

**Office of Health Care Quality Grant
EVALUATING MARYLAND MOLST ORDER FORM
RESULTS FROM HOSPITALS, NURSING HOMES, ASSISTED LIVING FACILITIES
JANUARY 16, 2016**

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PROJECT ABSTRACT

This statewide chart review initiative was undertaken to evaluate how the MOLST program is functioning in Maryland after three-plus years of legally mandated use.

The project was designed to answer the following questions:

1. What is the rate of hospital compliance with the MOLST-on-discharge obligation?
2. For MOLST orders written on hospital discharge, what percentage go beyond page 1?
3. Is there evidence of some process underlying completion of the MOLST form?
4. What is the MOLST form completion error rate?
5. How often is each MOLST order section completed and with what orders?
6. Who (RN, SW, MD) is discussing MOLST with whom (patient, surrogate, etc.)?
7. Are methods to track the active MOLST form effective when there are multiple forms?
8. What educational interventions and training materials has the facility employed, and for whom?
9. Is completion of the MOLST form complementing or replacing advance directive completion?
10. What is the rate of compliance with reviewing/revising the MOLST form?

FACILITY DATA RECEIVED

The final count of facility data received is summarized in Table 1. Members of the MOLST study volunteer database and Advisory Panel undertook extensive follow-up to ensure adequate response rates. Dialysis centers and home care agencies were particularly difficult to recruit to take part.

Table 1. Healthcare facilities invited to take part that contributed study data.

SITE	# INVITED	RECEIVED	SAMPLING WITHIN FACILITY
Hospitals (non-psych, adult)	50	24 (48%) 452 chart reviews (CRs); 446 MOLST forms; 351 CR with active MOLST	Last 20 adult (non-trauma/psych/OB) discharges to qualifying site, & last 10 adult non-trauma/psych/OB deaths <300 beds: half above
Nursing homes	115	51 (44%) 391 NH & 311 SNF/Rehab CRs; 866 MOLST forms; 666 CRs with active MOLST	Last 15 admits & Last 15 deaths 30-149: 8 admits & 8 deaths <30: current residents
Assisted Living	175	45 (26%) 417 chart reviews; 356 MOLST forms; 303 CRs with active MOLST attached (1 facility sent 25 MOLSTs separately)	Last 15 admits & Last 15 deaths 30-149: 8 admits & 8 deaths <30: current residents
Hospices	26	12 (46%) 235 chart reviews; 254 MOLST forms; 212 CRs with active MOLST	Last 30 deaths <30: current patients
Home care agencies	56	2 (3.5%) 60 chart reviews; 32 MOLST forms; 32 CRs with active MOLST	Last 30 admits
Dialysis centers	27	3 (11%) 93 chart reviews; 90 MOLST forms; 90 CRs with active MOLST	Random 30 current patients <30: current patients

THANK YOU to all the members of the MOLST Study Advisory Board, Volunteer Panel, and those who submitted study data! We could not have done this without your support!

SUMMARY HIGHLIGHTS

This report contains a summary of findings from Maryland hospitals, nursing homes/skilled nursing facilities (NH), assisted living facilities (ALF), hospices, home health agencies, and dialysis centers that participated in this chart review study. Facility data are provided in Tables 2 through 10. The data provides evidence of the Maryland MOLST program's successes as well as areas for improvement. Highlights are listed below.

SUCSESSES

- Most hospital staff (82%), ALF staff (75%), and hospice staff (89.5%) have reportedly been trained on MOLST. While the percentage of NH staff trained on MOLST (41%) is lower, designated social workers are more commonly involved with facilitating MOLST completion in NHs. Therefore, MOLST training may be appropriately targeted toward a smaller percentage of NH staff.
- A majority of hospital patients discharged to a MOLST-qualifying facility (86%) had a MOLST form on discharge; 47.5% had a MOLST form on hospital admission.
- Most long-term care residents had an active MOLST form (95% NH & 79% ALF).
- A majority of MOLST forms for long-term care residents (74% NH, 71% ALF) and hospice patients (69%) included orders on page 2.
- For 65% of NH residents, 67% of hospice patients, and 94% of dialysis center patients, there was some documentation in the medical record of what informed the MOLST completion.

