

Abstract Session A2: Aging/Geriatrics/End-of-Life

DNR does not mean do not treat: Data from the first US Electronic POLST Registry Erik K. Fromme¹; Dana Zive¹; Terri Schmidt¹; Elizabeth Olszewski¹; Susan W. Tolle¹. ¹Oregon Health & Science University, Portland, Oregon. (Proposal ID # 8719)

BACKGROUND: The Physician Orders for Life Sustaining Treatment (POLST) form augments traditional methods for advance care planning by translating treatment preferences into medical orders. Developed in Oregon, POLST programs now exist or are developing in 33 US states and 2 other countries. POLST orders include CPR, scope of treatment, antibiotics, and artificial nutrition by tube. Scope of treatment in POLST is divided into 'comfort only' meaning hospitalize only if comfort needs cannot be met in current setting, 'limited additional interventions' meaning hospitalize for evaluation and treatment of medical problems but avoid ICU care, and 'full treatment' including ICU care. The electronic POLST registry launched in December 2009 allowing emergency personnel and hospitals immediate and 24-hour access to patient POLST form information. Health professionals completing a POLST in Oregon are required (by legislative statute) to submit the form to the Registry unless the patient chooses to opt out. Thus the registry is both an innovation in advance care planning and a unique resource for understanding patient treatment preferences beyond resuscitation status.

METHODS: We analyzed all active forms signed and submitted from 12/3/09 to 12/2/10—the Registry's first year of full operation. We calculated the prevalence of each POLST order to represent the 'pre-test probability' of each preference. We calculated likelihood ratios to examine the predictive value of knowing a patient's preferences for each order.

RESULTS: At the end of the first year there were 25,142 active POLST forms in the registry which is currently receiving approximately 3,000 forms per month from every Oregon county. Over 84% of POLST registrants were 65 or older (mean age = 77.7 years, SD = 12.9 years), and 61% are female. 72.3% of registrants had a DNR order. Of these, 49.6% of also had orders for 'comfort only', 43.8% had orders for 'limited additional interventions', and 6.6% had orders for 'full treatment'. Figure 1 shows how many people chose each different combination of POLST orders. Table 1 shows the prevalence for each POLST order which reflect 'pre-test probabilities' and the likelihood ratios associated with a preference for each order. Only 5.4% of registrants wanted 'maximum' treatment in every category and only 6.6% wanted 'minimum' treatment in every category. Thus, 89.9% of those with a DNR order want more than the minimum in at least one other category and 80.8% of those requesting CPR wanted less than the maximum in at least one other category.

CONCLUSION: The Oregon Electronic POLST Registry is a new resource for ensuring patient preferences are available and actionable across care settings. Registry data demonstrate why clinicians should not use 'DNR' status to infer more about patient wishes. Even for these mostly elderly patients extrapolating from a patient with a DNR order that they would want comfort measures only was almost exactly a 50/50 proposition. POLST orders for 'full treatment' or 'comfort measures only' have higher predictive value. See www.POLST.org for further details.

Seniors Unnecessarily Complicate their Home Medication Regimens Post-Discharge Lee Lindquist¹; Lucy Lindquist²; Lisa Zickuhr¹; Elisha Friesema¹; Michael Wolf¹. ¹Northwestern University, Chicago, Illinois ; ²Walgreens, Chicago, Illinois . (Proposal ID # 10965)

BACKGROUND: Following hospitalization, seniors have multiple medication changes and new instructions. Seniors also frequently receive medication instructions from many sources. The universal medication schedule (UMS) was recently proposed for standardizing prescribing practices to four daily time intervals which would simplify regimens and potentially improve adherence. We aimed to determine whether seniors consolidate their medications following a hospital discharge, or if there was evidence of unnecessary regimen complexity.

METHODS: Face to face interviews were performed by study nurses with 200 seniors ≥ 70 yrs in their homes in the community one month following hospital discharge. At one month, subjects would have developed a routine schedule for taking their medications. During the home visit, the study nurse asked the subject to demonstrate how they took their medications in a normal day. The nurse visualized where the medications were stored and whether or not a pill box was used. Information on times of day, locations of med, and reasons for each were recorded. Following the interview, research assistants entered their medication lists and calculated the number of times in a day the subject took their medications. Two health care professionals (a pharmacist and a physician) blinded to the actual use of the patient were given the medication regimens of each patient. They were asked to determine the fewest number of times a day that a patient could take the regimen. A third healthcare professional served as a tie-break.

