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Michigan Physician Orders for Scope of Treatment: Development of a Nationally Recognized Program

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Title of Manuscript: Michigan Physician Orders for Scope of Treatment: Development of a Nationally Recognized Program

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Conflicts of Interest: None

Key Words: portable medical orders, end-of-life, advance care planning, program development

Abstract

Background: Advance directives are well intentioned, but fail to promote patient autonomy in emergent situations.

Objective: To develop a sustainable portable medical order program consistent with national standards through an evidence-based toolkit.

Methods: A literature review and policy analysis were conducted to develop toolkit. Interviews were conducted with content experts to validate toolkit.

Results: The final toolkit consisted of five components: educational materials for healthcare providers, a policy brief, strategies for fund development, strategies for quality monitoring, and a cost savings exemplar.

Conclusions: An evidence-based toolkit tailored to state-specific barriers is critical to development of a portable medical order program.

Michigan Physician Orders for Scope of Treatment: Development of a Nationally Recognized Program

Traditional advance directives (AD) are well intentioned, but fail to promote patient autonomy or quality of life in emergent situations (Garrido, Balboni, Maciejewski, Bao & Prigerson, 2015). Evidence suggests that nursing home residents with comfort-oriented ADs are hospitalized at similar rates compared to patients with full treatment ADs (Tark, Agarwal, Dick & Stone, 2019). This is concerning as older adults often prioritize symptom management over aggressive life-prolonging treatment (McGlade, et al., 2017; Vranas, et al., 2020).

Unwanted transitions of care are often burdensome to the patient and may result in adverse outcomes such as infection or injury (Laging, Ford, Bauer & Nay, 2015; Tark, Agarwal, Dick & Stone, 2019). Furthermore, older adults with advanced illness may experience little benefit from invasive treatments. However, an AD is not a medical order, therefore standard protocols for life-saving treatment are typically utilized when there is an acute decline in health status (Thomas & Sabatino, 2017). A new advance care planning tool, the physician orders for scope of treatment, was developed in response the shortcomings of the traditional advance directive.

Purpose and Objectives

Since its inception in 1991, the National POLST paradigm taskforce has worked to establish national standards related to portable medical orders to assist individual states as they develop a program. There are currently two mature state programs, 24 endorsed programs, 21 active programs, and six states unaffiliated with the National POLST paradigm. Michigan is

currently recognized as an 'active' program, which means legislation for portable medical orders has been enacted, but the form is not yet utilized. To progress to a 'mature' program, Michigan must implement the portable medical order program throughout the entire state, develop a quality monitoring protocol, and work towards developing an electronic registry (National POLST, 2020).

The purpose of this program development project was to design a toolkit consisting of evidence-based strategies and recommendations needed to create and sustain a mature portable medical order program in the state of Michigan. The purpose of this project was actualized through the following objectives:

1. Create health policy brief to educate stakeholders about Michigan Physician Orders for Scope of Treatment (MI-POST).
2. Develop recommendations for advocacy opportunities to promote education and engagement of key stakeholders.
3. Create educational materials for healthcare providers to implement MI-POST at a local level.
4. Develop evidence-based strategies and recommendations for quality measure data collection.
5. Develop evidence-based strategies and recommendations for fund development.

Background

In 1991, a group of stakeholders in Oregon developed the physician orders for life-sustaining treatment (POLST) paradigm. The POLST paradigm focuses on facilitating meaningful discussion between the patient and provider regarding goals of care and treatment preferences. This discussion is then translated into a portable medical order that travels with the patient during any transition of care. The medical orders vary by state, but most include orders regarding cardiopulmonary resuscitation (CPR), artificial nutrition and hydration, blood transfusions, antibiotics, hospitalization, and dialysis (Hoffman, 2019).

Compared to traditional ADs, portable medical orders are associated with end of life care that is better aligned with patient preferences. There are key differences between the traditional advance directive and the portable medical order that result in this improved efficacy (See Appendix A). According to Collier, Kelsberg & Safranek (2018), 91-100% of patients with a DNR order on the POLST form are allowed natural death in various care settings. In regards to medical treatment (e.g. fluids, intubation, feeding tubes, hospitalization, etc.), patient wishes were honored for over 90% of long term care facility residents (Steffen, n.d.).

Completed portable medical orders have been associated with higher rates of hospice admission and preferred death at home (Schmidt, Weaner & Long, 2015; Teno, et al., 2018), lower rates of unwanted CPR and lower rates of admission to the intensive care unit (Blix & Tolle, 2019; Hickman, Keevern & Hammes, 2015; Lee, et al., 2020; Pedraza, Culp, Falkenstine & Moss, 2016). Despite the efficacy of portable medical orders, there are many barriers that exist to statewide implementation (See Appendix B).

Conceptual Framework

The Center for Disease Control and Prevention (CDC) estimates that 6 out of every 10 Americans live with a chronic illness. In fact, chronic illness is the leading cause of morbidity and mortality in the United States (CDC, 2021). As more people are living with, and dying from, complications related to advanced chronic illness, it is vital that unwanted transitions of care are viewed from the palliative care perspective.

Palliative Perspective

The foundation of the transitions model of palliative care (Murray, 2007) is chronic disease management and shared decision making. The clinician contributes scientific knowledge and clinical expertise to the decision-making process, while the patient contributes his or her perspective regarding acceptable treatments and quality of life. The clinician's approach to care is based on patient needs, preferences and current situation. Care is achieved though supported self-care, disease management, and case management. This requires an intimate patient-provider relationship that empowers the patient to be actively involved in the decision-making process. Portable medical orders are the vehicle for this relationship and these discussions to ensure care that is aligned with patient preferences.

Theory Meets Practice

Critical appraisal of the current state of MI-POST made it apparent that program development was essential to meeting the current needs of Michigan residents. Program development is a dynamic process. Sustainability of a portable medical order program is dependent on a variety of stakeholders: these include healthcare professionals, lawyers,

policymakers, regulatory agencies, and ethical consultants. For this reason, it was essential to choose an implementation framework that offered guidance, but allowed for a degree of flexibility. The CDC Model (See Appendix C) offered a simple theoretical framework with universal relevance (CDC, 1999). This particular model allowed for development of a toolkit that was both evidence-based but feasible in a specific practice setting.

Methods

In order to determine the status of portable medical orders in Michigan, the author conducted an in-depth policy analysis. Many barriers were identified, including a lack of adequate funding for statewide implementation, lack of quality monitoring tools to promote program sustainability, and lack of knowledge regarding MI-POST among healthcare providers.

Next, a comprehensive literature synthesis was conducted, including research, expert opinion, and grey literature. The aims of the synthesis were to determine specific interventions (a) to secure adequate funding to implement MI-POST throughout the state of Michigan (b) for quality monitoring to promote program sustainability and (c) to educate stakeholders about MI-POST. There is limited research on interventions specific to portable medical orders.

In addition to the literature review, virtual interviews were conducted with local content experts to ensure feasibility of the strategies and recommendations in the state of Michigan. Content experts were individuals who were currently working in their respective fields and possessed at least five years of experience in their current or similar roles. A script was developed to obtain verbal assent from content experts that they were willing to share their professional knowledge. The content experts included the MI-POST program coordinator, a political consultant with previous experience in the Michigan state senate, and the director of

fund development at a local non-profit organization.

The finalized toolkit was formally presented to the MI-POST state coordinator at the conclusion of the project. Toolkit components were in electronic format to allow for sharing with the appropriate stakeholders throughout the state of Michigan.

Findings

The final program development toolkit consisted of five components: educational materials for patients and healthcare providers, a health policy brief, strategies for fund development, strategies for quality monitoring, and a cost savings exemplar. The intended audiences for these components included the MI-POST state coordinator, healthcare providers, patients and families, and policymakers. Development of the toolkit was guided by three aims: (a) to educate healthcare providers throughout the state about MI-POST, (b) to understand the impact of adequate funding and quality monitoring on long-term program sustainability and (c) to communicate the financial implications of MI-POST with policymakers.

Education

In order to improve understanding of the MI-POST process and contents, it was important to develop educational tools. An infographic (See Appendix D) was developed for patients to educate about the form, using health literacy standards such as readability (Centers for Medicaid and Medicare Services, 2010). The finalized version of the infographic is written at approximately an eighth-grade level per the recommendation of the American Academy of Family Physicians (Safeer & Keenan, 2005).

An anticipated barrier to MI-POST utilization was that healthcare provides might fill out

the form incorrectly, which would invalidate the medical orders. A user guide was developed for healthcare professionals on proper form completion. In addition, a shortcoming of traditional Advance directives is that they are not typically the result of a comprehensive discussion of goals of care. MI-POST completion must always start with this discussion between patient and provider. For this reason, a guide for facilitating effective advance care planning discussions was developed. This guide explains what advance care planning is, when and where discussions should occur, and who should be present for discussions.

There is no specific structure that advance care planning discussions must follow. Once decision-making capacity has been confirmed or a surrogate decision maker has been identified, high quality discussion must meet several objectives: assess the patient's current knowledge about their health status and prognosis to identify knowledge gaps, provide specific and evidence-based information to fill those gaps, discuss possible future scenarios specific to the patient's disease process while addressing the best and worst case outcomes in the event of aggressive treatment, and discuss what quality of life means to the patient focusing on how that translates to their treatment preferences. Once treatment preferences have been documented, the patient should be encouraged to share that information with their family. The toolkit guide provides examples and rationales for the listed recommendations.

Program Sustainability

States with mature portable medical order programs, such as California and West Virginia, have demonstrated that long-term program sustainability is a product of adequate funding and continual quality monitoring (Thomas & Sabatino, 2017). Evidence-based guides to

fund development and quality monitoring were developed for the toolkit. The local content experts offered recommendations for activities and resources to address the broad strategies found in the literature.

Fund Development strategies need to be tailored to each individual organization. However, the literature revealed several universal takeaways for successful fund development. First, the initial step to any successful endeavor is to a develop a specific and realistic program budget. This budget will allow an organization to set specific fundraising goals to work towards. Second, the foundation of fund development is cultivating meaningful relationships through intentional donor stewardship. Finally, organizations should be familiar with local sources of funding. Many funding agencies, particularly family foundations, want to invest in projects that will directly improve the lives of those within their own community.

The toolkit included quality monitoring indicators, tools, and recommended approaches were modified, with permission, from National POLST to reflect MI-POST (National POLST, 2021). A third quality indicator was developed to collect data from local medical authorities regarding how MI-POST was is utilized by emergency medical personnel. The quality improvement measures in the toolkit were designed to be utilized across care settings (e.g. nursing homes, adult foster care homes, hospitals, hospice and home health agencies, physicians' offices, etc.). Regardless of location, it was essential that this continuum of healthcare settings work together on quality improvement to support long-term program sustainability.