AREAS FOR IMPROVEMENT

- Advance directives continue to be under-used, with only 18% of hospital patients, 41% of ALF, and 50% of NH residents having an advance directive noted and on file in their medical record. While a higher percentage noted having an advance directive, whether or not it was on file in the medical record (31% hospital, 45% NH, 65% ALF), if an advance directive is not available, it is of little use to inform MOLST completion.
- Appointment of a durable power of attorney for health care (DPOA-HC) was more common than the presence of an "advance directive" (e.g., a living will) for long-term care residents and hospice patients (reported for 45% NH, 69% ALF residents, 64% hospice patients), with lower numbers for hospital patients (24%), home health patients (15%), and dialysis center patients (23%). Given that the process of selecting a DPOA-HC is simpler than completion of a living will, there may be advantage in promoting this as a first step in advance care planning.
- Health care professionals have mixed opinions about the relationship between advance directives and MOLST orders and the impact of MOLST orders on end-of-life care. More long-term care facility staff (60%) than hospital staff (36%) consider MOLST to be improving end-of-life care in Maryland. Sixty-eight percent (68%) of long-term care (NH and ALF) staff agreed that the MOLST form complements advance directives at their facility, whereas only 50% of hospital staff agreed with this. Most hospital staff (73%) disagreed that the MD MOLST form has replaced advance directives at their facility, whereas 66% of NH and 46% of ALF staff disagreed with this. However, MOLST form completion is high (overall), whereas advance directive completion is low. In order for these forms to complement each other, advance directive completion rates need to be higher and the discussions informing advance directives and MOLST orders need to be of high quality.
- Seventy percent (70%) of hospitalized adults discharged to a MOLST qualifying facility had no orders on MOLST page 2, indicating that page 2 may be under-used when MOLST orders accompany patients discharged from the hospital.
- A minority of MOLST forms from hospitals (37%), ALFs (41%), and home health (12%) noted documentation in the medical record of what informed the MOLST completion. Clinicians in all facilities can do a better job documenting in the medical record what informed how the MOLST form was completed.
- The "Other orders" section on page 2 of the MOLST form is under-used, with active MOLST form "other" orders absent for 98% hospital, 93% NH, 94% ALF, 73% hospice, 94% home health, and 99% dialysis center chart reviews.

- Most MOLST forms are improperly voided (79% overall), with some required voiding component missing (e.g., a line through the form, initials, and date). This has significant implications for tracking the current MOLST order.

OPEN QUESTIONS REGARDING MOLST COMPLETION ACCURACY:

- 51% of MOLST forms were completed based on a conversation with the patient (65% for hospital chart reviews). There were only 28 of 2069 MOLST forms (1.3%) indicating that a patient or authorized decision maker declined or was unable to make a decision about MOLST orders. Given the lack of documentation of the conversation underlying the MOLST orders, the question arises whether patients are truly informed of the MOLST options that should be presented to them.
- Of the 42% of patients with a Do-Not-Attempt Resuscitation (DNAR) order during their hospitalization who survived to discharge, only 53% had “No CPR” selected on their hospital discharge MOLST order form. This raises the question of whether the DNAR order was inappropriate during the patient’s hospitalization or whether the “Full Code” hospital discharge MOLST order was inappropriate for the near-half of patients in this category.
- Only five instances were noted of two physicians certifying that a treatment was medically ineffective during a patient’s hospital stay, whereas there were 49 such certifications in long-term care facilities. There were only 13 instances of this criterion being selected as the authority of MOLST orders [i.e., in accordance with Maryland’s Healthcare Decisions Act (HCDA)]. This suggests that this HCDA provision (i.e., not providing medically ineffective treatment) may be underutilized, particularly in hospitals.
- Of 148 hospital patients who died during current hospitalization, only 48 (32%) had documentation in the medical record of the patient being terminally ill. Among 266 nursing home residents who died, only 56 (21%) had documentation in the medical record that they were terminally ill. In other words, 68% of adults who died during hospitalization and 79% of nursing home residents who died had no documentation in their medical record before death that they were terminally ill. While many of these deaths were likely to have been unpredicted (e.g., hospital index admissions indicating an acute event), it seems that a subset of them involved individuals who could have been considered to be terminally ill (e.g., end-stage dementia as the patient’s hospital admitting diagnosis). Perhaps one barrier to translating advance directive preferences into MOLST orders is clinicians’ ambiguity in determining when a patient is considered to be terminally ill or “imminently” dying—a condition often triggering limitations on life-sustaining treatment in an advance directive that should be reflected in a MOLST order.
- While the purpose of the MOLST order form is for orders to be transportable across healthcare facilities, it is also the case that a MOLST form should be voided and a new MOLST form completed when warranted by changes in a patient’s condition or end-of-life treatment preferences. The fact that most patients (82%) for whom at least one MOLST order form was completed only had one MOLST form may indicate that the form is not being voided and new orders written when warranted by a change in the patient’s condition and/or treatment preferences.

IMMEDIATE SUGGESTED ACTIONS:

- Educate & motivate healthcare facility staff to:
 - document the conversation that informed the MOLST orders in the medical record
 - discuss and consider writing orders on page 2 of the MOLST form when appropriate (informed by a discussion with the patient or surrogate about what would trigger limits on life-extending interventions)
 - use the “Other” section on page 2 of the MOLST form more often (e.g., to communicate information to aide clinicians in interpreting or revising the MOLST orders)
 - properly void MOLST orders when writing a new MOLST
- Improve advance directive completion rates & access to them
 - Consider a “stepped” approach beginning with appointment of a DPOA-HC
 - Encourage patients and caregivers to give copies of advance directives to clinicians & (when available) the state registry
- Continue clinician education and training to improve:
 - skills in end-of-life communication

- consensus on when a patient's advance directive conditions are in effect
- agreement on when a patient is considered "terminal" and when medical interventions are considered "medically ineffective"

ADDITIONAL RESEARCH QUESTIONS TO ADDRESS:

- What percentage of patients with MOLST orders actually receive treatment that is consistent with their active MOLST form?
- How accurately are written MOLST orders in representing a patient's actual wishes (if known)?
- How prevalent are MOLST orders that run counter to clinicians' recommendations for life-sustaining treatment based on the medical standard of care and best interests of the patient (e.g., full code or tube feedings ordered that are not expected to benefit the patient)?
- What communication approaches are most effective to inform accurate MOLST order completion?
- What do clinicians perceive to be primary barriers to accurate MOLST completion and interpretation?
- What insights do Emergency Medical Technicians have to inform how the Maryland MOLST program could be improved?
- What insights do patients and family members have to inform how the Maryland MOLST program could be improved?

