

patient and family about the MOLST decisions or even foster a belief that the MOLST is an advance directive, which it is not.

The role of trained and qualified clinical professionals in the MOLST process cannot be understated; all of the professionals participating in the MOLST process must do so within scope of practice. Furthermore, too often MOLST forms are completed as a checklist document without following the nationally referenced 8-Step MOLST Protocol (see Figure 1), which was publicly posted for the first time in 2005, nationally referenced since 2006, and revised in 2011 to comply with Family Health Care Decisions Act.^{5–7} The authors should be emphasizing the correct process for MOLST completion and addressing the current gaps in practice as part of their recommendations.

The authors also use MOLST and POLST almost interchangeably throughout the article. While New York's MOLST is an endorsed POLST Paradigm Program, it is important to note that the NY MOLST form is not the same as many POLST forms around the country, and therefore some of the research about POLST forms cited by the authors is likely to not be applicable to New York's MOLST Program, which the authors do not acknowledge.^{2,8,9} This is particularly relevant given that New York's MOLST form has much more explicit and distinct clinical choices than many states' POLST forms.^{2,8}

Solutions

Clemency et al also fail to offer concrete solutions to the problems with MOLST completion that they have described.¹ To protect patients and physicians from approaching end-of-life decision making with a substandard understanding of the correct process, New York State (NYS) has integrated the process and ethical framework into public health law. These requirements apply for all decisions to withhold or withdraw life-sustaining treatment. NYSDOH and NYS Office for People with Developmental Disabilities (OPWDD) captured these requirements in "checklist" format for the convenience of clinicians.^{10,11} Ignoring the clinical, ethical, and legal process for having end-of-life discussions is a major cause of the errors on MOLST forms described by Clemency et al, yet the importance of this nationally recognized framework is mentioned nowhere in the article.¹ It is also not recognized by Clemency et al as a solution to the problems described.¹ Simply having clinicians follow the appropriate NYSDOH or OPWDD checklist for withholding/withdrawing life-sustaining treatment would be an excellent step in addressing the current gaps in the process for making end-of-life decisions and completing MOLST forms.

Finally, implementation of the eMOLST system, available at NYSeMOLSTregistry.com, would prevent incompatible orders, address incomplete or incorrectly completed MOLST documents, and ensure that the clinical, ethical and legal process for making end-of-life decisions is always followed.^{6,12,13,14} The eMOLST system will generate both a completed MOLST form and accompanying chart documentation form that exactly follows the NYSDOH or OPWDD checklists for withholding/withdrawing life-sustaining treatment. The system is accessible 24/7, can be integrated with an electronic medical record, and is available for any NYS and border state provider at no charge.^{6,12,13,14} The eMOLST system can also ensure that providers operate within scope of practice by only enabling certain areas of the application that are appropriate for their engagement in the MOLST discussion. Health systems, nursing homes, hospices, and physician practices are embarking on eMOLST implementation across NYS. Patients and families deserve better end-of-life discussions and careful decisions documented on an accurate MOLST; eMOLST implementation will help us get there.

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The Realities of Operationalizing MOLST Forms in Emergency Situations



To the Editor:

The goal of "Decisions by Default: Incomplete and Contradictory MOLST in Emergency Care" was to provide insight into the unintended consequences that may arise when emergency medicine providers are called upon to interpret and act upon MOLST (New York State's POLST paradigm) forms that are incomplete or contain potential inconsistencies.¹ We have been pleased by the overwhelmingly positive feedback we have received since the electronic publication of our article. We hope the article will contribute to a thoughtful, respectful dialogue about the potential implications

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of incomplete and inconsistent MOLST forms in the emergency setting.

We appreciate Dr Bomba's and Ms Orem's roles as champions of the MOLST form in New York State and as tireless advocates for improving end-of-life care. The main point of their letter² seems to be that there exists discordance between their visions for how the MOLST form should be utilized and the implications we describe regarding how the form may actually be operationalized in emergency situations. On this point we are in agreement. One potential weakness of these types of forms is they may emphasize desired procedures over goals of care.³ As a result, they may lead to confusion.⁴ If we are to honor patients' end-of-life wishes, we must consider the unintended consequences of an important, yet imperfect, MOLST/POLST process.