The priority for early implementation was ensuring that MI-POST forms were valid (e.g. all required elements were completed), were internally consistent (e.g. resuscitation orders

matched medical intervention orders), and were completed for appropriate patients (e.g. frail older adults with advance illness likely within the last year of life). The quality indicators included in the toolkit were process indicators designed specifically to measure the process of early program implementation.

In the future, rates of hospitalization, receipt of life-prolonging treatments, or location of death should be included as outcome measures (National POLST, 2021). However, collection of high-quality data for outcome measures requires that the MI-POST program is well established throughout the state. The strategies and recommendations for program sustainability included in the toolkit offer a blueprint for current and future MI-POST stakeholders.

Financial Implications

A critical element of MI-POST implementation is recognizing the interaction between healthcare policy and healthcare delivery. Policymakers are charged with the task of approving state budgets. To communicate the potential cost-savings of MI-POST implementation, a health policy brief (See Appendix E) was created for current and future policy makers. To communicate that information to healthcare providers, a clinical case scenario (See Appendix F) was developed; both materials included a cost-savings exemplar.

The cost-savings exemplar was developed based on collaboration with the program director of a Senior Emergency Room (ER) in Southeast Michigan and publicly available data. Older adults may show atypical signs of infection or illness when compared with younger adults. This necessitates a more comprehensive workup with an older adult presents to the emergency room. The cost-savings exemplar is based on the minimum length of stay at the senior ER, which

is six hours. The exemplar includes baseline laboratory tests that are drawn from all older adults who present to the ER (e.g. complete blood count, urinalysis, complete metabolic panel). It also includes medications and diagnostic testing specific to the vague complaint of abdominal pain (e.g. ultrasound and computed tomography of the abdomen, additional laboratory tests, and medication for pain and nausea). This complaint was highlighted as it is the leading cause of ER visits in older adult females over the age of 65 (Rui & Kang, 2020).

While policy makers are charged with the task of approving state budgets, healthcare providers are charged with the task of being good stewards of healthcare resources. It is essential to the success of MI-POST that both groups understand that MI-POST has the potential to save over 1.2 billion dollars annually. The cost savings exemplar has two aims: (a) to provide a practical example of how the MI-POST can decrease healthcare spending while improving clinical outcomes if used properly and (b) provides nurse practitioners with information to share when advocating for MI-POST within their own organizations or with policymakers.

Discussion

Implications for Program Development

The foundation of successful program development is interprofessional collaboration. Sustainability of the MI-POST program is dependent on a variety of stakeholders including healthcare professionals, lawyers, policymakers, regulatory agencies, and ethical consultants. It was essential that the final components were tailored, both for readability and relevancy, for the intended audiences.

Collaboration with non-healthcare content experts revealed that original drafts of toolkit components did not actually convey the intended messages. This led to two significant modifications in the toolkit. First, the educational materials were modified to ensure that the patient infographic was written at an eighth-grade reading level. Second, the policy brief was modified to include more background information regarding the interaction between MI-POST and out of hospital do not resuscitate legislation in Michigan. Interprofessional collaboration was invaluable to validating the final components and justifying the conclusions on which the toolkit was based.

Implications for Practice

This project is only one stop on the road to a mature MI-POST program (See Appendix G). Achieving program maturity requires a committed and active state coalition to spearhead the initiative. It also requires nurse practitioners, at the local level, be committed to program implementation.

Statewide rollout of the MI-POST program will be spearheaded by a state regulatory agency. For that rollout, the educational resources in the toolkit may provide direction for local healthcare organizations as MI-POST is integrated into local clinical workflows. The infographic for patients is available to offer written education to patients and families. The user guide for healthcare providers and the guide for facilitating effective advance care planning discussions is available for distribution to local nurse practitioners for guidance. The guides are not discipline specific, so the materials can be utilized by other disciplines (e.g. social work,

spiritual caregivers, etc.) if completion of the MI-POST is delegated due to local clinical workflows.

As more organizations adopt MI-POST as the preferred method of care planning, periodic quality monitoring is required to evaluate implementation processes and modify those processes as needed. The indicators, tools, and approaches for quality monitoring included in the toolkit may be utilized to collect this data. Analysis of the data will be completed by the state regulatory agency. Collection of the data may be a collaborative effort between the regulatory agency and individual organizations.

Finally, when 'mature' recognition has been achieved and MI-POST is fully adopted by the majority of healthcare organizations in Michigan, focus can be placed on development of an electronic registry for MI-POST forms. The policy brief and cost-savings exemplar may be utilized by nurse practitioners to advocate for legislation to enact an electronic pilot for MI-POST. The fund development resources may be utilized by the appropriate stakeholders to secure adequate funding for a pilot program. Electronic pilot efforts may be spearheaded by the state regulatory agency or an ad hoc committee specifically formed for these endeavors.

Conclusion

Portable medical orders, like MI-POST, are associated with healthcare that is better aligned with patient preferences (Blix & Tolle, 2019; Collier, Kelsberg & Safranek, 2018; Hickman, Keevern & Hammes, 2015; Lee, et al., 2020; Pedraza, Culp, Falkenstine & Moss, 2016; Schmidt, Weaner & Long, 2015; Steffen, n.d.; Teno, et al., 2018). Despite the efficacy of these orders, the process of implementing a portable medical order program is long and full of

potential roadblocks. Rigorous and intentional program development can be utilized to identify state-specific barriers. An evidence-based toolkit tailored to those barriers is crucial to developing a successful and sustainable portable medical order program. Collaboration with nurse practitioners who are knowledgeable about portable medical orders, experienced in prognostication, and committed to effective advance care planning will be vital to future efforts related to the MI-POST initiative.

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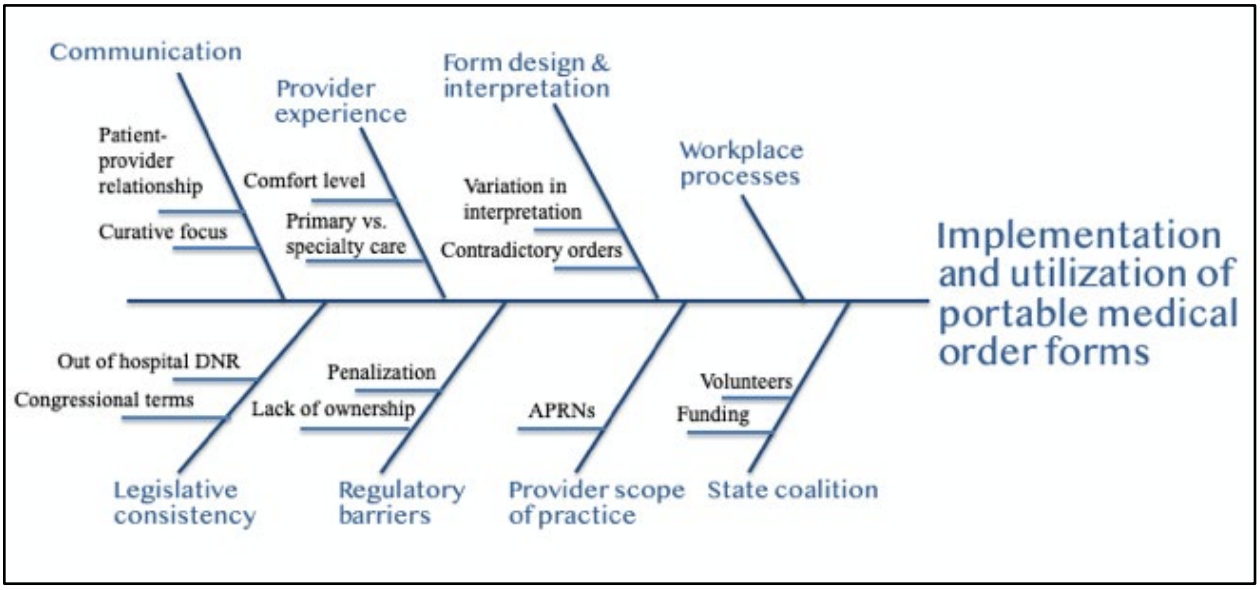
Appendix A

	MI POST	Advance Directives
Type of document	**Active medical orders**	**Legal document**
Intended users	Those with advanced illness or frail, older adults. Completion of portable medical orders should not occur until a person is likely in the final year of life	Competent adults over the age of 18
Method of completion	Signed by designated healthcare provider	Individual, often with assistance of a lawyer
Role of the surrogate	Do not appoint a surrogate decision maker; if the patient does have a legal designated surrogate, that surrogate can complete, change, or revoke a portable medical order	Appoint a surrogate decision maker
Information communicated	Specific medical orders	General wishes regarding treatment preferences and goals of care
Role of emergency personnel	May follow portable medical orders	May not follow an advance directive
Review	Must be reviewed: • Annually • With a change in condition • Goals of care/treatment preferences change	Not required

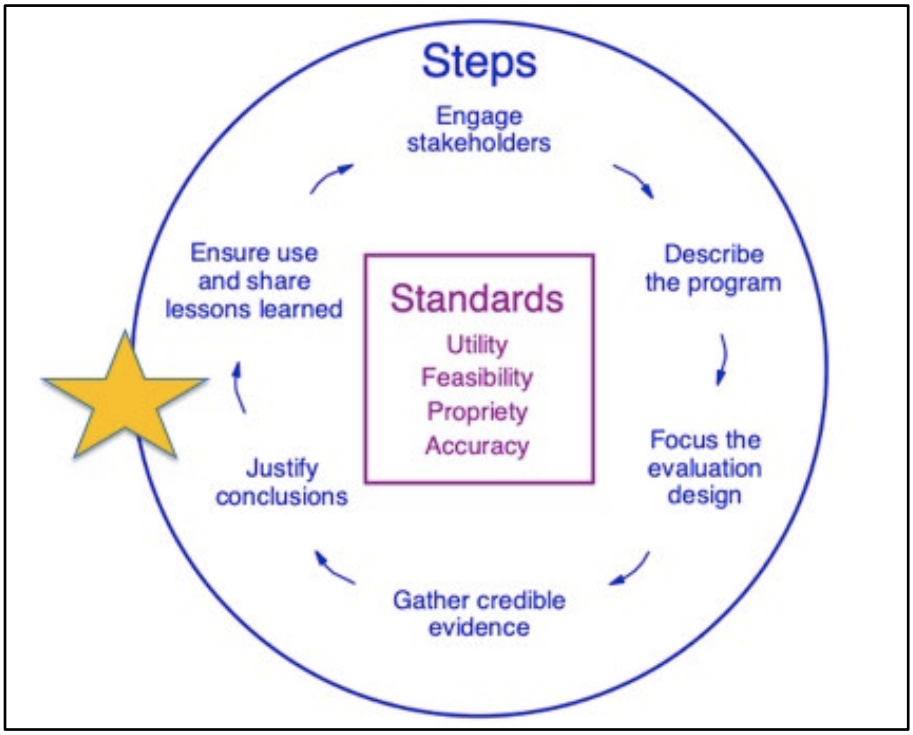
Note. Comparison of MI-POST and traditional advance directives

Appendix B



Note. Factors affecting the implementation and utilization of portable medical order forms.