TABLES

Table 2. Demographic data for participating facilities.

	Hospitals (n=24)	NH/SNF (n=51)	ALF (n=45)	Hospice (n=12)	Home Health (n=2)	Dialysis (n=3)
Not-for-Profit	100%	59%	38%	92%	100%	67%
Relig Affil	17%	18%	9%	8%	50%	0
Teaching	29%	0	0	0	0	
Bed size	X=279 (41-1032, med=191.5)	X=115 (25-406, med=109)	X=39 (10-125, med=22)	N/A	N/A	X=47, 19-100, med=21
MOLST trained staff	X=82% (50-100%)	X=71% (0-100%)	X=75% (0-100%)	X=89.5% (20-100%)	X=100%	X=53% (10-100%)
MOLST champion*	91%	69%	57%	64%	50%	67%
MOLST=DNR	67%	87%	98%	80%	100%	33%
Paper/EMR/Hybrid Records (%)	0/58%/42%	17%/21%/62%	57%/24%/19%	9%/27%/64%	100% hybrid	0/33%/67%

*Departments of MOLST champion: Most common = Social work; Other = Administrative Director of Patient Experience & Accreditation, Case Management, Ethics committee, Hospice, Nursing education, Nursing Administration, Oncology, Quality/Safety, Palliative Care, Patient Services, Risk Management, Senior VPMA

Table 3. Individuals completing chart reviews (% = “YES” – could select >1)

	Hospitals (n=24)	NH/SNF (n=51)	ALF (n=45)	Hospice (n=12)	Home Health (n=2)	Dialysis
NURSE	58%	15%	60%	25%	1 of 2	0
SOCIAL WORKER	25%	67.5%	0	25%	0	2 of 3
QI/ADMIN	17%	17.5%	34%	62.5%	0	1 of 3
MEDICAL RECORDS	4%	10%	6%	0	0	2 of 3
VOLUNTEER	4%	0	0	12.5%	0	0
RESEARCH ASSISTANT	0	0	0	0	0	0
OTHER	33%	15%	46%	12.5%	1 of 2	1 of 3
“OTHER” EXAMPLES	<i>Ethics committee member/chair; MSW student; MD & ethicist; Risk Management; Clinical Practice Coordinator; Coordinator Education; Director Respiratory Care; Palliative Care Program Coordinator</i>	<i>Combined role (e.g., nursing administration)</i>	<i>ALM manager or director, primary physician, wellness coordinator</i>	<i>CAN</i>	<i>(Blank)</i>	<i>MSW student</i>

Table 4. Attitudes toward MOLST (1=Strongly Agree; 5=Strongly Disagree)

	Hospitals (n=24)	NH/SNF (n=51)	ALF (n=45)	Hospice (n=12)	Home Health (n=2)	Dialysis (n=3)
MD MOLST form has replaced advance directives at this facility	X=4.0 (med=4.5, 73% disagree*)	X=3.9 (med=5, 68% disagree)	X=3.0 (med=3, 46% disagree)	X=3.5 (med=3, 30% disagree)	X=2 (neither disagree)	X=4 (1 of 3 disagrees)
MD MOLST form complements advance directives at this facility	X=2.5 (med=2.5; 50% agree*)	X=1.9 (med=1, 69.5% agree)	X=2.0 (med=1, 67% agree)	X=2.5 (med=2, 60% agree)	X=3.5 (1 of 2 agrees)	X=1 (2 of 3 agree, 1 left blank)
MD MOLST form is improving end-of-life care at this facility	X=2.7 (med=3; 36% agree*)	X=2.2 (med=2, 60% agree)	X=2.5 (median=2, 60% agree)	X=2.7 (med=2, 60% agree)	X=2 (1 of 2 agrees)	X=1 (1 agreed, 1 neutral, 1 left blank)

*"Agree" = "1" or "2" – "Disagree" = "4" or "5"

Table 5. MOLST training at facilities for staff, patients, & family members.

