

COMMENTARY

Rapid Implementation of eMOLST Order Completion and Electronic Registry to Facilitate Advance Care Planning: MOLST Documentation Using Telehealth in the Covid-19 Pandemic

Shahla Baharlou, MD, Katie Orem, MPH, Amy S. Kelley, MD, MSHS, Melissa D. Aldridge, PhD, MBA, Beth Popp, MD

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During the Covid-19 pandemic in New York City we needed to innovate to meet patient needs, including recognizing the value of medical orders as an advance care planning (ACP) tool. Accelerated adoption of eMOLST (Electronic Medical Orders for Life Sustaining Treatment), an electronic order completion and statewide public health registry, provided an opportunity to complete both general ACP and MOLST during telehealth encounters. Over three days we enrolled and trained 154 members of the Mount Sinai Health System (MSHS) Department of Geriatrics and Palliative Medicine, including primary care and specialty inpatient and outpatient practices, in the use of eMOLST, utilizing a connection to eMOLST within our electronic health record (EHR). In the initial month after launch, during the height of the Covid-19 outbreak, we entered 183 new patients into eMOLST from various settings, using telehealth encounters. Here we describe key factors that facilitated the rapid implementation and benefits of the eMOLST program.

During the Covid-19 pandemic in New York City, Mount Sinai Health System (MSHS) faced a public health emergency with many patients at high risk for infection, severe illness, hospitalization, respiratory failure, and death. Clinicians and staff focused on modifying usual operations to mitigate negative effects on patients, their families, and the health care system.

Table 1. Differences between MOLST/POLST and Advance Directives

	MOLST or POLST	Advance Directives
Type of Document	Medical order	Legal document
Appropriate patients	Seriously ill or frail people	All adults
Who completes the form?	Qualified health care professionals	Patients
Timeframe	Current care	Future care
Can this document appoint another medical decision maker?	No	Yes
Role of other medical decision makers	Can engage in discussions if patient lacks capacity	Cannot complete
Portability	Health care professionals are responsible	Patient/family are responsible
Periodic review	Clinicians are responsible	Patients are responsible
Can medical professionals and emergency personnel follow this document?	Yes	No

Source: Adapted from MOLST.org and the Office of the National Coordinator for Health Information Technology^{1,4}

One challenge of caring for Covid-19 patients is that they often rapidly deteriorate. Decisions about ventilator use may be needed within hours, sometimes minutes, of presentation. Most adults lack accessible advance directives or documented goals for care discussions. Even for those with advance care plans, infection with SARS-CoV2 represents a new and unexpected complication providing an impetus to revisit care decisions, including life-sustaining treatment preferences. Infection control measures required that patients enter the emergency department (ED) without family present, complicating the problem of making high-stakes decisions quickly.

MOLST (Medical Orders for Life Sustaining Treatment) is a tool created in New York State in 2003 and authorized for statewide use in all settings in 2008. eMOLST was launched as a statewide public health service for electronic completion of these conversations and registry of these forms in late 2011.¹ Considering these unique circumstances, the value of MOLST for seriously ill or frail patients was obvious. MOLST (known by other names in different states, the most common being POLST)² are medical orders based on the patient’s current health status, prognosis and goals.³ Medical orders, as opposed to advance directives, are authored by specific clinicians, only offered to appropriate patients, are frequently updated and are actionable in emergencies. (See Table 1)

