementation of the POLST Paradigm: An Integrative Review

Dear Charles Shomo and Vickie Moore,

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study does not classify as human subjects research. This means you may begin your research with the data safeguarding methods mentioned in your IRB application.

Decision: No Human Subjects Research

Explanation: Your study is not considered human subjects research for the following reason:

(1) It will not involve the collection of identifiable, private information.

Please note that this decision only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued non-human subjects research status. You may report these changes by completing a modification submission through your Cayuse IRB account.

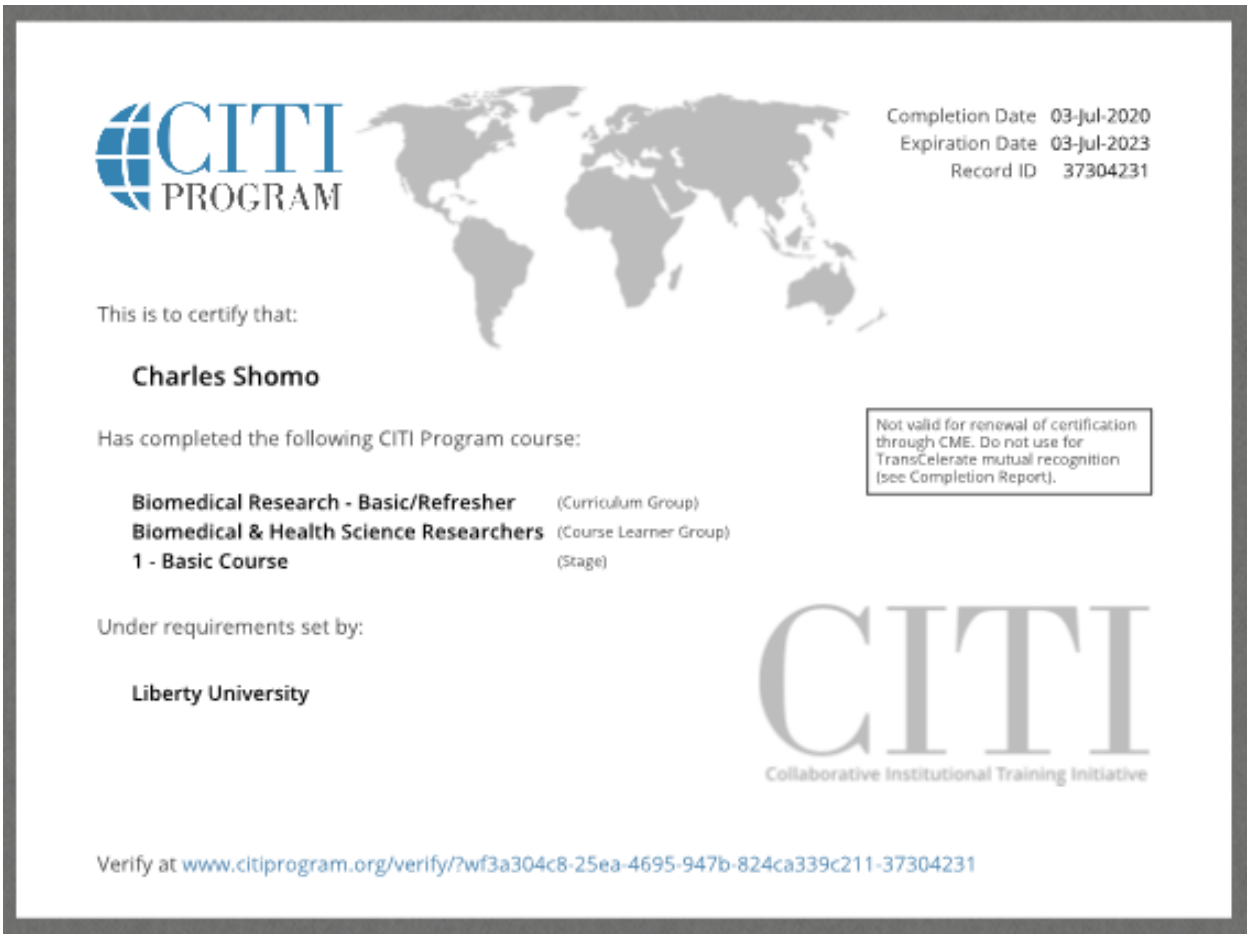
Also, although you are welcome to use our recruitment and consent templates, you are not required to do so. If you choose to use our documents, please replace the word *research* with the word *project* throughout both documents.