STAFF						
	Hospitals (n=24)	NH/SNF (n=51)	ALF (n=45)	Hospice (n=12)	Home health (n=2)	Dialysis (n=3)
External training seminar	37.5%	54%	39.5%	18%	2 of 2	1 of 3
Internal training seminar	83%	75%	44%	82%	2 of 2	2 of 3
Mandatory curriculum	33%	6%	12%	18%	1 of 2	1 of 3
Web/Online training	50%	17%	16%	9%	2 of 2	1 of 3
Self-paced educational materials	37.5%	8%	7%	0	0	1 of 3
Other	17%	4%	14%	18%	0	0
“Other” examples	<i>Emails, flyers, discussion; mailers; ongoing inservices; one-on-one with providers</i>	<i>During staff meetings; social worker & admin trained by consultant</i>	<i>Articles & information, Lifespan, MOLST worksheet/instructions</i>	<i>“All pts come with pre-filled out MOLST”, OHCQ insx</i>		
PATIENTS/FAMILIES						
	Hospitals (n=24)	NH/SNF (n=51)	ALF (n=45)	Hospice (n=12)	Home health (n=2)	Dialysis (n=3)
Varies based on individual clinician	67%	56%	14 (31%)	64%	1 of 2	2 of 3
Trained staff using similar approach	17%	29%	9 (21%)	45.5%	2 of 2	0
Informational packet	29%	33%	10 (23%)	27%	1 of 2	0
WBAL video on MD MOLST website	4%	0	0	0	0	0
Other	33%	21%	16 (37%)	18%	0	2 of 3
“Other” examples	<i>1 pg handout; community educ; community inservice; palliative care; advance directive handbook; one-on-one education by clinical team members</i>	<i>Discussed during care plan mtg or on admission; fliers or MOLST Worksheet, Family or Resident Council</i>	<i>Family meetings; 1 on 1; support group; mailings; working through MOLST worksheet; workshop</i>	<i>Explained during home visits-review worksheets; MOLST decision-making guide used when pt/fam arrive with expectation of measures considered futile</i>	N/A	<i>During their care plan meeting; Reviews with patients & family annually & on admission</i>

Table 6. End-of-life data from facility chart reviews.

	Hospitals	NH/SNF	ALF	Hospice	Home Health	Dialysis	ALL
No indication of advance directive	311/448 (69%)	383/698 (55%)	144/407 (35%)	94/233 (40%)	52/60 (87%)	40/93 (43%)	1024/1939 (53%)
Advance directive noted but none on file	57/448 (13%)	26/698 (4%)	61/407 (15%)	65/233 (28%)	1/60 (1.5%)	32/93 (34%)	242/1939 (12%)
Advance directive copy on file	80/448 (18%)	289/698 (41%)	202/407 (50%)	74/233 (32%)	7/60 (11.5%)	21/93 (23%)	673/1939 (35%)
Relevant sections of advance directive attached to chart review	63/80 (79%)	249/289 (86%)	150/202 (74%)	70/74 (95%)	5/7 (71%)	15/21 (71%)	552/673 (82%)
# MOLST forms attached	0=101 1=276 2=63 3=7 4=2 5=3	0=36 1=495 2=136 3=26 4=7 5=2	0=82 1=315 2=19 3=1	0=23 1=177 2=30 3=4 4=1	0=28 1=32	0=3 1=89 2=1	0=273 1=1385 2=249 3=38 4=10 5=5
Those with a MOLST who had <i>only</i> 1 MOLST	276/351 (79%)	495/666 (74%)	315/335(94%)	177/189 (94%)	32/32 (100%)	70/93 (75%)	1385/1688 (82%)
DPOA appointed [†]	109 YES, 206 NO, 137 DK/NR	317 YES, 296 NO, 79 DK/NR	288 YES, 110 NO, 19 DK/NR	151 YES, 18 NO, 66 DK/NR	9 YES, 11 NO, 12 DK/NR	21 YES, 1 NO, 71 DK/NR	895 YES, 631 NO, 433 DK/NR
Terminally ill noted in med record*	68/418 (16%)	69/629 (11%)	N/A	N/A	N/A	0/93	--
End-stage noted in med record*	81/418 (19%)	106/629 (17%)	N/A	N/A	N/A	63/93 (68%)**	--
PVS noted in med record*	4/418 (<1%)	5/629 (0.8%)	N/A	N/A	N/A	0/93	--
Decisional incapacity noted in med record*	73/418 (17%)	165/631 (26%)	25/413 (6%)	N/A	N/A	2/93 (2%)	--
Basis for term, end-stage, PVS, Dec-incap	Med rec doc 89% 2-MD cert 4% Other/both 7%	Med rec doc 31% 2-MD cert 53.5%; Other/both 15.5%	2-MD cert x 2, (rest blank)	N/A	N/A	33-Med record doc (rest blank)	--
Medically ineffective tx cert by 2 MDs*	5/437 (1%)	46/648 (7%)	3/412 (<1%)	N/A	N/A	N/A	--
Documented DNAR?	183/437 (42%) → "No CPR" on MOLST at d/c 73/138 (53%)	421/660 (64%) per MOLST (See Table 10)	206/297 (69%) per MOLST (See Table 10)	203/209 (97%) per MOLST (See Table 10)	8/32 (25%) per MOLST (See Table 10)	8/89 (9%) per MOLST (See Table 10)	1009/1632 (62%) per MOLST (See Table 10) Errors (n=17) BLANK; multiple selections
Mechanical vent?	10/313 (3%) on vent at d/c	1/652 (<1%)	N/A	N/A	N/A	0/93	N/A
Dialysis?	6/312 (2%) on dialysis at d/c	10/654 (1.5%)	N/A	N/A	N/A	93/93 (100%)	N/A
Tube feedings?	14/312 (4.5%) on tube feed at d/c	27/653 (4%)	N/A	N/A	N/A	0/93	N/A

DK=Don't Know; NR=No Response (left blank)

*DK responses excluded; ALF, Hospice, and Home Health chart reviews did not ask about these conditions

[†]Chart review form asked about "advance directives" and also asked if a DPOA-HC had been appointed

**"End-stage condition" not defined; likely confounded with end-stage renal disease for dialysis centers

Table 7. MOLST compliance & implementation.