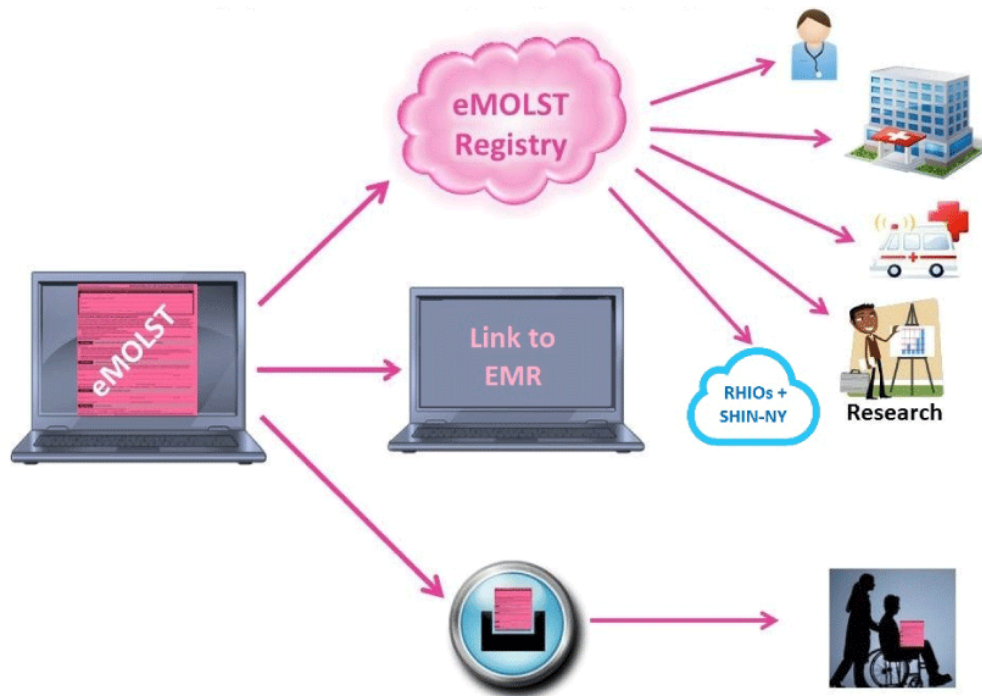
Both MOLST and advance directives are types of advance care planning documents, but only MOLST is actionable in all care settings and in emergencies. Advance directives can only be authored by the patient when they have capacity to do so. MOLST orders are completed by healthcare professionals in conjunction with a patient who has capacity, or a health care agent or surrogate when the patient lacks capacity.⁴ To date, New York is unique in offering eMOLST, a statewide electronic form completion and documentation system integrated into a public health registry; other states have similar systems, but don’t have an entirely electronic process like New York or only capture orders and not all aspects of patients’ goals, or legal and ethical requirements.⁵ eMOLST helps to simplify complex discussions by encouraging teams to collaborate and document conversations together -- incorporating skills and expertise of all staff under their scope of practice.⁶

eMOLST, a web-based system, guides a standardized approach to end-of-life conversations using embedded logic and workflows based on the patient’s characteristics, designated medical decision-maker (which varies by state), and care setting (community, nursing home, hospital or hospice). It

ensures documentation is consistent, legal, and universally available at NYSeMOLSTregistry.com (see Figure 1).

FIGURE 1

Pathways for eMOLST Use



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MSHS is New York City's largest academic medical system, encompassing eight hospitals, a medical school, a graduate school, and a large network of practices throughout downstate New York. Prior to the Covid-19 crisis, MSHS had embarked on integrating eMOLST into our health system workflow as a quality improvement project. MSHS's decision to use eMOLST pre-Covid-19 was driven by the advantages of standardizing documentation about end-of-life discussions and removing barriers to accessing these orders across care transitions. When Covid-19 struck, MSHS was launching an eMOLST pilot with the Oncology Department. The magnitude of the pandemic created an "all hands on deck" situation, in which every person needed to use their skills, clinical or administrative, in every way possible, to ameliorate the negative effects of the crisis and ensure quality, patient-centered care. We recognized the urgent need to rapidly expand use of eMOLST beyond Oncology as it was critical to understand the goals and preferences of every seriously ill and frail patient in the face of the Covid-19 public health emergency. These patients tend to decline very quickly if infected with Covid-19, and we needed to be able to honor their wishes, as well as to make that information available electronically across care settings.

We describe how the Department of Geriatrics and Palliative Medicine, including inpatient, specialty ambulatory, and primary care services, implemented eMOLST in just a few days during the Covid-19 crisis.