Appendix C

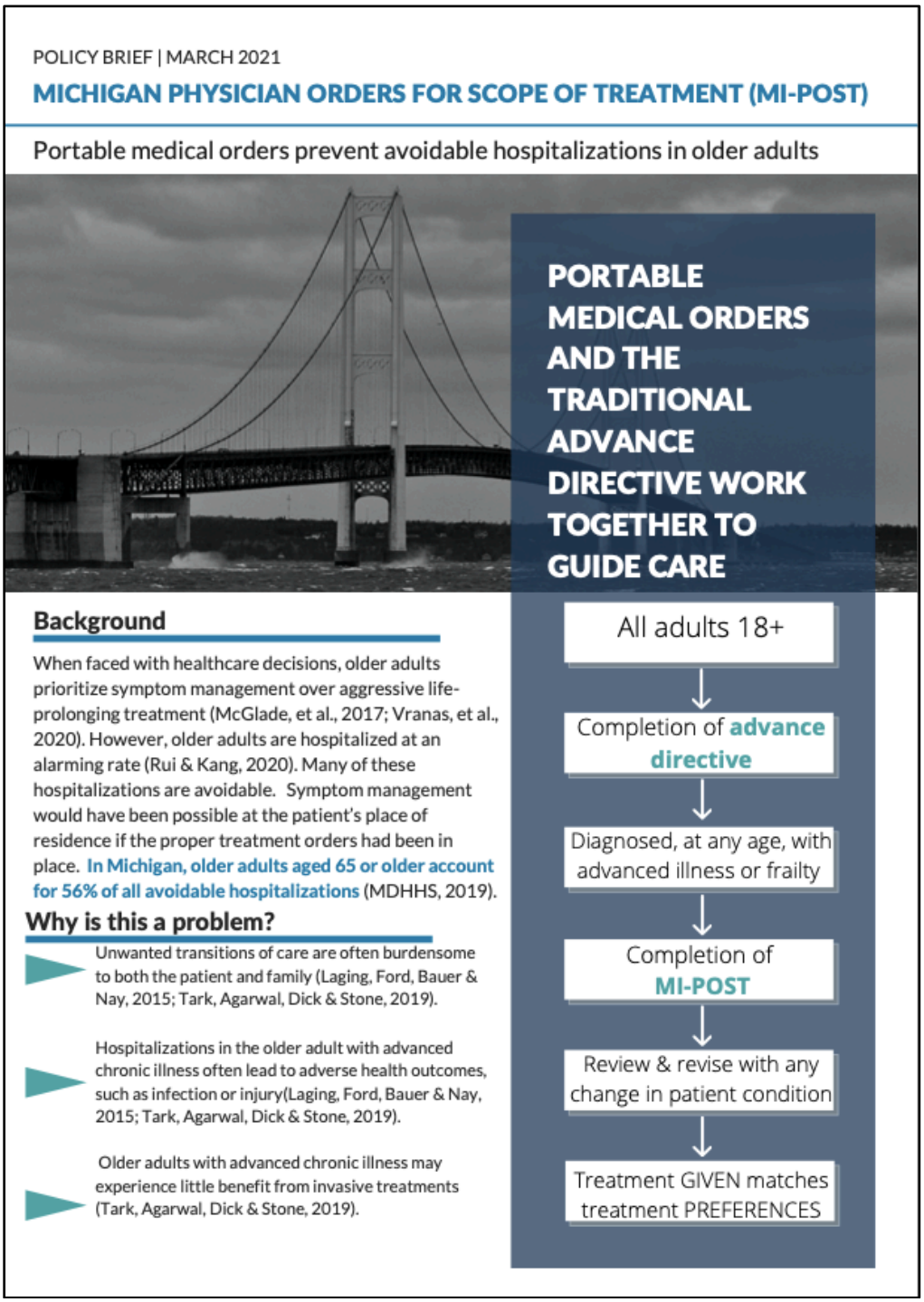


Adapted from "Framework for program evaluation in public health," Centers for Disease Control and Prevention, 1999, *Morbidity and Mortality Weekly Report,* 48(11), p. 4

Appendix D

Note. Patient infographic included in toolkit deliverables

Appendix E



Note. Health policy brief included in toolkit deliverables

Appendix F

Figure 1

Itemized list of costs acrued during six hour visit to ED

Cost savings exemplar- Older adult female complaining of stomach pain	Cost
Cost of transfer from facility to ER	
Ambulance ride	$275.00
Cost of paramedic on duty	$42.00
Cost of Emergency Department visit (6 hour minimum)	
Hydromorphone injection	$35.00
Therapeutic IV push (CPT: 96375)	$148.00
Subsequent therapeutic IV push (CPT: 96276)	$202.00
Ondansetron injection (J2405)	$41.00
Therapeutic IV push (CPT: 96375)	$148.00
Complete blood count (CPT: 85027)	$35.00
Blood smear w/ differential WBC count (CPT: 85007)	$30.00
Complete metabolic panel (CPT: 80053)	$69.00
Assay of lipase (CPT: 83690)	$63.00
Urinanalysis (CPT: 81003)	$54.00
Diagnostc ultrasound procedure of abdomen (CPT: 76705)	$462.00
CT of abdomen/pelvis with contrast (CPT: 74177)	$2,718.00
Diagnostic IV push (CPT: 9637459)	$181.00
Low osmolar contrast material (CPT: Q9967)	$200.00
ED physician	$840.00
Registered nurse	$204.00
Radiologist	$1,206.00
Radiology technician	$174.00
Environmental services	$102.00
Cost of transfer from ER to facility	
Ambulance ride	$275.00
Cost of paramdic on duty	$42.00
TOTAL COST	$7,546.00

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Note. Cost-savings exemplar included in toolkit deliverables

Appendix G

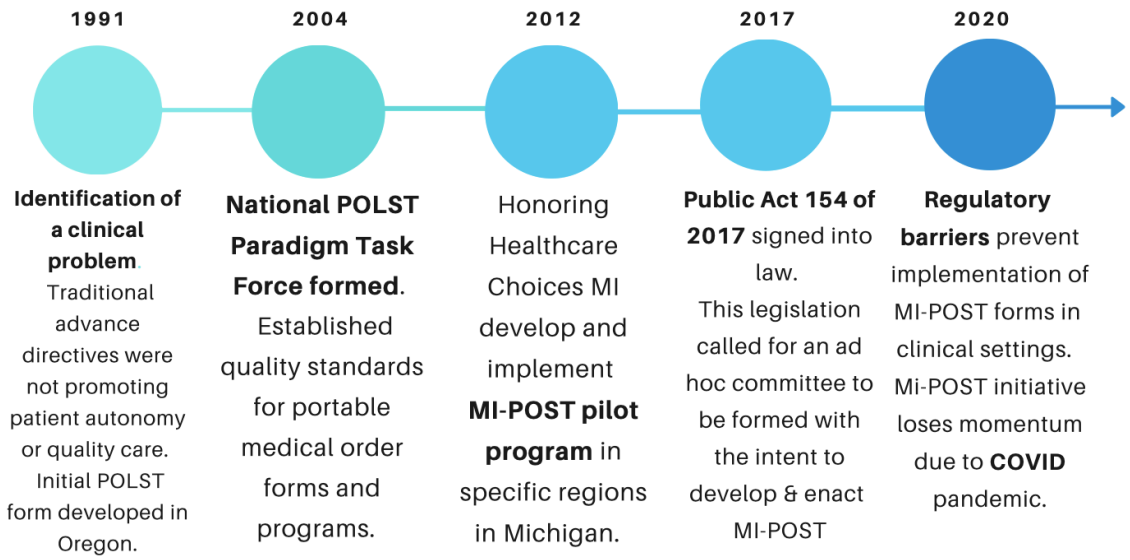

Figure G1. Timeline of past efforts of the MI-POST initiative

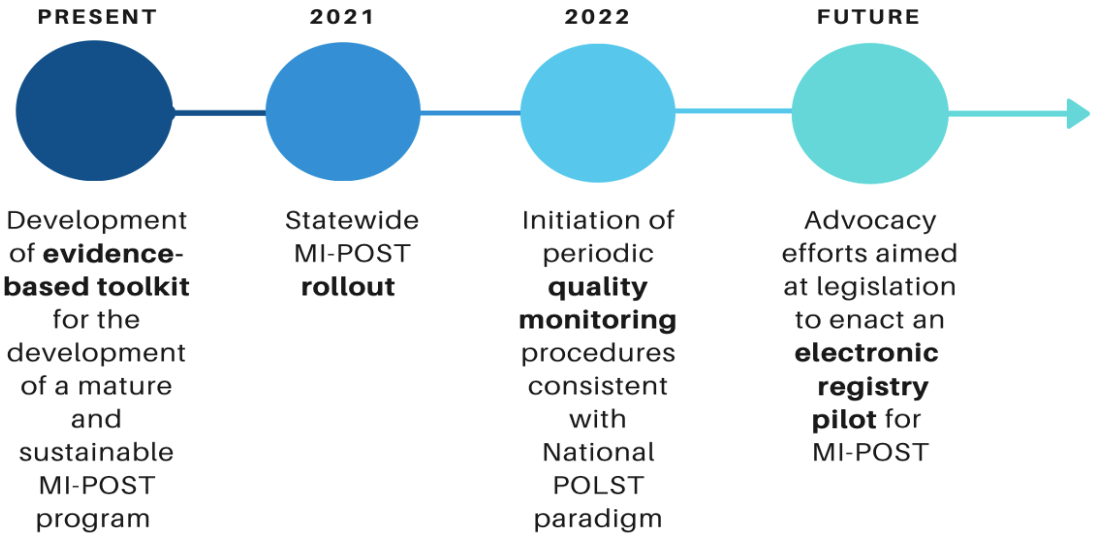

Figure G2. Timeline of future efforts for MI-POST implementation

Michigan Physician Orders For Scope of Treatment: Development of a Nationally Recognized Program

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DNP Project Final Defense

April 30, 2021

GRAND VALLEY STATE UNIVERSITY
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Objectives for Presentation

1. Review background and historical context of portable medical orders.
2. Review the current state of portable medical orders at micro and macro levels.
3. Review Transitions Model of Palliative Care (TMPC) and CDC Framework for Project Evaluation.
4. Present final deliverables of toolkit
5. Discuss dissemination of toolkit components
6. Obtain approval from advisory team for project.

