"Who's on First?" in the Chaos of Shared Decision Making: A Study of Doctor, Patient, and Objective Ratings of Shared Decision Making Using Directly Observed Encounters

Patrick G. O'Malley1,2, Dorothy Becher1, Gretchen Rickards2,1, Janice L. Hanson3,1, Jeffrey L. Jackson4,1; 1. Uniformed Services University, Bethesda, MD, United States. 2. Walter Reed National Military Medical Center, Bethesda, MD, United States. 3. University of Colorado School of Medicine, Aurora, CO, United States. 4. Medical College of Wisconsin, Milwaukee, WI, United States.

Background: Shared decision making involves complex patient-physician interaction, yet patient encounters tend to be chaotic, without coherent direction or dyad symmetry. We sought to explore how patients and doctors perceive the degree of shared decision making in the same chronic care encounters, and how well their perceptions correspond with objective assessments of the interaction.

Methods: Prospective, observational study of audiotaped encounters, with surveys of patients and physicians before and after the encounter. We enrolled a consecutive sample of 120 participants aged 40-80 y.o. with ≥ 3 additional chronic medical conditions (excluding dementia), and scheduled for a routine appointment with their primary provider. Immediately after the visit, patients and doctors were independently surveyed to assess the decision making style of the encounter along a 20-point spectrum ranging from “doctor-dominant” (0-6) to “shared” (7-13) to “patient-dominant” (14-20) decision making. The scale included behavioral descriptors in order to anchor one's choice. Three raters (PO, DB, GR) dual-rated transcriptions independently on the level of decision making complexity (low, medium, high), and the degree of shared decision making (20-item scale), blinded to the patient and doctor ratings; disagreements were reconciled through consensus. Agreement between patient, doctor, and objective ratings were measured using the intraclass correlation coefficient (ICC).

Results: Of the 105 patients who completed the visit, complete data was available on 98. The demographics were as follows: 53% F, 56% AA, mean age: 66yo, 88% were on 5 or more medications, only 8% had poor health literacy, and 30% had a very good or excellent functional status. The physician profile (N=11) was: 55% F, 28% AA, mean age: 48yo, and mean time since graduation: 19yrs. The level of decision making in the encounters was low in 61%, and mod/high in 39%. Categorical ratings of encounters (by collapsing scores into 3 groups), stratified by perspective (doctor, patient, objective), is presented in the table (below). Immediately after the visit, there was no agreement between patients and physicians on the degree of shared decision making during the visit (ICC = 0.06, P=0.37). By objective measurement, 88 of the 98 encounters were dominated by the physician (ie, scores from 0-9), and only 27 of those could be categorized as relatively "shared" (ie, scores of 7-9). When compared to objective ratings, physicians' ratings of shared decision making correlated more strongly (ICC=0.55, P<0.001) than patients' ratings (ICC=0.39, P=0.01).

Conclusions: Immediately after participating in the same chronic care encounter of mostly low to moderate decision complexity, both patients and physicians overestimated the degree of shared decision making, and neither agreed on the degree of shared decision making of the same encounter. Interventions to improve shared decision making will need to address 1. physician lack of awareness of their tendency to dominate encounters, and 2. both parties' ability to engage in true shared decision making.
Hospice Enrollment Preferences Among Physicians and the Timing of Their End-of-Life Care Discussions with Terminally-Ill Cancer Patients

Garrett M. Chinn1, 3, Michael Pang-Hsiang Liu2, Nancy L. Keating2, 3; 1. General Medicine, VA Boston Healthcare System, Boston, MA, United States. 2. Health Care Policy, Harvard Medical School, Boston, MA, United States. 3. General Medicine, Brigham and Women's Hospital, Boston, MA, United States.

Background: Physicians report preferences for care when they die that may be less aggressive than their patients generally receive, but few data are available about physicians’ preferences for end of life care. In addition, evidence suggests that physicians often delay in discussing hospice with their terminally-ill patients despite guidelines recommending such discussions for patients expected to die within 1 year. We explored factors associated with physicians’ reported preferences for hospice enrollment if they were terminally ill. We also assessed whether physicians who would enroll in hospice if terminally ill differed from other physicians regarding the timing of hospice discussions with their terminally-ill patients.