If you have any questions about this determination or need assistance in determining whether possible modifications to your protocol would change your application's status, please email us at irb@liberty.edu.

Sincerely,

G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
Research Ethics Office

Appendix D: CITI Training



CITI PROGRAM

Completion Date 03-Jul-2020
Expiration Date 03-Jul-2023
Record ID 37304231

This is to certify that:

Charles Shomo

Has completed the following CITI Program course:

Not valid for renewal of certification through CME. Do not use for TransCelerate mutual recognition (see Completion Report).

Biomedical Research - Basic/Refresher (Curriculum Group)
Biomedical & Health Science Researchers (Course Learner Group)
1 - Basic Course (Stage)

Under requirements set by:

Liberty University

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?wf3a304c8-25ea-4695-947b-824ca339c211-37304231

Appendix E: Sample POLST Form

HIPAA permits disclosure to health care professionals and authorized decision makers for treatment

Virginia Physician Orders for Scope of Treatment (POST)

This is a Physician Order Sheet based on the patient's current medical condition and wishes. Any section not completed creates no presumption about the patient's preferences for treatment.

Name Last / First / M.I.

Address

City / State / Zip

Date of Birth (mm/dd/yyyy) | Last 4 Digits of SSN ☐☐☐☐

A ✓one only

CARDIOPULMONARY RESUSCITATION (CPR): Person has no pulse and is not breathing.

☐ Attempt Resuscitation ☐ Do Not Attempt Resuscitation (DDNR/DNR/No CPR)

If "Do Not Attempt Resuscitation" is checked, this is a DDNR order. See Page 2 for instructions for use.

If a previous Durable Do Not Resuscitate form or POST form indicating Do Not Attempt Resuscitation was signed by the patient, only the patient can consent to reversing such a Durable DNR Order.

When not in cardiopulmonary arrest, follow orders in B & C

B ✓one only

If "Attempt Resuscitation" is checked in Section A, Virginia EMS protocol includes intubation when needed.

MEDICAL INTERVENTIONS: Patient has pulse and / or is breathing.

☐ **Comfort Measures:** Treat with dignity and respect. Keep warm and dry. Use medication by any route, positioning, wound care and other measures to relieve pain and suffering. Use oxygen, suction and manual treatment of airway obstruction as needed for comfort. Transfer to hospital *only* if comfort needs cannot be met in current location. Also see "Other Orders" if indicated below.

☐ **Limited Additional Interventions:** Includes comfort measures described above. Do not use intubation or mechanical ventilation. May consider less invasive airway support (e.g., CPAP or BiPAP). Use additional medical treatment, antibiotics, and cardiac monitoring as indicated. Hospital transfer if indicated. Avoid intensive care unit if possible. Also see "Other Orders" if indicated below.

☐ **Full Interventions:** In addition to Comfort Measures above, use intubation, mechanical ventilation, cardioversion as indicated. Transfer to hospital if indicated. Include intensive care unit. Also see "Other Orders" if indicated below.

Other Orders: _____

C ✓one only

ARTIFICIALLY ADMINISTERED NUTRITION: Always offer food and fluids by mouth if feasible.

☐ **NO** feeding tube (Not consistent with patient's goals given current medical condition)

☐ Feeding tube for a defined trial period (specific goal to be determined in consultation with treating physician)

☐ Feeding tube long-term if indicated

Other Orders: _____

D

Must be signed by a physician, nurse practitioner or physician assistant

PROVIDER SIGNATURE: My signature below indicates that I have discussed the decisions documented herein with the patient or the person legally authorized to consent on the patient's behalf and have considered the patient's goals for treatment to the best of my knowledge.

DISCUSSED WITH (Required):

☐Patient ☐Agent named on Advance Directive ☐Other person legally authorized ☐Court appointed guardian

SIGNATURE (REQUIRED): _____ **DATE (REQUIRED):** _____

PROVIDER NAME (REQUIRED): _____ **PHONE:** _____

Signature of Patient or Authorized Person (Required)

Signature: _____ **Date:** _____

If the patient signs and Do Not Attempt Resuscitation is checked in Section A, only the patient can revoke consent for the Do Not Resuscitate Order.