Background

- Advance directives (AD) are well intentioned, but fail to promote patient autonomy or quality of life in emergent situations (Garrido, Balboni, Maciejewski, Bao & Prigerson, 2015).
- Portable medical orders are more effective in preventing unwanted transitions of care and improving quality of life
- The physician orders for life-sustaining treatment (POLST) paradigm was developed in response to trends of discordant care (National POLST, 2020)
- Three levels of recognition that vary by state (National POLST, 2020)
  - Active, Endorsed, Mature
- Michigan is an 'active' program

	MI POST	Advance Directives
Type of document	**Active medical orders**	**Legal document**
Intended users	Those with advanced illness or frail, older adults. Completion of portable medical orders should not occur until a person is likely in the final year of life	Competent adults over the age of 18
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Information communicated	Specific medical orders	General wishes regarding treatment preferences and goals of care
Role of emergency personnel	May follow portable medical orders	May not follow an advance directive
Review	Must be reviewed: • Annually • With a change in condition • Goals of care/treatment preferences change	Not required

Current State of the Organization

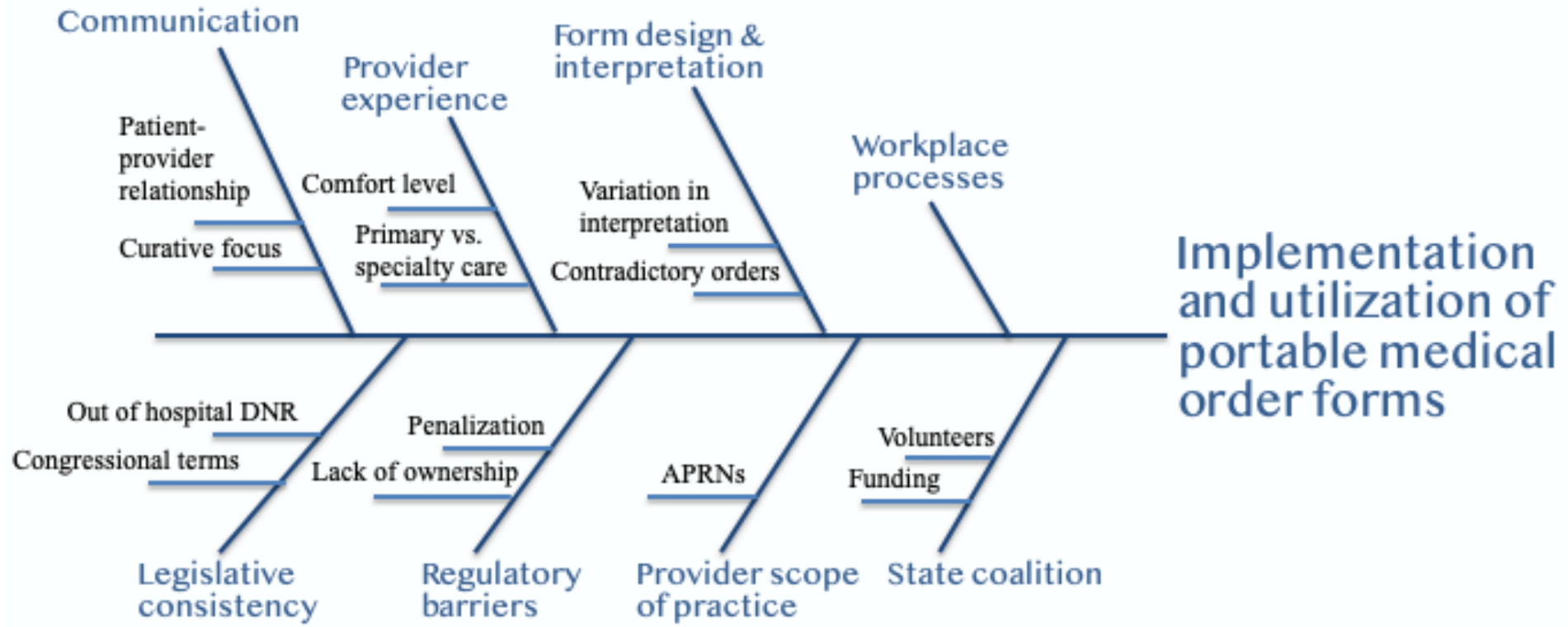
Micro

- Long-term-care (LTC) facilities
- Trend of unwanted transitions of care from local LTC facility to acute care hospital setting (Rui & Kang, 2020).

Macro

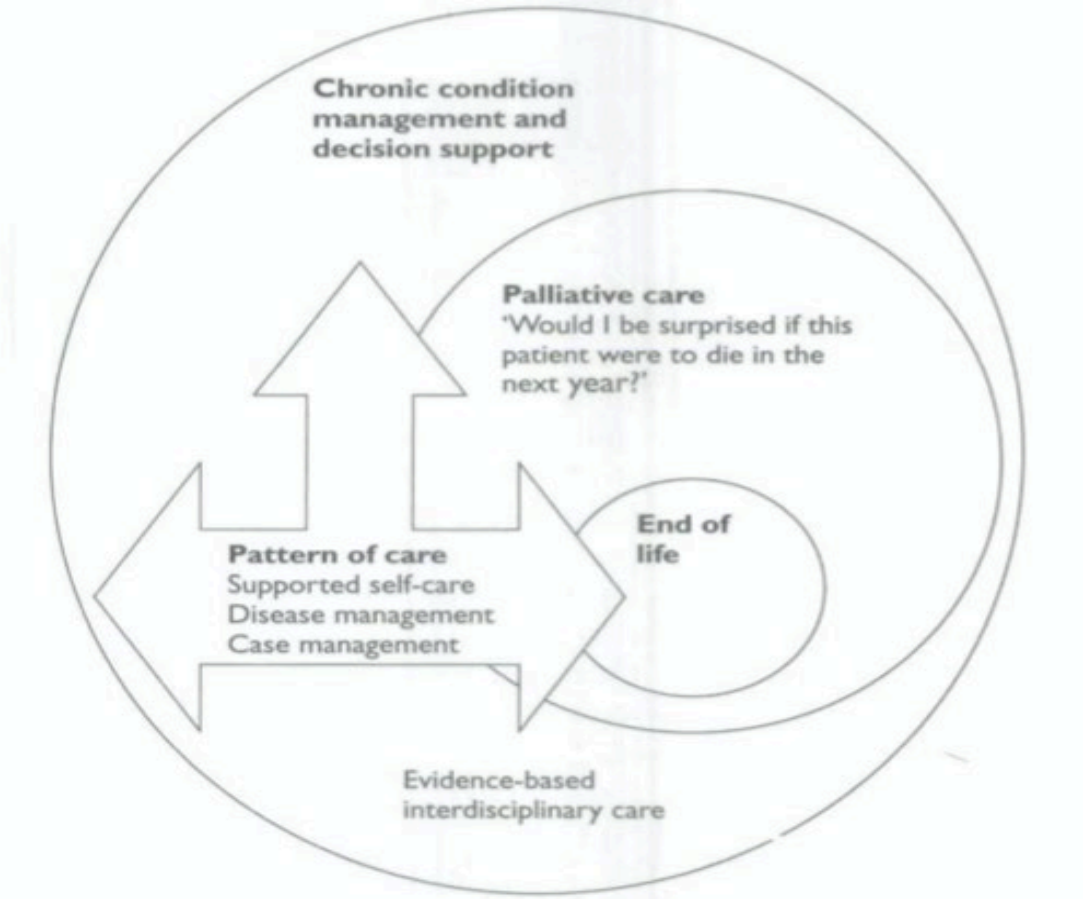
- Variation among states
- MI-POST not implemented due to legal and regulatory barriers.

Adapted from "Accelerating healthcare improvement: Canadian foundation for healthcare improvement's assessment tool", 2014, p.6


Communication
Patient-provider relationship
Curative focus
Provider experience
Comfort level
Primary vs. specialty care
Form design & interpretation
Variation in interpretation
Contradictory orders
Workplace processes
Implementation and utilization of portable medical order forms
Out of hospital DNR
Congressional terms
Legislative consistency
Penalization
Lack of ownership
Regulatory barriers
APRNs
Provider scope of practice
Volunteers
Funding
State coalition

Framework/Conceptual Model for Phenomenon

Transitions Model of Palliative Care (TMPC)



Adapted from "Crossing over: transforming palliative care nursing services for the 21st century," by M. Murray, 2007, *International Journal of Palliative Nursing, 13*(8), 366-376

SWOT Analysis

Strengths

- Prevention of unwanted transfers is a priority for stakeholders (Micro)
- MI-POST allows for APRNs to authorize portable medical orders (Macro)
- **Programs for portable medical order standards (both in Michigan and nationally) are developed based on strong evidence (Macro)**

Weaknesses

- Inadequate in-house nursing staff leading to increased use of agency staff (Micro)
- Lack of streamlined process for facilitating ACP discussions (Micro)
- Facility admission work processes are not conducive to efficient completion of AD (Micro)
- Maturity of organization – recent transfer of ownership (Micro)
- **Strict out of hospital DNR orders in the state of Michigan creates a legal barrier to MI POST utilization (Macro)**
- **State coordinator is not a paid position in the state of Michigan (Macro)**