Program Description

MSSH accelerated a planned implementation of telehealth capacity, enabling patients to receive essential care without risking Covid-19 exposure. At the same time, we recognized the need to review ACP and offer MOLST to our Geriatrics and Palliative Care patients, including patients seen on a consultative basis in MSSH EDs and ICUs, almost all of whom are at high risk of complications if infected with Covid-19. Offering discussions to these patient via telehealth would support the EDs and ICUs by leveraging our core skill sets, trust, and longitudinal relationships with these patients.

Although workflow has increasingly moved to electronic systems, we found that ACP via telehealth created challenges in completing paper documents. eMOLST provided a solution but wasn't initially accessible at MSSH beyond the pilot Oncology group. Although eMOLST has been used by many health systems across NYS for several years, it is a voluntary system and wasn't being used system-wide at MSSH until 2020. Within NYC and NYS other health systems, nursing homes, hospice and home care agencies had already been using eMOLST for several years prior to the pandemic. NYS eMOLST leaders realized the importance of ACP in this emergency and they connected with MSSH leadership to discuss accelerated access for the EDs and ICUs to retrieve existing eMOLST orders. Clinicians in ambulatory settings saw the ability to support inpatient colleagues by offering appropriate end-of-life discussions and the Department of Geriatrics & Palliative Medicine requested urgent eMOLST access. With leadership support, we were empowered to accelerate enrollment, develop training, and implement eMOLST using telehealth.

We compiled the necessary information for the staff who needed access, including credentials for EHR connectivity, and sent it to the eMOLST team. Within hours all staff were enrolled, including post-graduate fellows, physicians, nurse practitioners (NPs), nurses, social workers, and administrative staff.

We created a workflow, assigned tasks, and allowed team members access based on scope of practice. *Form Editors* include physicians, NPs, nurses, and social workers. *Form Signers* include licensed physicians, NPs, and PAs. (As of June, New York State law permits PAs to sign MOLST forms.)⁷ Administrative staff have *read-only access*, allowing forms to be retrieved for printing, scanning, emailing, or faxing.

We trained staff using Zoom and the session was recorded for later viewing. Two subsequent sessions were held at short intervals, incorporating more complex ACP situations. Project leaders and the eMOLST administrator developed content based on staff requests.

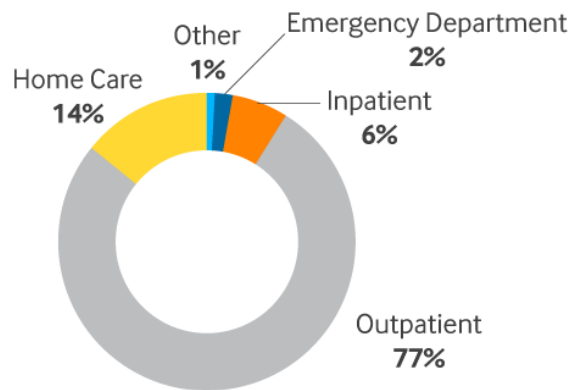
Results

Staff were highly engaged. Forty physicians and NPs authorized eMOLST orders for 183 new patients during April 2020. 99% were completed via telehealth regardless of the patient’s care setting; the majority were completed in “outpatient” visits highlighting the value of upstream completion prior to patients seeking emergency care in hospital settings (Figure 2).

FIGURE 2

Practice Location When eMOLST Completed

Virtually all of these visits were completed using telehealth.



Source: Brookdale Department of Geriatrics and Palliative Medicine, Icahn School of Medicine at Mount Sinai, New York
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Despite concern that end-of-life discussions using telehealth might not be well-received by patients, our early data demonstrate that patients’ demographics and core order selection are consistent with what we would expect from face-to-face discussions (Table 2). We recognize these conversations are complex and may span multiple visits; the number of visits per eMOLST completion was not tracked for this project.