RATE OF COMPLIANCE WITH THE MOLST-ON-DISCHARGE OBLIGATION (Q#1)					
Hospitals	NH/SNF	ALF	Hospice	HOME HEALTH	Dialysis
86% (261/302) adults d/c to qualifying facility have MOLST on hospital d/c	95% have at least 1 MOLST; 14/432 (3%) transferred from hospital in last year had no MOLST	79% have at least 1 MOLST; 14/117 (12%) transferred from hospital in last year had no MOLST	96% have at least 1 MOLST; 12% referred from hospital without MOLST 34% referred from hospital with MOLST; 29% from other provider with MOLST; 24% from other provider without MOLST; 1% self-referred	53% have at least 1 MOLST; 27% referred from hospital without MOLST 38% referred from hospital with MOLST; 18% from other provider with MOLST; 17% from other provider without MOLST	97% have at least 1 MOLST <i>Note: 88/93 (95%) patients commuting to dialysis center from home; others referred from long-term care</i>
PERCENTAGE OF MOLST ORDERS CONTAINING ANY P. 2 OPTIONS (Q#2)					
34% (119/351) (30% of patients d/c to qualifying facility)	74% (492/666)	71% (217/305)	69% (146/211)	19% (6/32)	40% (36/90)
DOCUMENTATION IN MEDICAL RECORD OF DISCUSSION INFORMING MOLST (Q#3)					
37% (92/248) 67% MD, 17% RN, 3% SW, 17% other/mixed	65% (378/579) 31% MD, 8% RN, 50% SW, 11% other/mixed	41% (159/384) 56% MD, 18% RN, 7.5% SW, 19% other/ mixed	67.5% (154/228)	4/32 (12.5%) 50% MD, 50% Social work	85/90 (94%) 60% MD, 1% RN, 39% SW)
INCORRECT VOIDS OF MOLSTS IF >1 MOLST ATTACHED (Q#7)					
71/97 (73%) incorrect NOTE: 33/201 (16%) MOLSTS voided after hospital admission; X=7.21 (median = 4) days after admission	147/236 (62%) incorrect	30/41 (76%) incorrect	38/40 (95%) incorrect	N/A (no voided MOLSTS)	70 voided MOLSTS indicated among 24 patients but these were not attached

Table 8. MOLST order patient demographics (excludes redacted chart review data).

	Hospitals (452 CRs)	NH/SNF (702 CRs)	ALF (417 CRs)	Hospice (235 CRs)	Home Health (60 CRs)	Dialysis (93 CRs)	ALL (1959 CRs)
Female	60%	65%	65.5%	61%	59%	46%	58%
Asian	3%	2%	<1%	3%	3.5%	3%	2%
Black/African American	26%	16%	9%	7%	12%	49.5%	17%
Hisp/Latino	<1%	1.3%	<1%	<1%	5.5%	0	1%
White	70%	79.5%	90%	90%	79%	47.5%	79%
Other/Mixed	2%	<1%	<1%	0	0	0	<1%
Age (censor at 90+=90)	X=73, Med 76	X=81.5, Med 85	X=83, Med 88.5	X=79, Med 84	X=71, Med 73	X=63, Med=65	
Medicare	68%	53%	76%	84%	68%	23%	64%
Medicaid	19%	13.5%	4%	2%	10%	3%	8%
Hospice	N/A	7.8%	N/A	100%	0	0	15%
Other/Mixed Insurance	5%	10%	6.1%	14%	22%	12%	18%
None/Self-pay	---	15%	4.9%	<1%	0	0	7%

Table 9. What is the MOLST form completion error rate?