Methods: We surveyed physicians caring for cancer patients enrolled in the multiregional population-based Cancer Care Outcomes and Research Surveillance study (response rate 61%). Physicians indicated on a 5-point Likert scale how strongly they agreed or disagreed with the statement “If I were terminally ill with cancer, I would enroll in hospice.” They were also asked to assume they were caring for an asymptomatic patient who they believed had 4-6 months to live and report whether they would discuss hospice with the patient: “now”, “when the patient first develops symptoms”, “when there are no more non-palliative treatments to offer”, “only if the patient is admitted to the hospital”, or “only if the patient and/or family bring it up.” We used logistic regression to examine physician and practice factors associated with responding “strongly agree” that they would enroll in hospice. In a second model, we assessed if physicians who strongly agreed they would enroll in hospice were more likely than other physicians to report they would discuss hospice “now” with their terminally-ill patients.

Results: The 4,368 respondents had a mean age of 49.4 (SD 10.2), 80% were men, and 14%, 6%, 21% and 59% were medical oncologists, radiation oncologists, surgeons, and non-cancer specialists, respectively. Most physicians strongly (65%) or somewhat agreed (21%) that they would enroll in hospice if they were terminally ill. In adjusted analyses, physicians caring for a higher proportion of managed care and terminally-ill patients were more likely than other physicians to strongly agree they would enroll in hospice (both P<.03), as were female physicians (OR 2.0, 95% CI 1.6,2.4). Surgeons (OR 0.6, 95% CI 0.5,0.8) and radiation oncologists (OR 0.6, 95% CI 0.4,0.8) were less likely than medical oncologists to strongly agree they would enroll in hospice. Age, race, and teaching involvement were not associated with personal preferences for hospice. Overall, 26% of physicians reported they would discuss hospice "now" with a patient who had 4-6 months to live. Physicians who strongly agreed they would enroll in hospice themselves were more likely than other physicians to report discussing hospice “now” (OR 1.7, 95% CI 1.5,2.0) with a terminally-ill patient.

Conclusions: Most physicians reported they would enroll in hospice if they were terminally ill- particularly female physicians, medical oncologists, and physicians caring for more terminally-ill and managed care patients. Physicians with strong personal preferences for hospice were more likely than others to report discussing hospice with their patients early. Personal preference for hospice may influence physicians’ propensity to discuss hospice with their terminally-ill patients.
Relation of antihypertensive treatment intensification to patient-provider communication about adherence to medications

Varsha Vimalananda1, 2, Barbara G. Bokhour1, 3, Jeffrey Solomon1; 1. Edith Nourse Rogers Memorial Veterans Hospital, Center for Health Quality, Outcomes and Economic Research (CHQOER), Bedford, MA, United States. 2. Boston University School of Medicine, Boston, MA, United States. 3. Boston University School of Public Health, Boston, MA, United States.

Background: In treating patients with uncontrolled blood pressure (BP), providers must distinguish suboptimal adherence to medications from insufficiently intensive therapy. Provider communication strategies are crucial to effective assessment of adherence and thus may influence decisions about whether or not to intensify medical therapy. We explored the relationships between open- or closed-ended questioning, providers’ perceptions of adherence and decisions to intensify medications for hypertension (HTN).

Methods: Data were collected for the CATCH (Culture and Treatment Communication in Hypertension) study. CATCH recruited primary care providers (PCPs) and their patients from 2 VA medical centers. Eligible patients had a diagnosis of hypertension (HTN) and >=2 BP measurements above goal (>140/90mmHg or, for diabetes, >130/80mmHg) in the preceding year. We audiorecorded and transcribed 52 clinical interactions between patients and PCPs. In 43 encounters, PCPs clearly discussed intensification or non-intensification of medications. Among these, we coded segments related to medication-taking according to pre-specified categories based on our analytic goals: patient- or provider-initiated discussion; open- or closed-ended questioning; intensification or non-intensification of medication; and perceived acceptable or unacceptable adherence. For perceived adherence we determined provider assessment based on either explicit statements about adherence or patients’ passive agreement with provider’s declarative statements.

Results: Of the 43 encounters, 22 resulted in treatment intensification and 21 did not. Forty patients were male. The intensified group was younger (57.5±11.1 vs. 61.3±7.2 years) and had a higher mean BP (166/97±21/11 vs. 155/92±13/8 mmHg). Adherence was addressed in most encounters (39/43) (Figure). Providers initiated the medication-taking discussion more often than did patients (65% vs. 27%). Providers used closed-ended more frequently than open-ended questions (75% vs. 25%). Intensification was more likely to occur when providers used closed-ended vs. open-ended questions (71% vs. 40%). Intensification occurred least frequently (27%) when patients initiated the conversation. The perception of acceptable adherence was much more likely in cases of closed-than in cases of open-ended questioning (76% vs. 13%).