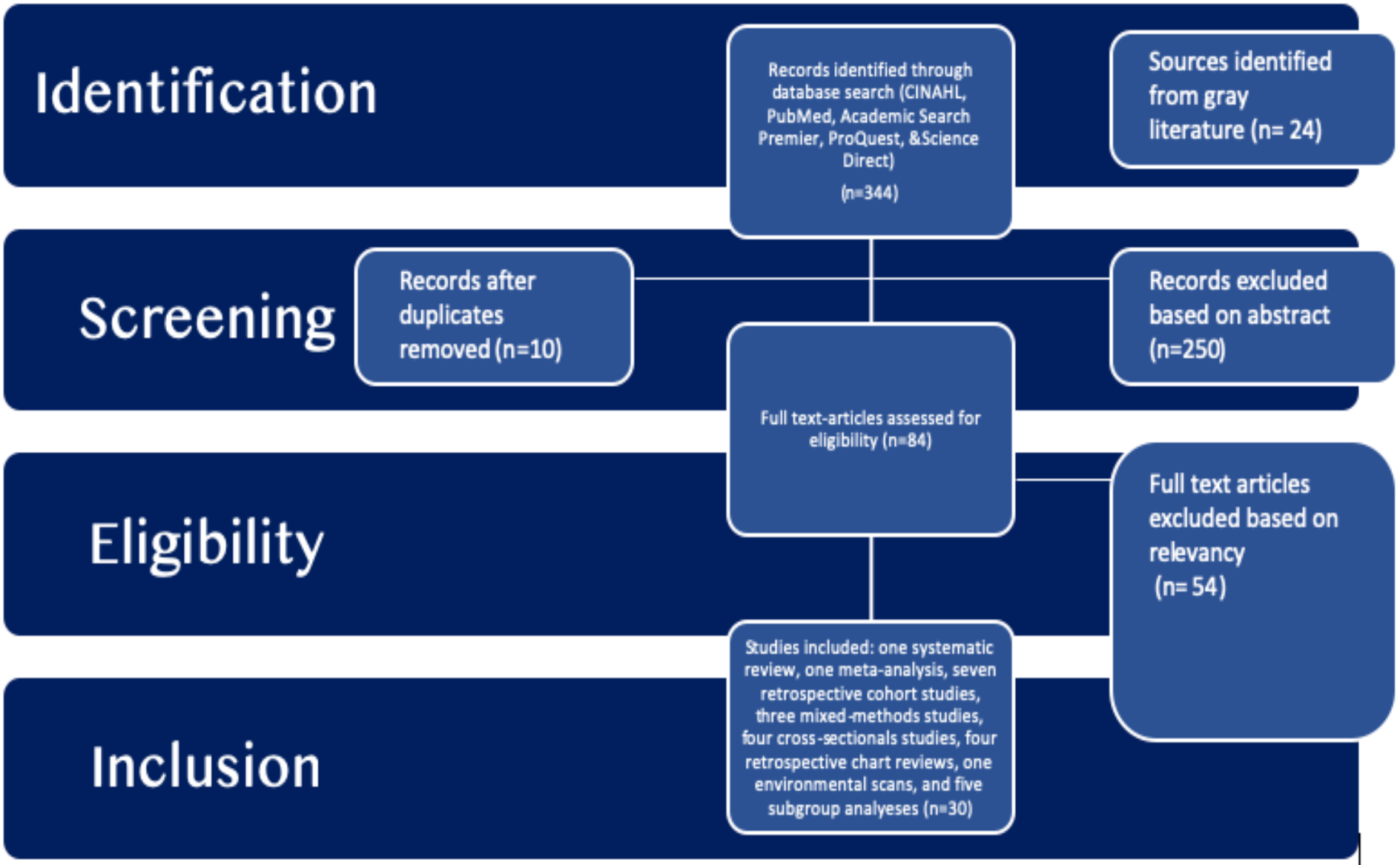
Opportunities

- The current global pandemic highlights the need for portable medical orders (Macro)
- The current expanded allowance for electronic signatures on medical orders may be extended and allow for increased completion rates of portable medical orders when the form is able to utilized (Macro)

Threats

- **Implementation of MI-POST law passed in 2017 is being delayed by state regulatory agencies (Macro)**
- COVID has shifted focus from MI-POST efforts to public health efforts related to the pandemic (Macro)

Literature Synthesis



Literature Synthesis

National POLST

Only two states, California and West Virginia, have achieved mature recognition

Michigan Physician Orders for Scope of Treatment (MI-POST)

Active program

Legislation passed,

but not implemented

Facilitators

Standardized work flows

APRNs

Active state coalition

Quality monitoring procedures

Barriers

Provider lack of experience

Poor communication

Legal and regulatory barriers

Lack of funding

Lack of an active state coalition

Lack of form access

Evidence for Project

Theme	Literature synthesis
Variation in advance directives	Traditional advance directives do not prevent unwanted transitions of care (Kaambwa, et al., 2015; Manu, et al., 2017; Nemiroff, et al., 2019; Vearrier, et al., 2016;) Portable medical orders are associated with improved quality of life and end-of-life treatment preferences being honored (Collier, Kelsberg & Safrenek, 2018; Lee, et al., 2020; Predaza, et al., 2016; Predaza, et al., 2017;)
Facilitators of portable medical order utilization	It is necessary to secure funding in the form of government aid grants, or community partnerships (Mack & Dosa, 2020) Periodic quality monitoring is required by National POLST (National POLST, 2020)
Barriers to portable medical order utilization	Incomplete or inaccurate documentation of portable medical orders is a prevalent barrier to utilization (Rahman, Bressette & Enquidanos, 2017) Online training modules do not teach the proper communication skills necessary for ACP discussions (Zach, Hayes, Eakin, Rand & Turnbull, 2020)

Clinical Practice Question

What are the evidence-based recommendations and strategies to achieve mature recognition for MI POST in Michigan?

PROJECT METHODOLOGY

Project Objectives

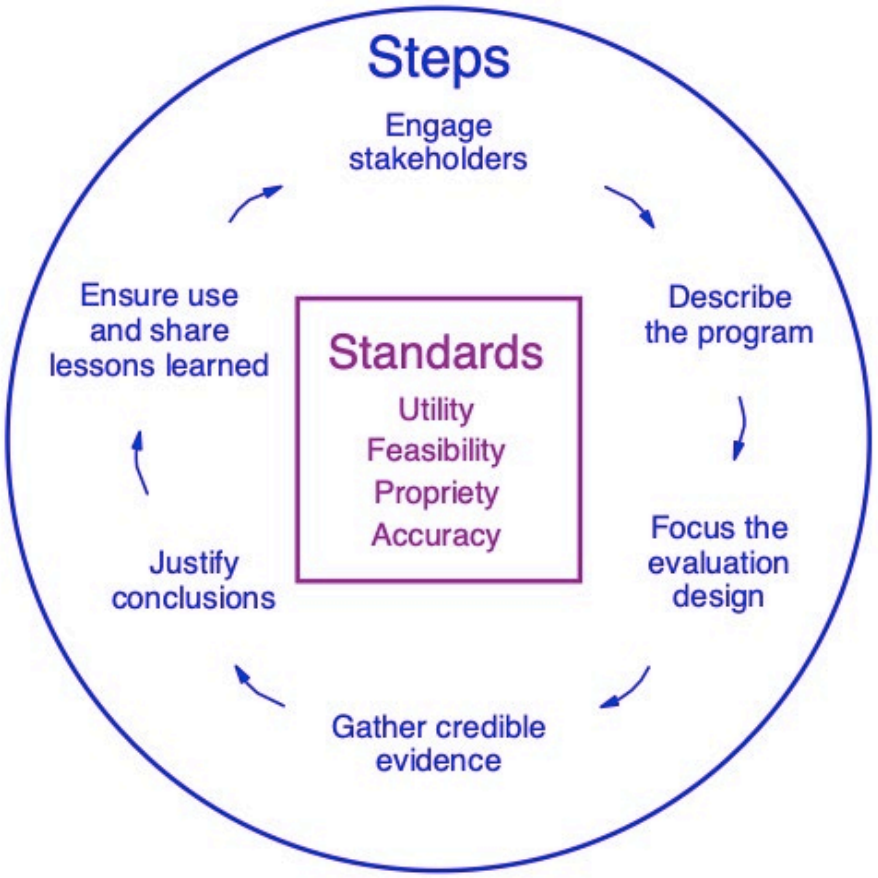
1. Obtain IRB approval from GVSU for project by December 30, 2020.
2. Identify key stakeholders by December 30, 2020.
3. Create educational materials for healthcare providers and patients by March 19, 2021.
4. Create a health policy brief to educate stakeholders regarding MI-POST by March 19, 2021.
5. Develop strategies for fund development and quality monitoring by March 19, 2021.
6. Create clinical case study highlighting cost-savings associated with MI-POST by March 19, 2021.
7. Present findings to key stakeholders by March 30, 2021.
8. Complete final project defense by April 30, 2021.
9. Upload project to Scholar Works by May 14, 2021.

Project Design

- Program development guided by an in-depth policy analysis

- Strategies versus recommendations
  - Broad strategies to meet criteria
  - Specific activities to address the broad strategies

Implementation Framework



CDC Model

Adapted from "Framework for program evaluation in public health," Centers for Disease Control and Prevention, 1999, *Morbidity and Mortality Weekly Report,* 48(11), p. 4

Setting

- Assisted living facilities
- Adult foster care
- Nursing homes
  - Skilled nursing
  - Long term care
  - Subacute rehabilitation
- Private homes
- Ambulatory care offices
- Acute care hospitals

Stakeholders

State coordinator for MI-POST
Michigan Department of Health and Human Services
    Medical Control Authorities
Department of Licensing and Regulatory Affairs
National POLST Program
Standards Committee

Older adults in final year of life
    Family, surrogate decision maker
Physicians, APRNs, Pas
Nursing home, hospice, and hospital staff
First responders

Implementation Strategies & Elements

CDC Model	Implementation Strategy (Powell, et al., 2015)
Engage stakeholders	Conduct educational outreach and advocacy visits
Describe the program	Develop effective educational materials
Focus the evaluation design	Assess for readiness and identify barriers and facilitators
Gather credible evidence	Access new funding Develop and implement tools for quality monitoring
Justify conclusions	Use data experts
Ensure use and share lessons learned	Develop a formal implementation blueprint

Evaluation of Toolkit

	Deliverables	Stakeholders
Evaluation of toolkit	Educational materials	Coordinator
	Health policy brief at state level	Coordinator, political consultant
	Recommendations and strategies for securing funding.	Coordinator, fundraising consultant
	Recommendations and strategies for quality measure data collection	Coordinator
	Cost savings exemplar	Coordinator, legislator

Validation and Dissemination of Toolkit

Validation	Dissemination
Literature review Public data Interviews with content experts Virtual presentation and discussion with key stakeholders will include the state coordinator for MI-POST. Stakeholder survey	An electronic file that includes all toolkit components will be submitted to the MI POST coordinator The Coordinator will share toolkit with the appropriate stakeholders in order to move initiative forward with an evidence-based approach

Project Budget

Revenue	
Project Manager Time (in-kind donation)	9,450.00
Team Member Time:	
Site mentor- facility NP	2,640.00
Consultations	
MI POST State coordinator (in-kind donation)	100.00
Equipment	
Student laptop (in kind donation of student)	1,200.00
TOTAL REVENUE	13,390.00
Expenses	
Project Manager Time (in-kind donation)	9,450.00
Team Member Time:	
Site mentor- facility NP	2,640.00
Consultations	
MI POST State coordinator (in-kind donation)	100.00
Equipment	
Student laptop (in kind donation of student)	1,200.00
TOTAL EXPENSES	13,390.00
Net operating plan	0.00