Hospitals	NH/SNF	ALF	Hospice	HOME HEALTH	Dialysis
<p>Of 206 patients <i>without</i> DPOA-HC, 17 had MOLST health care agent as basis for MOLST completion;</p> <p>Of 2 patients with basis of MOLST completion as authority in HCDA, 1 lacked 2-physician certification of medically ineffective treatment;</p> <p>Of 9 patients documented to be in a terminal condition whose AD dictated DNAR in such condition, 7 had DNAR in hospital (2 didn't); 7 died in hospital; 1 had "Attempt CPR" on MOLST, 2 had A-1, 1 A-2, & 4 had "No CPR" selected;</p> <p>Of 5 patients in end stage condition whose AD dictated DNAR in such condition, all 5 died in hospital with DNAR, 2 didn't have MOLST, 3 had No CPR, Option B on MOLST;</p> <p>6 patients for whom artificial nutrition or hydration (ANH) precluded by AD had ANH - 5 died in hospital, 1 d/c to SNF without ANH, MOLST for that patient selected 7c "trial fluids OK";</p> <p>Of 149 patients precluding intubation & ventilation on MOLST p. 1, 1 had 2a selected on MOLST p. 2</p> <p>Of 127 patients transferred to hospital with MOLST for whom MOLST not voided who had preferences selected for p. 2 Section 4, 11 had "no hospital transfer" selected</p> <p>73 (53%) of 138 patients with DNAR in hospital had "No CPR" MOLST order written on hospital discharge</p>	<p>Of 281 residents <i>without</i> DPOA-HC, 27 had health care agent as basis for MOLST completion;</p> <p>Of 5 residents with basis of MOLST completion as authority in HCDA, 3 lacked 2-physician certification of medically ineffective treatment;</p> <p>Of 32 residents in a terminal condition whose AD dictated DNAR in such condition, 1 had full code, 4 had Option A-2, and 25 had No CPR (Option B) on MOLST (2 had no MOLST on record);</p> <p>Of 30 residents in end-stage (ES) condition whose AD dictated DNAR in such condition, 1 had full code, 6 had Option A-2, and 23 had No CPR (Option B) on MOLST;</p> <p>Of 32 residents in terminal (29 ES) condition whose AD dictated no artificial nutrition/hydration (ANH) in such condition, 3 (2 ES) had ANH allowed, 1 allowed trial ANH, 4 (5 ES) allowed trial fluids, 16 (19 ES) had no ANH selected, and 8 (3 ES) had no p. 2 orders for ANH on MOLST p. 2;</p> <p>Of 332 residents precluding intubation & ventilation on MOLST p. 1, 1 had 2a & 6 had 2b selected on MOLST p. 2</p>	<p>Of 56 residents <i>without</i> DPOA-HC, 6 had health care agent as basis for MOLST completion;</p> <p>No residents with basis of MOLST completion as authority in HCDA;</p> <p>Of 210 residents precluding intubation & ventilation on MOLST p. 1, none had 2a, 5 had 2b selected on MOLST p. 2</p>	<p>Of 17 patients <i>without</i> DPOA-HC, 2 had health care agent as basis for MOLST completion; 1 patient had basis of MOLST completion as authority in HCDA;</p> <p>Of 205 patients precluding intubation & ventilation on MOLST p. 1, none had 2a or 2b selected on MOLST p. 2</p>	<p>Of 11 patients <i>without</i> DPOA-HC, 2 had health care agent as basis for MOLST completion; Of 8 patients precluding intubation & ventilation on MOLST p. 1, 1 had 2a selected</p>	<p>Only 1 patient did not have appointed DPOA-HC and basis for MOLST was patient; Only 1 patient with intubation & ventilation precluded on MOLST p. 1, & no ventilation noted on p. 2 for that patient</p>

Table 10. MOLST Order Selections (for p. 2 orders, denominator only includes those with ANY orders for #2-8)