Conclusions: The methods that providers use to assess adherence in patient encounters influence decisions about treatment intensification for HTN. Use of closed-ended questions is likely to result in incomplete information about adherence, leading to inaccurate judgments of the need to intensify therapy.
Language Interpretation Errors and their Clinical Significance in the Medical Encounters of Spanish-speaking Latinos.

Anna M. Napoles1, Jasmine Santoyo-Olsson1, Leah Karliner1, Eliseo J. Perez-Stable1; 1. UCSF, San Francisco, CA, United States.

Background: Limited English proficient (LEP) patients with language concordant clinicians experience better outcomes of care than LEP patients with discordant clinicians. Due to shortages of language concordant physicians, there is a need to understand the impact of language interpretation on physician-patient communication and quality of care. Across three interpretation modes: professional in-person (PI), remote professional via videoconferencing (VMI), and ad hoc (non-professional, untrained; AH) interpreters, this study compared: 1) the frequency of interpreter communication behaviors, and 2) ratings of the clinical significance of interpretation errors.

Methods: Selected patients, representing 3 modes of language interpretation (PI=5, VMI=22, AH=5), were recruited from a public hospital primary care clinic in Northern CA between May-Oct 2005 and audio recorded. Verbatim transcripts were independently coded by two investigators using a coding scheme that classified interpreter behaviors into one of eight categories: two positive (non-error) or six negative (error) codes: accurately interprets (+), asks for clarification (+), makes an addition (–), makes a substitution (–), answers for patient or clinician (–), makes an omission (–), editorializes (–), and uses incorrect words (–). The unit of analyses was an identifiable segment of continuous speech or text unit (TU). Two general internists verified the coding of the first two coders and applied independently another coding scheme to the negative behaviors (errors) that assessed their clinical significance on a 1=clinically insignificant to 4=highly clinically significant scale. All coding was adjudicated until consensus was reached.

Results: Mean age of patients (n=32) was 53 years (SD 15.8), 75% were women, 88% had < high school education, and 56% were uninsured. Mean age of clinicians (n=14) was 51 years (SD 11.5), 71% women, 50% non-Latino White, 80% general internists, and 50% had no previous training on using interpreters. A total of 2,945 TUs were coded; 30% (N=872) of text units were coded as errors, with an average of 27 errors per visit. Errors of omission were 65% of all errors coded. Accurate interpretation occurred less frequently in AH interpreted visits (38% vs. PI=66% and VMI=65%; p<.05). The distribution of types of interpreter errors by mode of interpretation was similar except for makes an omission (AH=33%, vs. PI=16% and VMI=16%; p<0.05) and answers for patient or clinician (AH=16%, vs. PI=1% and PVC=1%; p<0.05), which occurred more frequently in AH interpreted visits. Clinically significant errors occurred frequently, (59% of all errors, although only 7% were rated as moderately or highly clinically significant). The mean clinical significance rating of errors was 1.67 (SD 0.61).

Conclusions: Clinically significant errors in medical interpretation are fairly common in primary care visits of Spanish-speaking patients. Ad hoc interpreted visits result in more interpreter errors of omission and answering for patients or clinicians, indicating lower quality interpretation. Expansion of professional interpreter services for LEP patients either through in-person or videoconferencing modes is warranted.
A randomized, controlled trial of alternative forms of feedback on glycemic control in patients with poorly controlled diabetes

Anjali Gopalan1,3, Emin Tahirovic2, Haley Moss2, Andrea B. Troxel2, Jingsan Zhu2, Kevin G. Volpp1,2; 1. Philadelphia VA Medical Center, Philadelphia, PA, United States. 2. Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA, United States. 3. University of Pennsylvania, Robert Wood Johnson Clinical Scholars Program, Philadelphia, PA, United States.

**Background:** Prior work has indicated that understanding of the hemoglobin A1c (A1c) among diabetic patients is low. A 2008 study in the British Medical Journal by Parkes et al. showed the potential effectiveness of translating poorly understood medical values into more universally understood forms. This study expressed FEV1 in terms of “lung age” to active tobacco users. Patients given their “lung age” in place of their FEV1 value had significantly higher rates of smoking cessation at study completion. This approach may hold promise for improving feedback for diabetic patients on glycemic control.