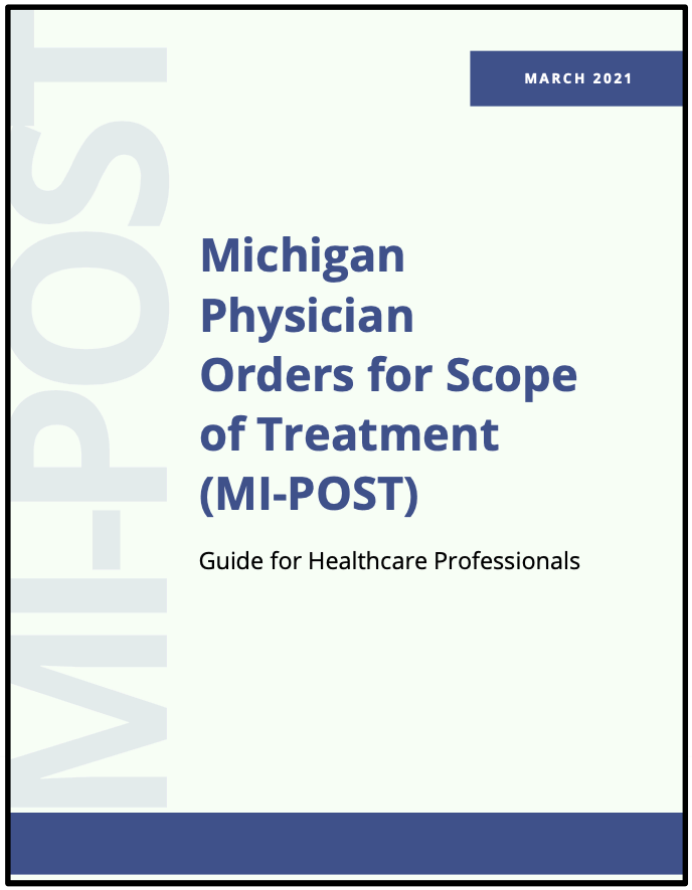
Ethical Considerations

- No protected individual data was collected
- Toolkit components were stored on password protected file and given to coordinator
- Epigeum Human Subjects Protection training
- Epigeum Responsible Conduct of Research training
- IRB determination given by GVSU on February 11, 2021- Not research

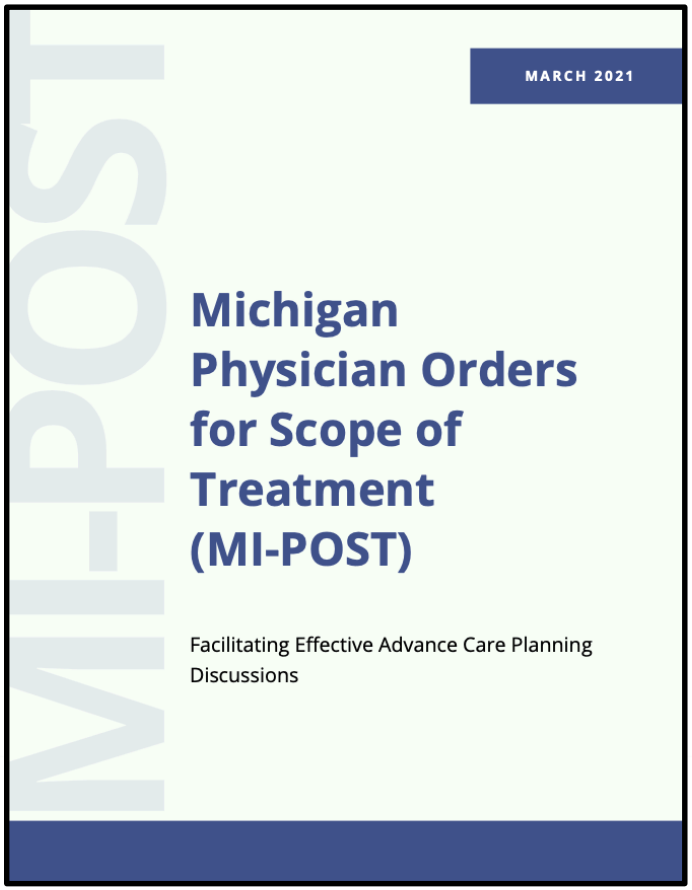
FINAL DELIVERABLES

Deliverable 1: Educational Materials

- MI-POST guide for healthcare professionals
  - Proper form completion



- Advance care planning discussion guide for healthcare professionals



Educational Materials (cont.)

- Patient infographic
  - Eighth grade reading level
- Collaboration with MI-POST coordinator

MICHIGAN PHYSICIAN ORDERS FOR SCOPE OF TREATMENT (MI-POST)

Who, What, When, Where, Why, and How

1 WHO

MI-POST is for older adults with advanced chronic illness. MI-POST may be a helpful care planning tool if you have noticed any of the following:

- Needing help to bathe, dress, toilet, or feed yourself.
- Rapid weight loss or loss of appetite
- Going to the hospital multiple times within the past year due to infection, illness, or injury
- Multiple falls within the past year

2 WHAT

MI-POST is an active medical order that tells healthcare workers what care you want to receive. This can include:

- Chest compressions if your heart stops beating
- A breathing tube if you cannot breathe on your own.
- Going to the hospital if an emergency occurs.
- Artificial food or fluids if you are unable to eat or drink
- Blood products
- Antibiotics

3 WHEN

MI-POST is an active medical order that you should review regularly with your healthcare provider. MI-POST should be reviewed:

- At least once a year
- If you have to leave your home to go to a different care setting. This can include the hospital, a nursing home, or a hospice facility.
- If you change your mind about what care you would like to receive
- If there is a dramatic change in your health.

4 WHERE

MI-POST is a portable medical order that can direct care in different settings. These could include:

- in the community if you required emergency medical services or hospice care
- in a nursing home if you were to need 24-hour nursing care
- in the hospital if you go to the emergency room

5 WHY

Patients who complete MI-POST are more likely to receive healthcare that matches their preferences. The use of portable medical orders led to the following results:

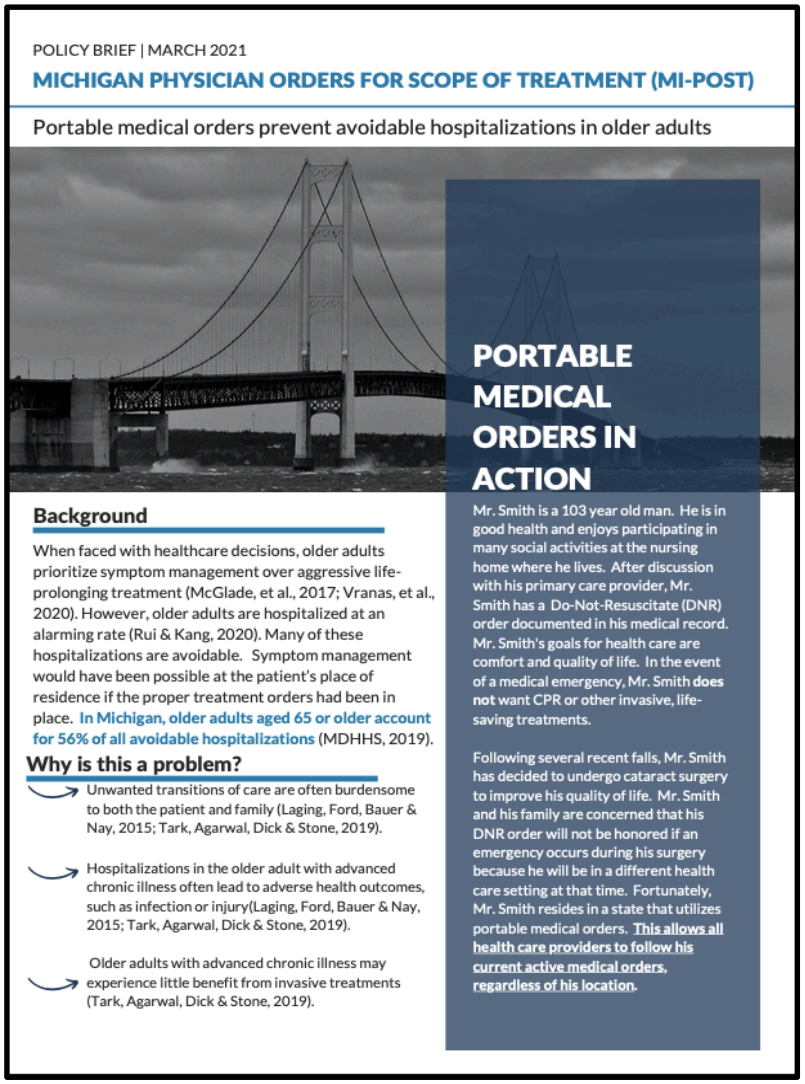
- nearly 100% of patients with a do not resuscitate order were allowed natural death
- 90% of nursing home residents had their wishes honored in regards to medical treatment (e.g. intubation, artificial nutrition and hydration, etc.)
- higher rates of hospice admission and preferred death at home
- lower rates of ICU admission and unwanted resuscitation efforts

6 HOW

Completion of an MI-POST form is YOUR CHOICE. Your healthcare provider may ask you about completing one if they feel that you meet the criteria. However, if you are interested in completing an MI-POST form, ask your healthcare provider for more information.

Deliverable 2: Health Policy Brief

- Collaboration with consultant with previous experience in the Michigan state senate.
- Concisely conveys background information, potential patient outcomes, and potential cost savings
- Encouragement to allocate resources to program implementation



POLICY BRIEF | MARCH 2021

MICHIGAN PHYSICIAN ORDERS FOR SCOPE OF TREATMENT (MI-POST)

Portable medical orders prevent avoidable hospitalizations in older adults

PORTABLE MEDICAL ORDERS IN ACTION

Mr. Smith is a 103 year old man. He is in good health and enjoys participating in many social activities at the nursing home where he lives. After discussion with his primary care provider, Mr. Smith has a Do-Not-Resuscitate (DNR) order documented in his medical record. Mr. Smith's goals for health care are comfort and quality of life. In the event of a medical emergency, Mr. Smith **does not** want CPR or other invasive, life-saving treatments.