Discussion

We found that seven principles were important in framing our successful rapid implementation of this initiative:

Table 2.Characteristics of Patients and eMOLST Orders Completed During the Height of the COVID-19 Pandemic

Median Age in Years		
	86	
Gender		
Gender	Number	Percentage
Male	57	31.15%
Female	126	68.85%
Non-Binary	0	0.00%
Ethnicity		
Hispanic or Latino	49	26.78%
Not Hispanic or Latino	134	73.22%
Preferred Language		
English	138	75.41%
Spanish	34	18.58%
Other	11	6.01%
Decision Maker		
Patient	102	55.74%
Health Care Agent	57	31.15%
Public Health Law Surrogate ^a	21	11.48%
1750-b Surrogate ^b	3	1.64%
Goals for Care		
Longevity	9	4.92%
Functionality	92	50.27%
Comfort	59	32.24%
Other	23	12.57%
Resuscitation Orders		
Attempt CPR	23	12.57%
DNR	160	87.43%
Intubation & Ventilation Orders		
Intubation with long-term ventilation if needed	8	4.37%
Trial of Intubation and/or NIPPV	47	25.68%
Do Not Intubate	124	67.76%
Trials of Intubation and/or NIPPV		
Trial of Intubation and/or NIPPV	27	14.75%
Trial of NIPPV Only	19	10.38%
Trial of Intubation Only (no NIPPV)	1	0.55%

^aPublic Health Law Surrogate is used when the patient has not designated a Health Care Agent and lacks capacity to complete a Health Care Proxy. The Surrogate list is in order of priority and comes from New York State's Family Health Care Decisions Act.

^b1750-b Surrogate is used when the patient has intellectual/developmental disabilities, has not designated a Health Care Agent and lacks capacity to complete a Health Care Proxy. The 1750-b Surrogate list is in order of priority and comes from New York State's Surrogate's Court Procedure Act §1750-b.

Source: Brookdale Department of Geriatrics and Palliative Medicine, Icahn School of Medicine at Mount Sinai, New York

If we did not act, many patients at highest risk for the worst outcomes of Covid-19 would arrive in the ED with no relevant information available about their wishes and be at risk for goal-discordant care.

Advance directives, such as health care proxies and living wills, are rarely available and are insufficient for seriously ill and frail patients.⁸ Inpatient colleagues observed that health care proxies often weren't completed or couldn't be accessed. Patients' living wills are not actionable and were typically not clinically relevant. Every MSHS hospital reported challenges with identifying the legal health care agent or surrogate for patients without capacity. This issue was amplified by visitor prohibitions, making it difficult to understand family relationships and contact the correct decision-maker. The structured eMOLST process includes information from NYS law to identify the health care agent or appropriate surrogate and captures this information in a way that is easily retrievable.⁹

“ *Advance directives, such as health care proxies and living wills, are rarely available and are insufficient for seriously ill and frail patients.*”

Understanding the value of medical orders in ACP made eMOLST the best tool to solve this problem.

Members of our department recognized the value of actionable medical orders on a MOLST in the Covid-19 crisis because MOLST explicitly addresses resuscitation, intubation, ventilation and hospitalization in relation to the patient's current health status, prognosis and goals.¹⁰ Ensuring that seriously ill patients with treatment preferences have a MOLST is always beneficial, but this crisis highlighted the need for electronic documentation and instant access across care settings. eMOLST adds value in capturing all aspects of the discussion, including legal and ethical requirements. Verbal consent and witnessing along with electronic signature ensured orders were instantly accessible. Forms were emailed to patients for urgent access and a printed copy followed via mail.

Crises demand rapid system evolution, collaboration, and leadership: don't let the perfect be the enemy of the good.

Change is often slow, especially in large health systems. With empowerment from departmental and MSHS leadership, we were able to implement a rapid practice change, integrate it in the EHR, operationalize a new workflow and facilitate teamwork among staff who were otherwise often working in silos. Our department served as “beta testers” for the eMOLST-EHR integration. We gave feedback to the EHR team and developed interim solutions until technical issues were optimally resolved. Our experience has encouraged us to think differently about organizational barriers to change; they need not slow the process as much as common wisdom often suggests. Our rapid eMOLST implementation was one of many innovative responses to the crisis.¹¹

Interdisciplinary team engagement is needed when a crisis requires “all hands on deck.”