	Hospitals (351CR+MOLST)	NH/SNF (666CR+MOLST)	ALF (303CR+MOLST)	Hospice (212CR+MOLST)	Home Health (32CR+MOLST)	Dialysis (90CR+MOLST)	ALL MOLSTs (n=2069 MOLSTs)
Basis for the MOLST orders	Patient: 223 (65%) DPOA-HC: 45 (13%) Guardian: 6 (2%) Surrogate per HCDA: 32 (9%) AD: 3 (1%) HCDA: 2 (<1%) Pt/Dec-maker declined: 1 (<1%) ERRORS: Multiple options checked (10); BLANK (29)	Patient: 335 (50%) DPOA-HC: 152 (23%) Guardian: 20 (3%) Surrogate per HCDA: 65 (10%) AD: 7 (1%) HCDA: 5 (<1%) Pt/Dec-maker declined: 5 (.8%) ERRORS: Multiple options checked (55); BLANK (24); unclear (2); Parent/LAR (1)	Patient: 117 (38.5%) DPOA-HC: 85 (28%) Guardian: 13 (4%) Surrogate: 13 (4%) AD: 11 (4%) HCDA: 0 Pt/Dec-maker declined: 6 (2%) ERRORS: Multiple options (27); BLANK (30); unclear (1)	Patient: 104 (49%) DPOA-HC: 54 (25.5%) Guardian: 6 (3%) Surrogate: 11 (5%) AD: 4 (2%) HCDA: 1 (<1%) Pt/Dec-maker declined: 2 (1%) ERRORS: Multiple options (22); BLANK (9);	Patient: 27 (84%) DPOA-HC: 2 (6%) Guardian: 0 Surrogate: 0 AD: 0 HCDA: 0 Pt/Dec-maker declined: 0 ERRORS: Multiple options (2), BLANK (1)	Patient: 85 (95%) DPOA-HC: 0 Guardian: 0 Surrogate: 0 AD: 0 HCDA: 0 Pt/Dec-maker declined: 1 ERRORS: BLANK (4)	Patient: 1067 (51.5%) DPOA-HC: 421 (20%) Guardian: 58 (3%) Surrogate: 151 (7%) Parent/LAR 3 (<1%) AD: 34 (1.5%) HCDA: 13 (<1%) Pt/Dec-maker declined: 28 (1%) Anomaly (multiple items checked or blank) 322 (16%)
CPR (RESUSCITATION) STATUS:	Attempt CPR: 182 (52%) No CPR, Option A-1, Intubate: 17 (5%) No CPR, Option A-2, DNI: 59 (17%) No CPR, Option B: 87 (25%) ANOMALY: 6 (1%)	Attempt CPR: 239 (36%) No CPR, Option A-1, Intubate: 11 (2%) No CPR, Option A-2, DNI: 120 (18%) No CPR, Option B: 290 (44%) ANOMALY: 6	Attempt CPR: 91 (30%) No CPR, Option A-1, Intubate: 3 (1%) No CPR, Option A-2, DNI: 60 (20%) No CPR, Option B: 143 (47%) ANOMALY: 6	Attempt CPR: 6 (3%) No CPR, Option A-1, Intubate: 0 No CPR, Option A-2, DNI: 25 (12%) No CPR, Option B: 178 (85%) ANOMALY: 2	Attempt CPR: 24 (75%) No CPR, Option A-1, Intubate: 0 No CPR, Option A-2, DNI: 4 (12.5%) No CPR, Option B: 4 (12.5%) ANOMALY: 0	Attempt CPR: 81 (91%) No CPR, Option A-1, Intubate: 2 No CPR, Option A-2, DNI: 3 No CPR, Option B: 3 ANOMALY: 1	Attempt CPR: 771 (37%) No CPR, Option A-1, Intubate: 40 (2%) No CPR, Option A-2, DNI: 363 (17.5%) No CPR, Option B: 832 (40%) ANOMALY 63 (30.5%)
P.2 orders	119/351 (34%)	492/666 (74%)	216/303 (71%)	146/212 (69%)	6/32 (19%)	36/90 (40%)	844/2069 (41%)
INTUBATION/VENTILATION	2a: 36/114 (32%) 2b: 6/114 (5%) 2c: 31/114 (27%) 2d: 41/114 (27%) Time limit (n=10) x=28 days, med=8.5	2a: 92/475 (19%) 2b: 46/475 (10%) 2c: 56/475 (12%) 2d: 281/475 (59%) Time limit (n=20) x=15 days, med=7	2a: 26/203 (13%) 2b: 23 (11%) 2c: 38 (19%) 2d: 115 (57%) Time limit (n=20) x=71 days, med=12	2a: 2/133 (1.5%) 2b: 2/133 (1.5%) 2c: 7/133 (5%) 2d: 122/133 (92%) Time limit (n=2) 7 & 30 days	2a: 3/6 (50%) 2b: 2/6 (33%) 2c: 0 2d: 1 (17%) Time limit (n=1) 7 days	2a: 20 (69%) 2b: 3 (~10%) 2c: 3 (~10%) 2d: 3 (~10%) Time limit (n=3) 7, 10, 14, 45 days	2a: 200 (18%) 2b: 92 (8%) 2c: 165 (15%) 2d: 654 (59%) 1 Anomaly Time limit (n=1021) X=34 days, med=7
BLOOD TRANSFUS	3a: 72/111 (65%) 3b: 39/111 (35%)	3a: 248/415 (60%) 3b: 167/415 (40%)	3a: 130/195 (67%) 3b: 64/195 (33%)	3a: 31/125 (25%) 3b: 94/125 (75%)	3a: 5/6 (83%) 3b: 1/6 (17%)	3a: 28/29 3b: 1/29	3a: 597 (58%) 3b: 421 (42%) 3 Anomaly
HOSPITAL TRANSFER	4a: 77/113 (68%) 4b: 19/113 (17%) 4c: 17/113 (15%)	4a: 263/480 (55%) 4b: 112/480 (23%) 4c: 105/480 (22%)	4a: 125/210 (59.5%) 4b: 61/210 (29%) 4c: 23/210 (11.5%)	4a: 14/144 (10%) 4b: 69/144 (48%) 4c: 61/144 (42%)	4a: 5/6 (83%) 4b: 0 4c: 1/6 (17%)	4a: 28/29 4b: 1/29 4c: 0	4a: 609 (53.5%) 4b: 296 (26%) 4c: 231 (20%) 2 Anomaly
MEDICAL WORKUP	5a: 76/113 (67%) 5b: 23/113 (20.5%) 5c: 14/113 (12.5%)	5a: 270/462 (58.5%) 5b: 130/462 (28%) 5c: 62/462 (13.5%)	5a: 120/202 (59.5%) 5b: 61/202 (30%) 5c: 21/202 (10.5%)	5a: 17/127 (13%) 5b: 47/127 (37%) 5c: 63/127 (50%)	5a: 5/6 (83%) 5b: 1/6 (17%) 5c: 0	5a: 28/29 5b: 1/29 5c: 0	5a: 613 (56%) 5b: 303 (28%) 5c: 175 (16%)
ANTIBIOTICS	6a: 92/112 (82%) 6b: 4/112 (4%) 6c: 8/112 (7%) 6d: 8/112 (7%)	6a: 328/461 (71%) 6b: 27/461 (6%) 6c: 78/461 (17%) 6d: 28/461 (6%)	6a: 148/202 (73%) 6b: 16/202 (8%) 6c: 28/202 (14%) 6d: 9/202 (4.5%) Anomaly: a&b (n=1)	6a: 36/128 (28%) 6b: 10/128 (8%) 6c: 67/128 (52%) 6d: 15/128 (12%)	6a: 5/6 (83%) 6b: 0 6c: 1/6 (17%) 6d: 0	6a: 29/29 6b: 0 6c: 0 6d: 0	6a: 754 (69%) 6b: 67 (6%) 6c: 198 (18%) 6d: 68 (6%) 1 Anomaly
FLUIDS/NUTRITION	7a: 55/108 (51%) 7b: 11/108 (10%) 7c: 19/108 (18%) 7d: 23/108 (21%) Time limit (n=5) x=39 days (med-5)	7a: 118/438 (27%) 7b: 41/438 (9%) 7c: 113/438 (26%) 7d: 166/438 (38%) Time limit (n=33) x=16.5 days (med-7)	7a: 58/202 (29%) 7b: 38/202 (19%) 7c: 48/202 (24%) 7d: 57/202 (28%) Anomaly: a&c (n=1) Time limit (n=30) x=51 days (med-14)	7a: 7/129 (5.5%) 7b: 6/129 (4.5%) 7c: 14/129 (11%) 7d: 102/129 (79%) Time limit (n=3) 3, 30 & 60 days	7a: 3/5 (60%) 7b: 1/5 (20%) 7c: 1/5 (20%) 7d: 0 Time limit N/A	7a: 21/29 7b: 4/29 7c: 4/29 7d: 0 Time limit (n=2) 10 & 45 days	7a: 313 (30%) 7b: 118 (11%) 7c: 244 (23%) 7d: 383 (36%) 1 Anomaly Time limit (n=88) x=29 days, med=7