Incomplete Orders

MOLST forms are typically completed after a discussion between patients or surrogates and health care providers in a nonemergent setting where the pace, emotions, and stakes favor the types of in-depth conversations that are often impossible when a previously unknown patient arrives in the emergency department in extremis at 3:00 AM. Fully 69% of MOLST forms presented to the emergency department in our sample were incomplete. In the absence of instructions to the contrary, these incomplete sections will commonly lead to full treatment for a particular procedure.⁵ It may at the time of completion be appropriate to defer decisions regarding individual procedures within a MOLST form. However, providers should counsel patients and surrogates that in an emergency situation, these deferred decisions may result in patients receiving undesired, extraordinary, or invasive care that may not be consistent with their treatment goals.

Inconsistencies Within Orders

The letter writers contend that we “frequently cite incompatible orders as errors on the MOLST form.”² This is simply incorrect. In fact, neither the word “incompatible” nor “error” appears anywhere in the article. The article does utilize an a priori list of medical order pairs (such as a request for comfort care with CPR) that may represent inconsistencies.¹ The list was created, based on the study group's collective experience, to facilitate the analysis. The list itself should not be interpreted as the study results, as it was neither derived nor validated from the study data. The letter writers seem to agree with some of the order pairs used in the methods and disagree with others. Respectful disagreement should be expected in scholarly discourse. The frequency of individual pairs of orders from the a priori list were reported separately. This allows diligent readers to decide for themselves which pairs they believe are and are not concerning for their patients. These inconsistencies are not necessarily incompatible. Emergency physicians can and should work conscientiously to honor both of the patient's documented wishes, but these inconsistencies may cause confusion stemming from suboptimal communication between the patient and their physicians regarding goals of care.

Interdisciplinary Team Approach

As we state in the article, the “form should ideally be completed following an informed discussion between patient/surrogate and physician.”¹ The letter writers seem to take odds with our description of how nonphysician facilitators may contribute to an interdisciplinary team approach to documenting patients' wishes.²

Many states permit nonphysician signatures to execute POLST forms,⁶ and there is evidence that social workers and/or nurses initiate up to 78% of POLST forms.^{7,8} Although it is clear that physicians often play a vital role in end-of-life conversations,⁹ increased attention has been paid to the role of the interprofessional team in these conversations and their ability to influence POLST and advance care planning completion,^{10,11} as studies suggest that physicians are not always effective communicators about a patient's prognosis.¹² In fact, it is notable that in a previous work, Bomba et al emphasized the role of nonphysician care team members, such as social workers, in the shared decision-making process at end of life and subsequent preference-concordant care, noting “one of the strengths of social work involvement in the MOLST program is improving communication between the patient and the patient's physician, family members, caregivers, health care agents, or surrogates.”¹³ We believe strongly that nonphysician members of an interdisciplinary team can and should play an important role in clarifying a patient's wishes. Even if others feel nonphysicians should not play this role, there is no denying that they currently do in New York State and beyond.^{7,8}

Resources and eMOLST

We agree that there are a number of resources available to assist providers in the completion of the MOLST form,² and we encourage physicians and nonphysicians alike to explore them. Unfortunately, we are unaware of any that adequately address the issue of incomplete and inconsistent orders. Some MOLST-specific training materials specifically instruct physicians that they may defer decisions on the form.¹⁴ However, to our knowledge, there is no training for providers on the practical implications of deferring these decisions and how to instruct patients in this regard. eMOLST is an important next step in the evolution and portability of the MOLST form. However, eMOLST is not currently available in our, or many other, practice environments. The introduction of eMOLST will not fully resolve the issues described in this article. For instance, eMOLST does allow users to document “decision deferred” for some sections.¹⁴ However, in an emergency situation there is no practical distinction between a blank section and a section where “decision deferred” has been documented.