Skillful and efficient ACP discussions often involve an interdisciplinary team (IDT).¹² Nurses and social workers can explain eMOLST, prepare patients for discussions, articulate values and document goals for care. Physicians and NPs continue the discussion, provide advice about treatments’ benefits and burdens, and write orders based on the patient’s goals. Recognizing this, we mobilized our IDT and created a workflow to maximize quality and efficiency of ACP discussion and eMOLST completion. In states where electronic form completion isn’t available, health systems can integrate IDT members into ACP and document in a structured fashion to ensure consistency. At MSHS, eMOLST provided an effective way to integrate the maximum number of team members into the ACP process, allowing everyone to practice at the top of their license.

Use bite-sized training and education and make experts available in a time of crisis.

Our clinicians are invested in ACP, skilled in communication, and familiar with paper MOLST, and they were eager to incorporate eMOLST into the EHR. We focused short training sessions on practical eMOLST components rather than general ACP education. eMOLST is intuitive, and few clinicians needed to use the “training site” before using eMOLST with patients. eMOLST also provides a logical workflow for less-experienced clinicians. Recorded sessions allowed for asynchronous learning or review. Additional sessions on advanced topics were based on clinicians’ requests. Experts were available via phone and email for “just-in-time” assistance to support clinicians during patient visits, removing a common barrier to implementing workflow changes.

Seize the opportunity to change and incorporate telehealth workflow.

Workflows and regulatory requirements changed rapidly during the public health emergency, requiring clinicians to adapt. The pressure of the evolving crisis resulted in clinicians making multiple practice changes simultaneously. We capitalized on this and integrated new eMOLST workflows into telehealth visits, which are now part of the visit’s foundation. Clinicians using telehealth prioritize ACP discussions in the time they would have normally spent doing a detailed physical examination. Education about reimbursement and coding for ACP can further reinforce integration into telehealth workflow.¹³⁻¹⁵

Patients understand a crisis, are willing to adapt, and are willing to have difficult conversations using telehealth.

The public’s attention to Covid-19 enabled education regarding the rationale for using telehealth; our IDT conveyed the importance of ACP in the Covid-19 era. The urgency of the crisis also provided a natural starting point for these discussions, even for patients who had long been due for end-of-life conversations but had yet had them.

As the surge subsided in our region we demonstrated sustainability of eMOLST use by doubling the number of patients’ discussions entered in eMOLST over the following two months. eMOLST is

intended to be a permanent practice change that is spreading across various Departments at MSHS today, specifically prioritizing expansion in Oncology, the MICU, ED, and Hospital Medicine. While we haven't yet evaluated the impact of eMOLST orders if/when patients are hospitalized, the value of MOLST in all settings is well-recognized in evidence-based guidelines.³ Post-Covid-19 surge, we have developed rich online learning modules, including quizzes, for scalable clinician education in the MSHS education portal.

During this time, Covid-19 has felt pervasive. News about the virus saturates the media and there are few effective treatments. Physical distancing and social isolation are on everyone's minds. Poor outcomes for older and sicker adults are highlighted. Our clinicians found that patients and families are receptive to discussing ACP via telehealth and documenting in eMOLST to ensure they receive goal-concordant care and avoid interventions they don't want.

We encourage our colleagues to recognize that this crisis creates an opportunity to reframe ACP and document care preferences using eMOLST or similar tools in other states. We recommend also using VitalTalk, which developed innovative talking maps using the pandemic to explore patient and family thoughts about end-of-life care interventions.¹⁶ Other resources are available from many expert sources. When considering implementation of innovative ACP tools for seriously ill patients, clinicians should screen patients for appropriateness using established criteria.¹⁷ Adapting workflows to accommodate this changed discussion can be done rapidly with success.