DIALYSIS	8a: 40/100 (40%) 8b: 4/100 (4%) 8c: 56/100 (56%) Time limit (n=2) 31 & 180 days	8a: 92/403 (23%) 8b: 34/403 (8%) 8c: 277/403 (69%) Time limit (n=15) x=25 days (med=10)	8a: 41/193 (21%) 8b: 18/193 (9%) 8c: 134/193 (70%) Time limit (n=10) x=16.5 days (med-14)	8a: 2/127 (2%) 8b: 4/127 (3%) 8c: 121/127 (95%) Time limit (n=1) 45 days	8a:3/4 (75%) 8b: 0 8c: 1/4 (25%) Time limit N/A	8a:35/35 (100%) 8b: 0 8c: 0 Time limit: N/A	8a:241 (24%) 8b: 73 (7%) 8c: 679 (68%) 5 Anomaly Time limit (n=33) x=27 days, med=14
OTHER ORDERS?	336/351 NO (96%)	616/659 NO (93%)	285/303 NO (94%)	166/226 NO (73%)	30/32 NO (94%)	89/90 NO (99%)	1918/2069 NO (93%)
SIGNATURE	99% (n=331)	99% (n=664)	97% (n=304)	100% (n=235)	100% (n=32)	63/90 (70%)	1986/2029 (98%)
DISCIPLINE	78% MD, 9% NP, 13% PA (n=273)	76% MD, 18.5% NP, 5.5% PA (n=583)	87% MD, 9% NP, 4% PA (n=271)	88% MD, 10% NP, 2% PA (n=197)	96% MD, 4% PA (n=25)	75% MD, 25% NP (n=77)	80% MD, 14% NP, 6% PA (n=1692)
NAME	96% (n=334)	98% (n=660)	91% (n=303)	96% (n=212)	97% (n=32)	95% (n=90)	96% (n=2001)
DATED	98% (n=350)	98% (n=664)	95% (n=304)	99% (n=212)	100% (n=32)	98% (n=90)	98% (n=2027)

Table 11. Type of “Other orders” indicated on p. 2 MOLST for ALL MOLST forms (151/2069).

<i>Categories (includes multiple orders)</i>	<i>Examples</i>
1.Hospice agency contact info (n=54)	“Patient is [----] Hospice call [410 -----]”
2.Request for comfort care (n=38)	“Patient is comfort care only”
3.Restate orders selected (n=16)	“No CPR,” “No PEG tube,” “He may have PEG tube placed”
4.Clarity orders selected (n=13)	“Transfer to hospital only for laceration or fracture,” “IV fluids on a case-by-case basis”
5.Limits on weights, vital signs, labs (n=13)	“no vitals, no labs, no weights”
6. Follow-up request (n=11)	“Please refer to my advanced directive & consult with my POA's”
7.Specification of other treatments (n=11)	“No escalation of care,” “no pressors,” “no xray,” “No chemo or radiation,”
8.Info provided (n=11)	“hospice pt,” “[option] 7-8 not decided,” “allergic to sulfa”
9.Goals of care/future wishes (n=6)	“Goal is to maintain quality of life in assisted living,” “If CPR is unsuccessful and ends up in veg state, she does not want any advanced life supportive treatments”

Table 12. Chart reviews for deceased patients who had an active MOLST form (n=507).

	<u>%</u>	<u>n</u>	<u>Mean</u>	<u>Median</u>
Age			82 years	87 years
No advance directive noted	46%	233		
Advance directive noted but not on file	9%	46		
Advance directive noted & on file (85% of 228 ADs attached)	45%	228		
DPOA-HC appointed	68%	296/437		
Hospice patients	22%	113		
Hospitalized patients	18%	90		
Long-term care patients (NH, ALF) (26% NH on hospice)	60%	303		
Living will available	35%	179/516		
Living will precluded CPR if terminal	95%	170/179		
Attempt CPR on MOLST	10%	47/502		
No CPR – Option B on MOLST	72%	363/502		