In summary, this article does not purport to be an instruction manual on how the creators of the MOLST intend the forms to be completed. Rather it is a quantitative study describing how forms arriving in an emergency department *have actually been completed* with a discussion of the possible implications for emergency care. In medicine, the search for solutions begins with an evidence-based understanding of the current realities.

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Adverse Drug Reactions Associated With Cholinesterase Inhibitors—Sequence Symmetry Analyses Using Prescription Claims Data



To the Editor:

Clinicians must balance the likelihood of benefit with the risk of adverse drug reactions (ADRs) when deciding to initiate or discontinue cholinesterase inhibitors.^{1,2} The most common pharmacovigilance method is spontaneous ADR reporting. There were 43,753 ADR reports related to cholinesterase inhibitors reported to the World Health Organization (WHO) International Drug Monitoring Program database between 1998 and 2013.³ These included non-specific reports of cardiac, gastrointestinal, nervous system,

and psychiatric disorders. Several of these ADRs are well established (eg, nausea, diarrhea),⁴ whereas other ADRs are less well established (eg, seizures). Although spontaneous ADR reporting is useful for signal detection, it is also subject to selective and underreporting.⁵ This is particularly true when ADRs are nonspecific, not identified during routine practice, or easily misattributed to the dementia process itself.⁶ The objective of this study was to analyze national dispensing data from Australia's Pharmaceutical Benefits Scheme (PBS) between March 2005 and May 2016 to substantiate ADR signals for cholinesterase inhibitors reported to the WHO International Drug Monitoring Program.

Methods

Sequence symmetry analyses (SSAs)⁷ were conducted using data from a 10% random sample of dispensing data from the PBS between March 2005 and May 2016. These data comprised patient-level records of all reimbursed medications dispensed by Australian pharmacies. SSA is a signal detection technique used in the postmarketing surveillance of prescription medications that compares the sequence of incident dispensing of an index and marker medication.⁷ The index medication is considered the exposure, and marker medication is considered the outcome. The marker medication is used as a proxy for an ADR that the index medication is suspected to cause. All medications were categorized using Anatomical Therapeutic Chemical (ATC) codes recommended by the WHO.⁸

Incident dispensing of a cholinesterase inhibitor (index medication) was defined as the first dispensing, excluding the first 2 years of the data. The cholinesterase inhibitors of interest were donepezil (ATC code N06DA02), rivastigmine (N06DA03), and galantamine (N06DA04). In Australia, these medications are reimbursed for management of mild to moderate Alzheimer disease.

Marker medications were selected for eight ADRs reported to the WHO International Drug Monitoring Program for which there were at least 100 spontaneous ADR reports each. Antiemetics (A04A, N05AB04, A03FA03, A03FA01) were used as a marker of nausea. Proton-pump inhibitors, histamine 2 (H2) antagonists and antacids (A02BC, A02BA, A02A) were used as a marker of dyspepsia. Loperamide and oral rehydration sachets (A07DA03, A07DA53, A07CA) were used as a marker of diarrhea. Oxybutynin (G04BD04) was used as a marker of urinary incontinence. Anticonvulsants (N03A) were used as a marker of seizures. Anxiolytics (N05B) were used as a marker of anxiety. Hypnotics and sedatives (N05C) were used as a marker of insomnia. Antidepressants (N06A) were used as a marker of depression. Data were extracted on incident dispensing of each marker medication during a 52-week observation period before and after the incident dispensing of the index cholinesterase inhibitor. Incident dispensing of the marker medication was defined as the first dispensing after a 52-week washout period before the observation period.

We determined whether the sequence of the two incident dispensings was causal (cholinesterase inhibitor first, then marker) or noncausal (marker first, then cholinesterase inhibitor). Cases where the incident dispensing of the cholinesterase inhibitor and marker medication occurred on the same date were excluded. The adjusted sequence ratio (ASR) with 95% confidence intervals (CIs) was calculated as the ratio of the two sequences (ie, causal to noncausal). The ASR was adjusted for the background rate of change in incident dispensing of each marker medication using the method described by Hallas⁷ and validated by Pratt et al.⁹ All data management and analyses were performed in R. This study was approved by the Monash University Human Research Ethics Committee.

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