Shahla Baharlou, MD

Associate Professor, Brookdale Department of Geriatrics and Palliative Medicine, Icahn School of Medicine at Mount Sinai

Katie Orem, MPH

Geriatrics & Palliative Care Program Manager; eMOLST Administrator for New York State, Excellus BlueCross BlueShield

Amy S. Kelley, MD, MSHS

Professor, Brookdale Department of Geriatrics and Palliative Medicine, Icahn School of Medicine at Mount Sinai

Melissa D. Aldridge, PhD, MBA

Professor, Brookdale Department of Geriatrics and Palliative Medicine, Icahn School of Medicine at Mount Sinai

Beth Popp, MD

Associate Professor, Brookdale Department of Geriatrics and Palliative Medicine, Icahn School of Medicine at Mount Sinai

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References

1. <https://molst.org/how-to-complete-a-molst/molst-form/>
2. National POLST Paradigm Program Designations. 2020. <https://polst.org/programs-in-your-state/> Accessed: 31 July 2020.
3. MOLST.org. Frequently Asked Questions. <https://molst.org/how-to-complete-a-molst/faqs/>
4. Office of the National Coordinator for Health Information Technology. Electronic End-of-Life and Physician Orders for Life-Sustaining Treatment (POLST) Documentation Access through Health Information Exchange (HIE). July 2018. Table 1, pp. 5-6. <https://www.healthit.gov/sites/default/files/topiclanding/2018-07/POLSTRegistryKnowledge.pdf> Accessed 18 September 2020.
5. Office of the National Coordinator for Health Information Technology. Electronic End-of-Life and Physician Orders for Life-Sustaining Treatment (POLST) Documentation Access through Health Information Exchange (HIE). July 2018. p. 14 <https://www.healthit.gov/sites/default/files/topiclanding/2018-07/POLSTRegistryKnowledge.pdf>. Accessed 18 September 2020.
6. National Consensus Project for Quality Palliative Care. Clinical Practice Guidelines for Quality Palliative Care, 4th edition. Richmond, VA: National Coalition for Hospice and Palliative Care; 2018. <https://www.nationalcoalitionhpc.org/ncp>.
7. MOLST.org. Authority of Physician Assistants as of June 17, 2020. <https://molst.org/ethics-laws/proposed-legislation/authority-of-physician-assistants-under-current-nys-law/>
8. Bomba PA, Kemp M, Black JS. POLST: An improvement over traditional advance directives. *Cleve Clin J Med*. 2012;79(6):457-64
9. Bomba PA, Karmel J. Medical, Ethical and Legal Obligations to Honor Individual Preferences Near the End of Life. *New York State Bar Assn Health Law Journal*. 2015;20(6):28-33
10. New York State Department of Health. 2020. Medical Orders for Life-Sustaining Treatment (MOLST). https://www.health.ny.gov/professionals/patients/patient_rights/molst/.
11. Ankuda C, Woodrell C, Meier D. A Beacon for Dark Times: Palliative Care Support During the Coronavirus Pandemic. *NEJM Catalyst*.

12. National Consensus Project for Quality Palliative Care. Clinical Practice Guidelines for Quality Palliative Care, 4th edition. Richmond, VA: National Coalition for Hospice and Palliative Care; 2018. <https://www.nationalcoalitionhpc.org/ncp>.
13. Centers for Medicare and Medicaid Services (CMS). July 2016. Frequently Asked Questions about Billing the Physician Fee Schedule for Advance Care Planning. <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeeSched/Downloads/FAQ-Advance-Care-Planning.pdf> Accessed 18 June 2020.
14. August CMS. 2019. Advance Care Planning. <https://www.cms.gov/outreach-and-education/medicare-learning-network-mln/mlnproducts/downloads/advancecareplanning.pdf> Accessed 18 June 2020.
15. March CMS. 2020. Telehealth Services. <https://www.cms.gov/outreach-and-education/medicare-learning-network-mln/mlnproducts/downloads/telehealthsrvcfsht.pdf> Accessed 18 June 2020.
16. Vitaltalk COVID Ready Communication Playbook <https://www.vitaltalk.org/guides/covid-19-communication-skills/> Accessed 18 June 2020.
17. MOLST.org Patients Appropriate for MOLST Discussions. <https://molst.org/how-to-complete-a-molst/> Accessed: 30 July 2020.