RESULTS: Of 200 seniors [mean age 83.0 yrs, 57% female], 152 (76%) had medication changes at hospital discharge. Medication regimens could be simplified for 85 (42.5%) patients. Of those seniors who were not consolidating their medications, 53 (26.5%) could have had the number of times a day medications were taken reduced by 1; 26 (13.0%) could have reduced by 2; and 6 (3.0%) could have reduced by 3. Medication regimen interrater reliability between the pharmacist and physician (kappa) was 0.845. The three most common causes of overcomplexity of medication regimens were (1) misunderstanding medication instructions (i.e. taking cholesterol lowering medications very late at night), (2) concern over absorption of drugs (i.e. before or after meals), and (3) perceived drug-drug interactions. Pillboxes were used by 99 (49.5%) of subjects but usage did not significantly correlate with simplified regimens.

CONCLUSION: Over forty percent of seniors aged 70 and older overly complicate their medication regimen following a hospitalization. This lack of consolidation potentially impedes medication adherence. Health care professionals should ask patients to explicitly detail the number of times medication consumption occurs in the home. Home nurse visits may also be useful to better ascertain true medication usage. In exploring the reasons behind the complexity, patients and health care professionals need improved education and communication about medication usage.

Missed Opportunities for Advance Care Planning in Primary Care Sangeeta Ahluwalia¹; Jennifer Levin¹; Karl Lorenz¹; Howard Gordon². ¹Veterans Administration, Los Angeles, California ; ²University of Illinois, Chicago, Chicago, Illinois . (Proposal ID # 11167)

BACKGROUND:

Advance care planning (ACP), a process of patient-provider communication by which a patient can make their preferences for future care known, is particularly relevant for patients with heart failure (HF), who face a highly variable trajectory characterized by periods of medical crisis, and where considerable uncertainty exists about the timing and nature of death. There is indirect evidence to suggest that ACP discussions are limited in the primary care setting; such discussions are often avoided until death is imminent. A key barrier to engaging in ACP reported by primary care clinicians is the lack of opportunity during a busy clinic visit to raise this complex topic with their patients. The purpose of this study was to 1) determine the frequency and type of ACP communication between HF patients and their primary care providers (PCP) during clinic visits following discharge from a HF hospitalization and 2) to characterize missed opportunities for engaging in ACP during the visit.

METHODS:

We conducted a content analysis of 76 post-discharge primary care clinic visits, that were recorded and transcribed, with veterans ≥ 65 years with HF and their PCP/ Transcripts were analyzed for the presence of 5 components of ACP as defined by existing literature: explanation of disease trajectory, prognosis communication, discussion or completion of formal directives, discussion or identification of a surrogate decision-maker, and personal and psychosocial planning for the future. Transcripts were also analyzed using grounded theory methods for missed opportunities for providers to engage in ACP, defined as direct communication by the patient providing information regarding their thoughts, concerns, or questions related to any of the 5 components of ACP that was not fully encouraged or adequately responded to by their provider.

RESULTS:

Out of the 76 unique clinic visits analyzed, only one contained a discussion of all 5 components of ACP. Of the remaining 75 visits, 15% (n=11) included an explanation of disease trajectory, 23% (n=17) included prognosis communication, 4% (n=3) included a discussion of formal directives, 0% (n=0) included discussion of a surrogate decision-maker, and 4% (n=3) included personal and/or psychosocial planning for the future. The following categories of missed opportunities for engaging in ACP emerged from the analysis: i) emotional opportunities, where veterans expressed concern or worry regarding their prognosis, future functional abilities and likelihood of decline, or their overall expected health state, ii) information-seeking opportunities, where veterans sought information on their prognosis, specific treatment options, or future care, and iii) social-support opportunities, where veterans discussed their future health within the context of their family/caregiver or broader social environment. Categories of provider responses to these communications included: i) incomplete responses, where the physician did not fully explore the comment, ii) misdirected responses, where the provider bypassed the comment by engaging in a related discussion and iii) terminated responses, where the provider invalidated or ignored the veteran's thoughts or feelings.

CONCLUSION:

These findings demonstrate particularly limited engagement in ACP by PCPs with their patients with HF. Patients actively seek information, empathy and guidance from their providers regarding their illness that may be overlooked or inadequately addressed by their provider. The missed opportunities for ACP identified here represent meaningful entries into discussions about planning and preparing for future care; active recognition of these opportunities may help providers to initiate what is already a difficult and complex topic.

Medicare Post-Hospitalization Skilled Nursing Benefit in the Last Six Months of Life [Katherine N Aragon](#)¹; Kenneth Covinsky¹; Yinghui Miao¹; W John Boscardin¹; Alexander Smith¹. ¹University of California San Francisco, San Francisco, California . (Proposal ID # 11101)

BACKGROUND: Older adults often transition to skilled nursing facilities (SNFs) following acute hospitalization in the last months of life under the Medicare SNF benefit. However, current Medicare policy prohibits concomitant payment for both SNF and Hospice services. We sought to examine patterns of SNF use following hospitalization in the last 6 months of life.