**Methods:** We randomly assigned 177 poorly controlled diabetics seen at University of Pennsylvania outpatient practices to receive a “diabetes report card” with individualized information about glycemic control in one of three study arms: (1) letter grades ranging from A-F (grade arm); (2) faces whose emotion reflected current glycemic control (face arm) or (3) actual A1c value (control arm) (Figure 1). The primary study outcome was change in A1c values between baseline and 6 months. Secondary outcomes were changes in participant perceptions of their current diabetes control, disease severity, and future risk of associated complications.

**Results:** The average A1c for enrolled participants was 9.9±1.7% and did not differ significantly between study arms. The pre-intervention survey confirmed high levels of misunderstanding of current glycemic control, with the majority (63%) of participants describing their control as ‘moderate’ or ‘good’/‘excellent’ in spite of an average A1c of 9.8% and 10.2%, respectively. We noted no significant differences in change in A1c at 6 months between the control arm and the experimental arms. Using multiple imputation to handle missing A1c values, the change in A1c for the grade, face, and control arms was -0.55 ±0.3%, -0.89±0.3%, and -0.74±0.37%, respectively (p=0.67 for grade vs. control, p= 0.76 for face vs. control). We found no significant differences between study arms for the changes in perceptions of current diabetes control, severity, and future complication risk.

**Conclusions:** Letter grades and faces did not differentially affect A1c at 6 months or participant perceptions of current control in this population of poorly controlled diabetics. This may reflect the particular alternatives tested in this study, without invalidation of the concepts that improving communication and patient understanding of disease management targets could significantly improve diabetes outcomes.
Patient and Physician Satisfaction With an Electronic Medical Record (EMR): Correlations With Computer Activity

Neil J. Farber1, Yunan Chen3, Alan Calvitti1,2, Richard L. Street4,5, Danielle Zuest2, Lin Liu1, Kristin Bell2, Mark Gabuzda2, Barbara Gray2, Zia Agha2,1; 1. Medicine, University of California, San Diego, La Jolla, CA, United States. 2. Medicine, San Diego VAMC, La Jolla, CA, United States. 3. University of California, Irvine, Irvine, CA, United States. 4. Texas A & M University, College Station, TX, United States. 5. Baylor College of Medicine, Houston, TX, United States.

Background: The use of electronic medical record (EMR) systems by primary care physicians has increased in recent years. Although there are clear benefits to EMRs, such as better availability of medical information and potentially decreased medical errors, some have expressed concerns about an increased workload for physicians, as well as problems with patient-physician interaction. However, no studies have examined the association of patient or physician satisfaction with physician EMR usage intensity. The data reported in this abstract, part of a larger study involving EMR use in a VAMC, look at correlations between actual computer use by physicians during the patient-physician interaction and the satisfaction of patients and physicians during that interaction.

Methods: General internal medicine physicians in VAMC continuity practices located in one West Coast city were recruited to be part of this study. Each participating physician identified up to 6 patients to participate in the study. All patients were visiting the physician for either a follow-up or an acute visit. Physician use of the computer and the patient-physician interaction in the exam room were captured in real time via videotape of the interaction, videotape of the computer screen, and through the use of the Morae system that records physician clicks and scrolls on the computer. Physicians and patients completed satisfaction surveys (patients with their physicians, physicians with the EMR system and patient-physician interaction). Spearman correlation coefficients were used to analyze the correlations between patient satisfaction with the physician, and the amount of physician time spent viewing the computer; and for the correlations between the physician satisfactions with the EMR system and various computer activities.

Results: Video and Morae data, and satisfaction surveys, were collected on a total of 126 individual patient office visits for the 23 participating physicians. The total time spent using the EMR during the clinical visit negatively correlated with the satisfaction of the perceived interactional skills of the physician (p = 0.05), and patient-centered communication was positively associated with the time spent by the physician with the patient and companion (p = 0.01). Physician satisfaction was negatively correlated with the total number of clicks and scrolls using the EMR (a measure of the time using the EMR), including adequacy of data collection (p = 0.0024), use of time in the interaction (p = 0.0017), physician-patient relationship (p = 0.0368), and the cooperative nature of the patient (p = 0.0317).

Conclusions: In this study of VA general internists’ use of the EMR, patient satisfaction with the physicians’ interactional skills, and physicians’ satisfaction in several spheres of the clinical interaction were negatively correlated with an increased physician use of the EMR during the clinical visit. EMR systems need to be designed in a more physician friendly manner that allows for increased physician time during the interaction for face-to-face communication with the patient, and to ease the workload of EMR documentation. In the meantime, physicians should be coached about how to expedite their use of the EMR during the clinical visit as well as outside of the exam room in order to improve both theirs and their patients’ satisfaction.