Following several recent falls, Mr. Smith has decided to undergo cataract surgery to improve his quality of life. Mr. Smith and his family are concerned that his DNR order will not be honored if an emergency occurs during his surgery because he will be in a different health care setting at that time. Fortunately, Mr. Smith resides in a state that utilizes portable medical orders. **This allows all health care providers to follow his current active medical orders, regardless of his location.**

Background

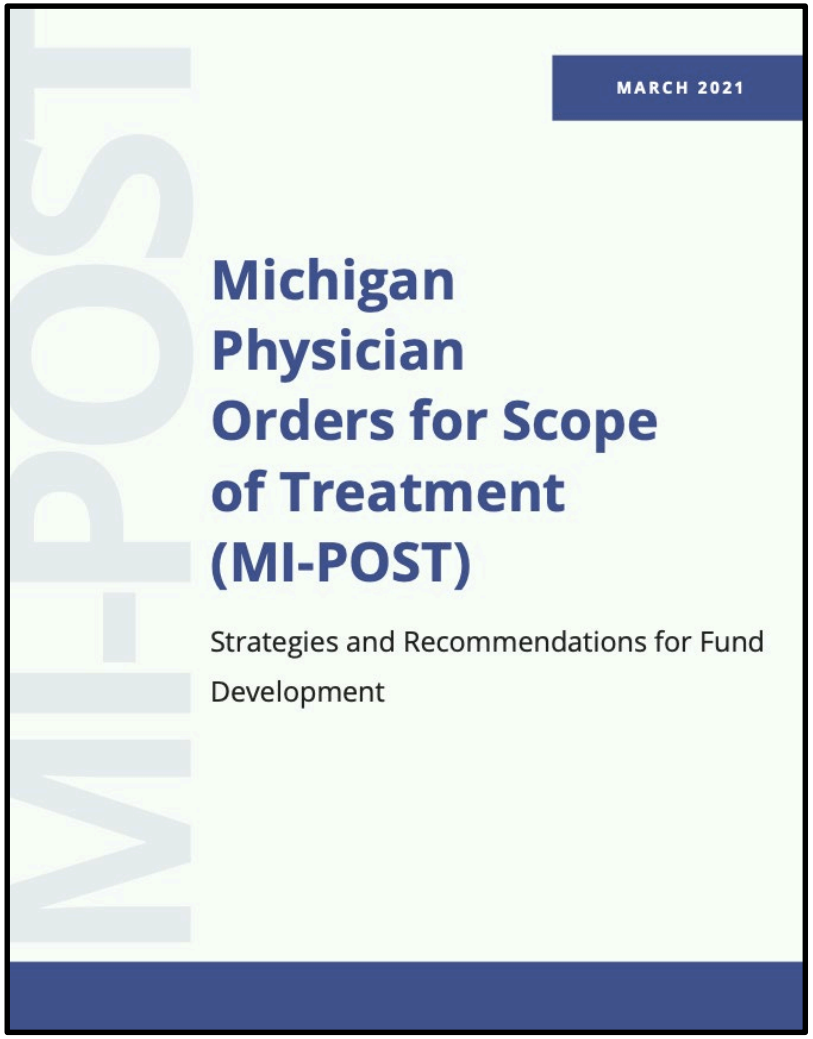
When faced with healthcare decisions, older adults prioritize symptom management over aggressive life-prolonging treatment (McGlade, et al., 2017; Vranas, et al., 2020). However, older adults are hospitalized at an alarming rate (Rui & Kang, 2020). Many of these hospitalizations are avoidable. Symptom management would have been possible at the patient's place of residence if the proper treatment orders had been in place. **In Michigan, older adults aged 65 or older account for 56% of all avoidable hospitalizations** (MDHHS, 2019).

Why is this a problem?

- Unwanted transitions of care are often burdensome to both the patient and family (Laging, Ford, Bauer & Nay, 2015; Tark, Agarwal, Dick & Stone, 2019).
- Hospitalizations in the older adult with advanced chronic illness often lead to adverse health outcomes, such as infection or injury(Laging, Ford, Bauer & Nay, 2015; Tark, Agarwal, Dick & Stone, 2019).
- Older adults with advanced chronic illness may experience little benefit from invasive treatments (Tark, Agarwal, Dick & Stone, 2019).

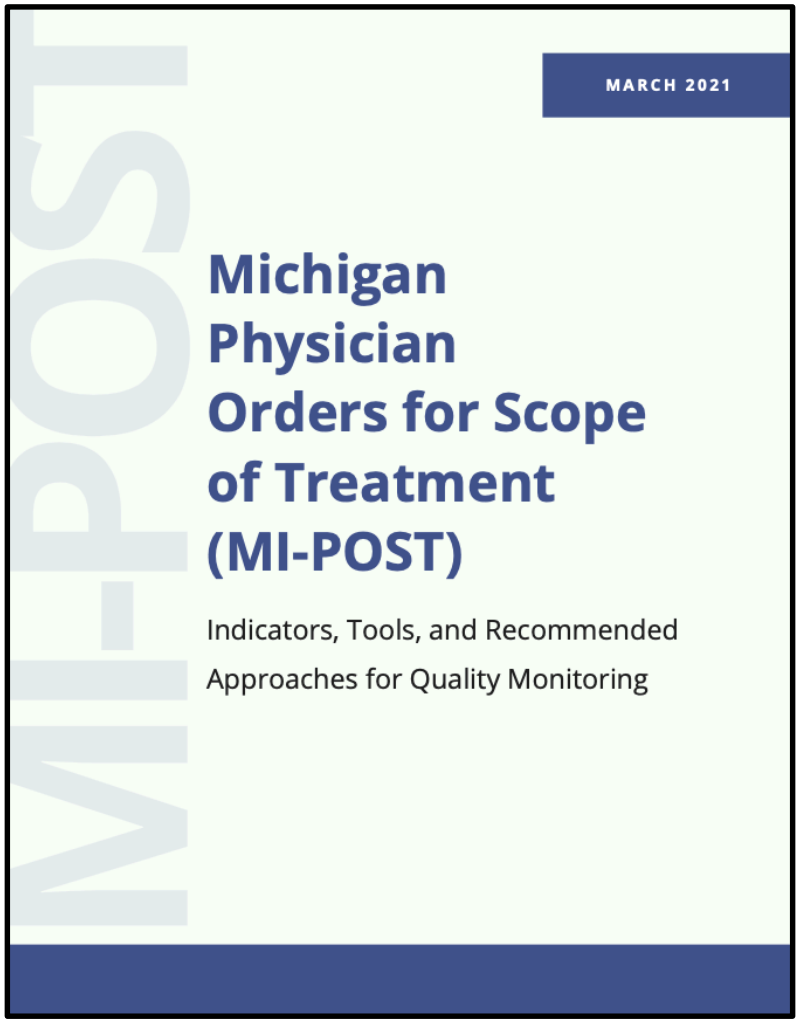
Deliverable 3: Strategies for Fund Development

- Collaboration with director of fund development at a local nonprofit organization
- Michigan specific recommendations
- Donation requests and donor stewardship



Deliverable 4: Indicators, Tools and Approaches for Quality Monitoring

- Based on standards established by National POLST
- Focused on the current state of MI-POST
  - Process indicators versus future outcome indicators

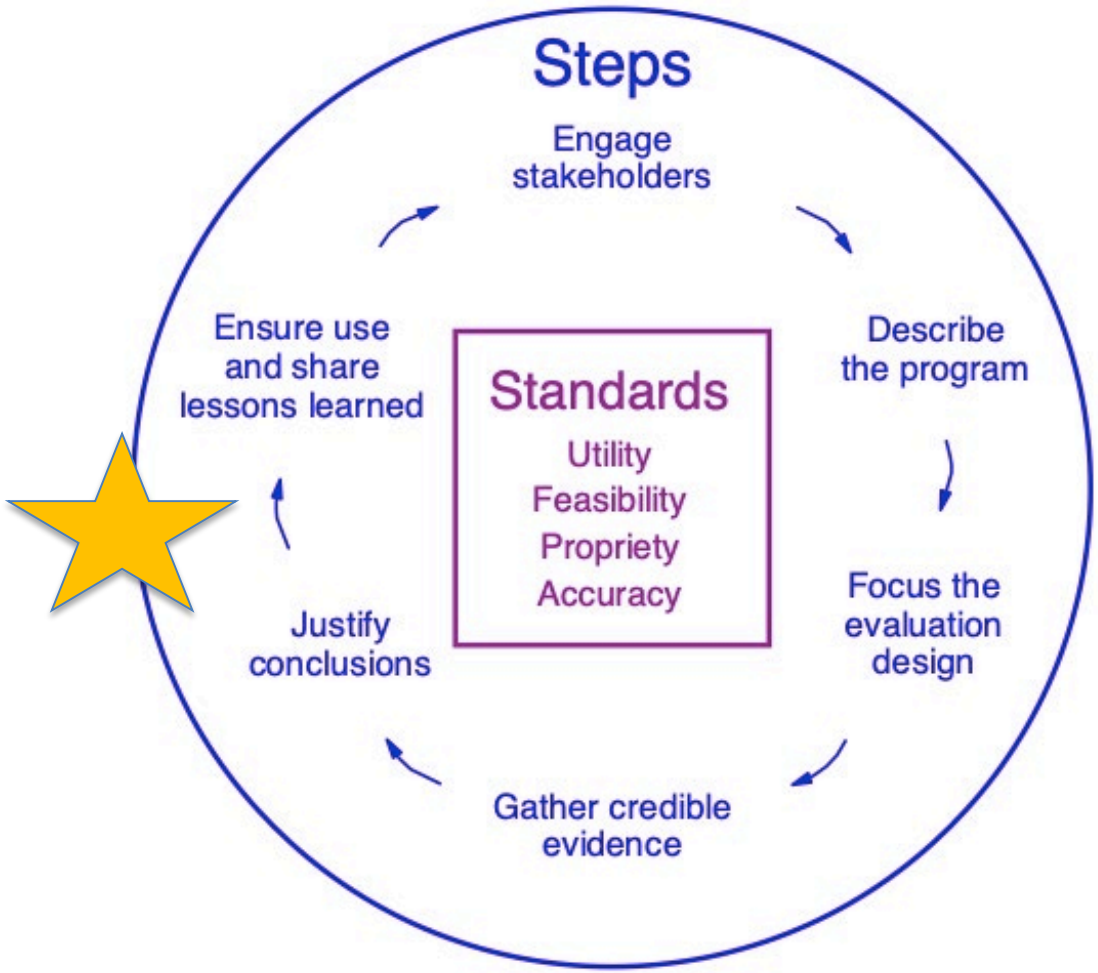


Deliverable 5: Cost-savings Exemplar

- Collaboration with the program director of a senior emergency room in southeast Michigan
- Age specific workup AND complaint specific workup
- Advocacy within an organization AND with policymakers

Cost savings exemplar- **Older adult female complaining of stomach pain**	**Cost**
Cost of transfer from facility to ER	
Ambulance ride	$275.00
Cost of paramedic on duty	$42.00
Cost of Emergency Department visit (6 hour minimum)	
Hydromorphone injection	$35.00
Therapeutic IV push (CPT: 96375)	$148.00
Subsequent therapeutic IV push (CPT: 96276)	$202.00
Ondansetron injection (J2405)	$41.00
Therapeutic IV push (CPT: 96375)	$148.00
Complete blood count (CPT: 85027)	$35.00
Blood smear w/ differential WBC count (CPT: 85007)	$30.00
Complete metabolic panel (CPT: 80053)	$69.00
Assay of lipase (CPT: 83690)	$63.00
Urinanalysis (CPT: 81003)	$54.00
Diagnostc ultrasound procedure of abdomen (CPT: 76705)	$462.00
CT of abdomen/pelvis with contrast (CPT: 74177)	$2,718.00
Diagnostic IV push (CPT: 9637459)	$181.00
Low osmolar contrast material (CPT: Q9967)	$200.00
ED physician	$840.00
Registered nurse	$204.00
Radiologist	$1,206.00
Radiology technician	$174.00
Environmental services	$102.00
Cost of transfer from ER to facility	
Ambulance ride	$275.00
Cost of paramdic on duty	$42.00
TOTAL COST	$7,546.00