METHODS: We used the Health and Retirement Study (HRS), a nationally represented study of older adults, linked to Medicare claims data. From Medicare claims, we determined the number of individuals age 65+ who used the SNF benefit in the last 6 months of life following hospitalization, and their admitting diagnosis to SNF. Using linked data from the HRS, we examined demographic, social, and clinical correlates of SNF use.

RESULTS: Our sample included 4,516 patients who died between 1994 and 2006 (mean age 83 [sd 8], 54% female, 87% white). Age-adjusted use of the SNF benefit in the last 6 months of life increased from 17% in 1994 to 36% in 2006. The most common admitting diagnoses were heart failure (9%), hip fracture (6%), and rehabilitation (5%). Use of the SNF benefit was greater among patients who were: older (>85 36%, <85 26%), poorer (lowest quartile of net worth 34%, highest quartile 28%), and did not have cancer (no cancer 32%, cancer 26%) (all p<.001). These differences persisted after adjustment for age, sex, race/ethnicity, marital status, educational attainment, region, chronic conditions, and year of death. After using the SNF benefit 18% of patients enrolled in hospice and 27% died in a hospital. Among patients who died in 2006, 14% used the post-hospitalization SNF benefit 2 or more times in the last 6 months of life.

CONCLUSION: Over one-third of older adults now receive care in a SNF at the end of life under the Medicare SNF benefit. Many older adults shuffle between the hospital and SNF at the end of life. Although Medicare policy prohibits payment for hospice when patients are using the SNF benefit, many patients use the benefit near the end of life, suggesting a need to incorporate palliative services into the Medicare SNF benefit.

Hiring and Training Processes of Agencies Supplying Paid Caregivers to Older Adults Lee Lindquist¹; Kenzie Cameron¹; Joanne Messerges-Bernstein¹; Elisha Friesema¹; David Baker¹. ¹Northwestern University, Chicago, Illinois . (Proposal ID # 10972)

BACKGROUND: Seniors frequently rely on the assistance of paid, non-family caregivers to maintain independence in their homes. Caregivers often are asked to provide medication reminders, transportation to physician appointments, and support for activities of daily living. As the demand for caregivers increase, agencies or private businesses are supplying caregivers to seniors. No prior studies have examined what, if any, screening processes agencies use in selecting caregivers or what training is provided to the caregivers.

METHODS: We aimed to identify screening and training practices of agencies that provide paid non-related caregivers to seniors. Further, we assessed differences between caregiver salaries and agency charges. This study was considered exempt by the Northwestern University IRB. We phoned 432 agencies that advertised to supply home health care and caregiver services in senior-dense areas of Illinois, Wisconsin, Indiana, Arizona, and Florida. Agencies that (1) had 2 or less employees or (2) did not offer non-nursing home services were excluded. Telephone interviews were conducted with surveyors posing as prospective clients obtaining information on caregivers for a senior with dementia. Agencies were queried about their hiring practices, training, supervision, services provided and fee schedules.

RESULTS: Of the 432 caregiver agencies contacted, 139 fit the inclusion criteria. Of those surveyed, all performed screening procedures; 98% perform a criminal background check at the state level, but only 55% perform a federal check. Other screening measures include phoning references (100%), drug screening (33%), checking driving records (30%), requiring proof of auto insurance (4%), credit check (5%), and psychological evaluation (2%). Some agencies stated that they perform an "elder abuse record check", "social security number trace", "national caregiver background check", "circuit court access program medical assistant exclusion list", and "state caregiver check." On further investigation, we found no evidence of these databases and were unable to verify their existence. All agencies reported that caregivers could assist with reminding clients of medications, accompanying seniors to physician appointments, and following physician orders. Although these activities require strong health literacy, no agencies reported assessing potential caregivers' health literacy. Agencies primarily determined skill sets through self-report via questions of the caregiver (100%) during the hiring interview. Training of caregivers was extremely variable and included providing a manual, post-hiring training in the home of the senior by a care manager or nurse, shadowing other caregivers, or family effort after hiring. The range of time spent on training was 8 hours to 4 days. On average, agencies charged seniors an hourly rate of \$19.31 (\$12-\$28). Caregivers received \$8-10 an hour on average from prior reports. Of the agencies, 64% did not provide health insurance for their employee caregivers.

CONCLUSION: Using an agency to hire caregivers may give seniors and their families a false sense of security regarding the background and skill set of the caregivers. Recent studies have shown that caregivers make errors on medication regimens. More stringent screening, education, and training of caregivers by agencies are needed to ensure adequate care of their senior clients.