Print Name: _____

If patient lacks capacity, describe authority to consent on the patient's behalf: _____

If the patient has no Advance Directive, the following persons may consent for the patient in this order: Guardian, Spouse, Adult Children, Parents, Adult Siblings, Other Relative in descending order of blood relationship (Code of Virginia §54.1-2986)

FORM SHALL ACCOMPANY PATIENT WHEN TRANSFERRED OR DISCHARGED

www.virginiapost.org

patient label

HIPAA permits disclosure to health care professionals and authorized decision makers for treatment

NAME: _____ **Date of Birth:** _____

CARE SETTING WHERE POST WAS COMPLETED

☐ Long-Term Care ☐ Hospital ☐ Home ☐ Hospice Facility ☐ Outpatient Practice ☐ Other _____

Name of Care Setting: _____

Name of Healthcare Professional Preparing Form:

Print Name: _____ Date: _____ Organization: _____

This form is meant to reflect decisions for treatment based on the patient's current medical condition. It should be reviewed periodically and updated as needed with changes in condition, patient preferences, or setting.

Instructions for Use of This Form

Completing POST

- POST is not valid until signed by a physician, nurse practitioner or physician assistant who has a bona fide relationship with the patient. Nurse practitioners and physician assistants are authorized to sign POST forms under the Code of Virginia §54.1-2957.02 and §54.1-2952.2 respectively. Health care organizations may have policies that impose limitations on this authority based on the provider's individual scope of practice.
- Use of the original form is encouraged. A photocopy, fax or electronic version should be honored as if it were an original.

Using POST

- Patients may choose Full Interventions to authorize ventilation/intubation as a treatment for respiratory distress and still choose Do Not Attempt Resuscitation in the event of a full cardio-pulmonary arrest.
- When comfort cannot be achieved in the current setting, the patient, including someone who has chosen "Comfort Measures," should be transferred to a setting able to provide comfort (e.g. treatment of a hip fracture).
- Review POST periodically and update if needed with changes in condition, patient preferences or setting.

Revoking/Making Changes to Section A

- Administrative Code of Virginia §12VAC5-66-10 states "Durable DNR order shall also include a Physician Orders for Scope of Treatment (POST) form." Therefore, provisions under Code of Virginia §54.1-2987.1 apply to POST Section A.
- If "Do Not Attempt Resuscitation" is checked in Section A, and Section D is completed, and the patient has signed this form, no one has the authority to revoke consent for the DDNR order other than the patient as stated in the Code of Virginia §54.1-2987.1.
- If "Attempt Resuscitation" is checked in Section A, a legally authorized decision maker may make changes to carry out the patient's preferences in light of the patient's changing condition.

Making Changes to Sections B and C

- To change any orders in these sections, the current POST form must be voided and a new POST form completed.
- If the POST is revoked and no new POST form is completed, full treatment and resuscitation may be initiated.
- If a patient tells a healthcare professional that they wish to revoke their consent to POST or change POST, the healthcare professional caring for the patient should draw a line through the front of the form and write "VOID" on the original, date and sign, and notify the patient's physician. A new POST form then may be completed if desired by the patient.
- If not in a healthcare facility, the patient (or person authorized to make decisions on the patient's behalf, in keeping with the patient's goals for treatment) may revoke consent for POST orders by voiding the form as described above and informing a healthcare professional. The healthcare professional must then notify the patient's physician so that appropriate orders may be written and a new POST form created if desired by the patient.
- If the patient signs this form and becomes unable to make healthcare decisions, a legally authorized decision maker may continue carrying out the patient's preferences in light of the patient's changing condition, and in consultation with the treating physician, may sign, revoke consent to, or request changes to the POST orders (except in Section A as noted above).

FORM SHALL ACCOMPANY PATIENT WHEN TRANSFERRED OR DISCHARGED

POST forms are available to medical providers and organizations that have agreed to the standards set forth by the Virginia POST Collaborative. Contact: program.coordinator@virginiapost.org

Appendix F: Letter of Endorsement

Rockbridge Area Hospice

Founded in 1984. Your Hometown Hospice, Neighbors Helping Neighbors.

August 18, 2020

To Whom It May Concern,

As a community-based hospice organization in Lexington, VA, Rockbridge Area Hospice provides a great deal of assistance to patients and community members in preparing for their end-of-life. The confusion and hesitation around Advance Directive processes & documents, even within the healthcare system, is apparent to us on a daily basis.

The proposal that Hunter Shomo has developed for his doctoral project is very relevant to our work. A more thorough understanding and articulation of POLST implementation best practices would aid our organizations efforts to partner with other healthcare providers in serving the end-of-life needs in our community.

I fully support Hunter's interest and efforts in this arena, and look forward to the results he discovers.

Sincerely,

[redacted]
Executive Director

315 Myers Street · Lexington, VA 24450 · (540) 463-1848 · Fax (540) 463-3175
www.rockbridgeareahospice.org