Results: Implementation Strategy



Adapted from "Framework for program evaluation in public health," Centers for Disease Control and Prevention, 1999, *Morbidity and Mortality Weekly Report,* 48(11), p. 4

Discussion

- Policy work and program development are both dynamic processes
  - Flexibility
  - Continuous re-evaluation
- Evidence used
  - Limited RCTs and systematic reviews available
  - Gray literature
  - Sources from other disciplines

Implications for Practice

- Theory meets practice
  - Selection of appropriate framework critical to successful program development

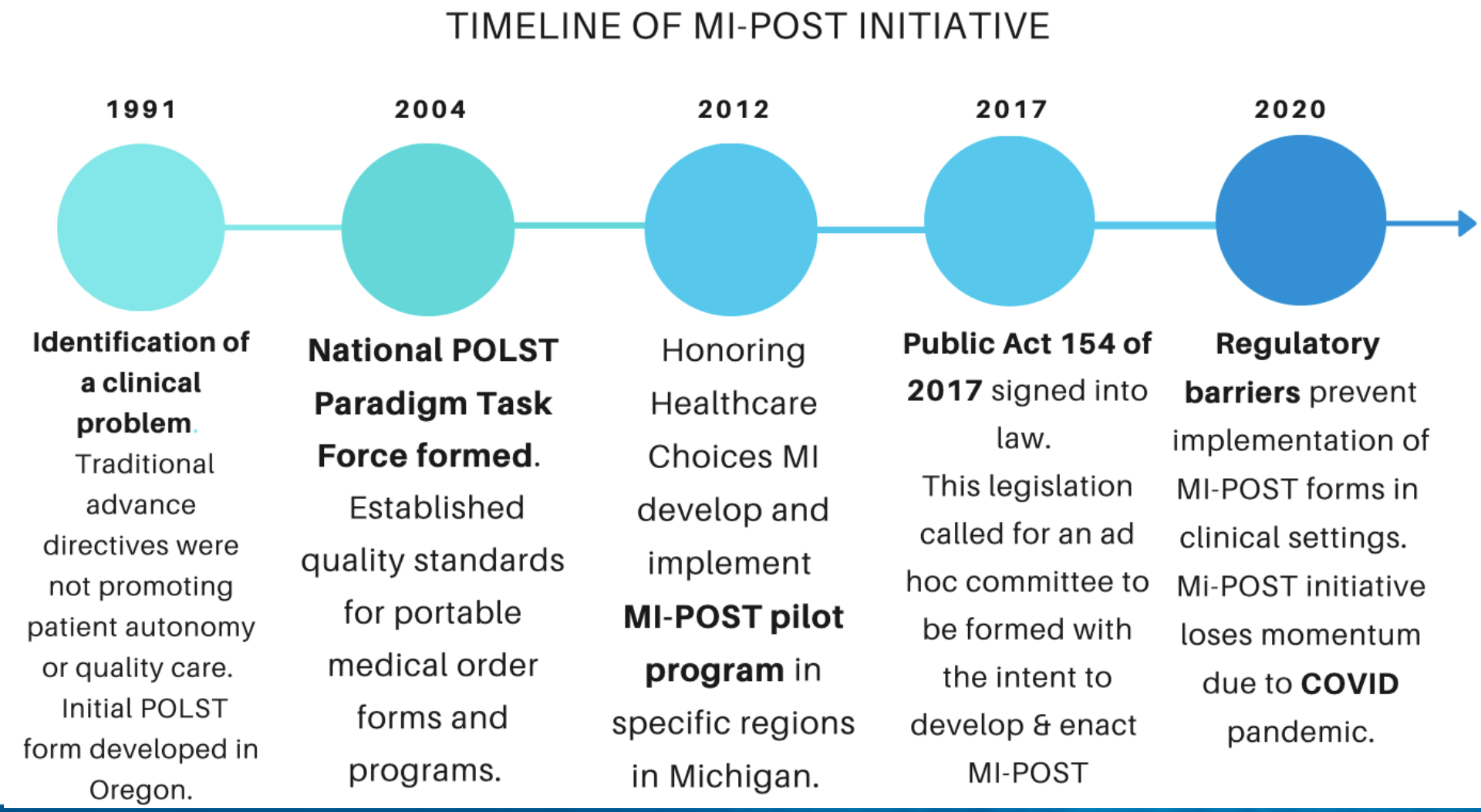
- Integration of practice, organizational, population, fiscal and policy issues requires interprofessional collaboration

Lessons Learned

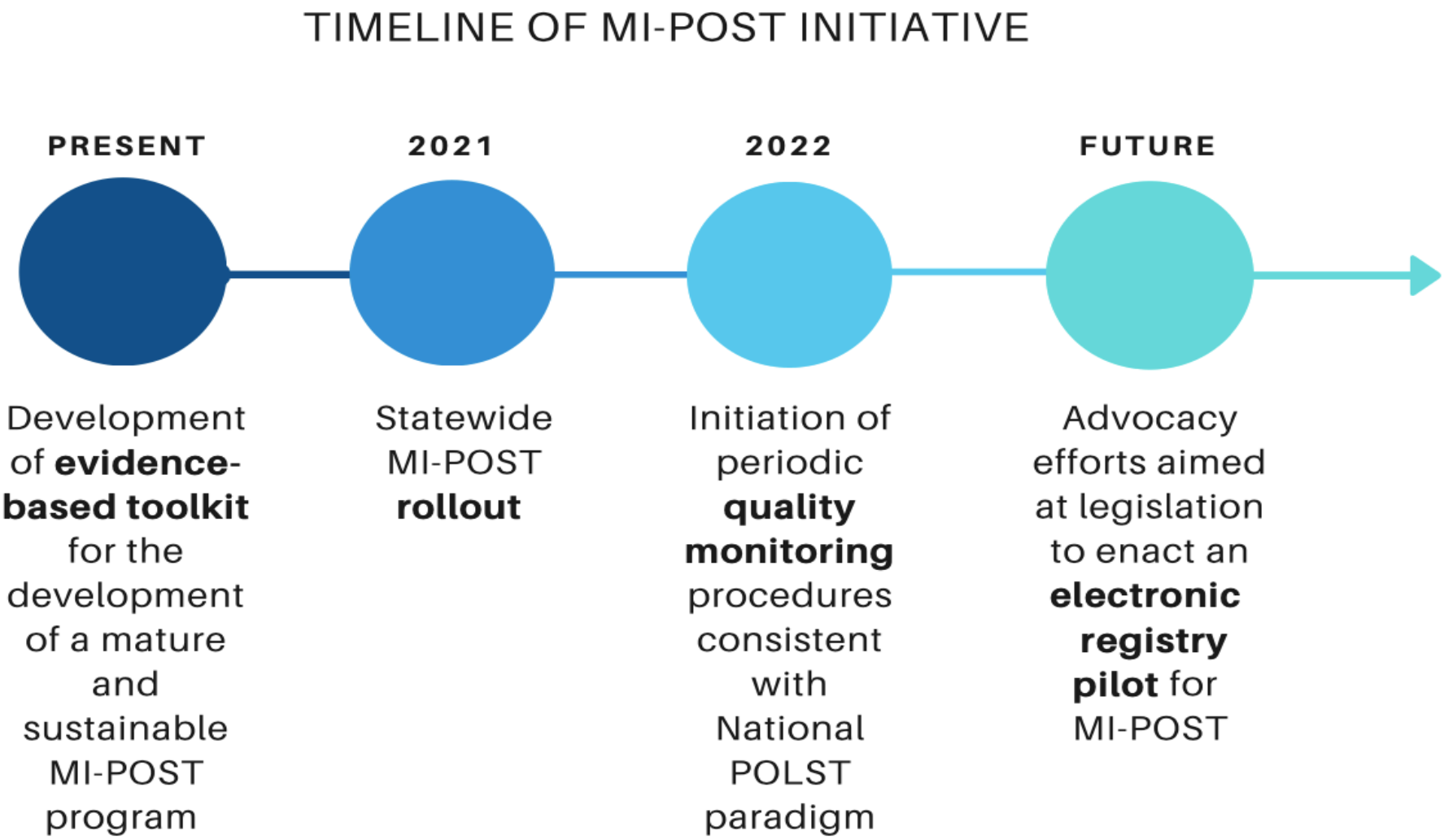
- Portable medical orders, like MI-POST, are associated with improved quality of life and healthcare that is better aligned with patient preferences (Blix & Tolle, 2019; Collier, Kelsberg & Safranek, 2018; Hickman, Keevern & Hammes, 2015; Lee, et al., 2020; Pedraza, Culp, Falkenstine & Moss, 2016; Schmidt, Weaner & Long, 2015; Steffen, n.d.; Teno, et al., 2018)

- An evidence-based toolkit tailored to state-specific barriers is critical to development of a portable medical order program
  - Interprofessional collaboration
  - Transformation of healthcare delivery in the state of Michigan

Sustainability



Next Steps…


TIMELINE OF MI-POST INITIATIVE
PRESENT
2021
2022
FUTURE
Development of **evidence-based toolkit** for the development of a mature and sustainable MI-POST program
Statewide MI-POST **rollout**
Initiation of periodic **quality monitoring** procedures consistent with National POLST paradigm
Advocacy efforts aimed at legislation to enact an **electronic registry pilot** for MI-POST

Dissemination

- Flexible dissemination strategy
  - Dynamic nature of legislative process and the stakeholders involved in MI-POST
  - Electronic file
- Education efforts vital to statewide rollout
  - Professional and scholarly presentations
    - West Michigan Ethics Conference
    - GVSU Graduate showcase
- Involvement of the DNP prepared nurse on future advisory committees
- Manuscript
  - Submission to academic journal
- Scholarworks

DNP Essentials Reflection

Essential I: Scientific underpinnings for practice

Essential II: Organizational and systems leadership for quality improvement and systems thinking

Essential III: Clinical scholarship and analytical methods for evidence-based practice

Essential IV: Information systems/technology and patient care technology for the improvement and transformation of health care

Essential V: Health care policy for advocacy in health care

Essential VI: Interprofessional collaboration for improving patient and population health outcomes

Essential VII: Clinical prevention and population health for improving the nations health

Essential VIII: Advanced nursing practice

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