Treating Complex Patients in Primary Care: Physician Offer a New View of Competing Demands

Danielle F. Loeb¹, Elizabeth A. Bayliss²,³, Carey Candrian¹, Frank V. deGruy³, Ingrid A. Binswanger¹; 1. General Internal Medicine, University of Colorado School of Medicine, Aurora, CO, United States. 2. Institute for Health Research Colorado, Kaiser Permanente, Denver, CO, United States. 3. Family Medicine, University of Colorado School of Medicine, Denver/Aurora, CO, United States.

Background: Complex patients with multiple chronic conditions present unique management challenges for primary care physicians (PCPs). Polypharmacy, multiple consultants, and conflicting guidelines for their different conditions complicate the care of these patients. We sought to understand PCPs’ experiences in managing complex patients, the system barriers and facilitators in their management, and the changes PCPs feel would improve their ability to effectively treat these patients.

Methods: This study was a part of a qualitative investigation of physician experiences with complex patients. We recruited 15 internal medicine PCPs from 2 university clinics and 3 community health clinics using email notices sent to all physicians in the practices. We used systematic non-probabilistic sampling to achieve an even distribution of participants with respect to gender, years in practice, and practice site. Providers received a working definition of complexity in advance of the interviews and were asked to bring de-identified notes from three patient encounters with patients they considered complex. We conducted open-ended in-depth interviews. Transcripts were coded and analyzed utilizing a team-based participatory general inductive approach.

Results: PCPs described daily struggles and successes in caring for patients with complicated medical, psychological, and social needs. From these descriptions four primary domains emerged: 1) healthcare system barriers, 2) institutional barriers, 3) the importance of PCP attitudes, and 4) PCPs’ personal strategies for managing these patients. Physicians experienced competing demands in their efforts to overcome institutional and structural barriers while trying to live up to their own ideals. (Figure 1) They attributed many of their struggles to inadequate time and resources. In particular, they expressed frustration over the lack of support in addressing patients’ social and mental health needs. They defined their successes as times when they were effectively able to fulfill what they saw as their true role as a PCP: managing medical issues to help patients avoid hospitalizations, using their knowledge and trusting relationships with patients to help patients make difficult medical decisions, and coordinating the care of multiple specialists. PCPs felt that systematic changes such as decreasing productivity demands on providers caring for complex patients and improving support services for complex patients would allow them to use their expertise to effectively manage the overall care of these patients.

Conclusions: In this study, we identified core struggles in the daily practice of PCPs managing complex patients. New models of care such as the patient centered medical home may address some of these struggles. However, whether these models of care alone can meet the time and personnel resource needs of complex patients still needs further investigation.
**Background:** Significant resources in the United States and other countries are being directed to comparative effectiveness research. Medical care decisions arising from evidence-based medicine involve input from policy makers, clinicians, and patients. The degree to which the methods and results of scientific studies in health are of interest to patients is not known. The objectives of this study are to describe patient attitudes and beliefs towards evidence-based medicine in health.

**Methods:** A focus group study was conducted. Participants were recruited from a primary care population in the urban community of West Philadelphia. Purposeful sampling was used to recruit a population that was diverse in race and education. A focus group guide was developed to explore participant attitudes towards science and interest in and value placed on scientific evidence in health. Sessions were audio-recorded, transcribed verbatim, and entered into NVivo10 software for analysis. Transcripts were coded by two independent coders with agreement determined using the Kappa statistic and % agreement. A thematic analysis was undertaken and a theoretical framework developed to describe the relationships and insights gained in the study.

**Results:** Four focus groups were conducted with a total of 31 participants. Study subjects were diverse in race (71% African-American, 23% White, and 3% Asian), educational background (48% with only a high school level education) and gender (61% female). Age ranged from 30 to 68 years. Subjects described a wide range of attitudes towards science and knowledge about the scientific process. The perceived value of scientific studies in health varied according to the medical topic addressed by the study (screening, prevention, or treatment studies), personal relevance of the condition, the organization designing and funding the study, and source of information. Some participants expressed interest in details regarding methods and results of scientific studies while others wanted only general information. Four factors were found to inform attitudes towards scientific studies in health; 1) education and scientific literacy, 2) trust in the medical care system and medical research, 3) cultural and family values, and 4) medical conditions of self and significant others. A theoretical framework emerged in which attitudes regarding evidence-based medicine were defined by the following factors; 1) perceived importance of knowledge regarding scientific studies in health, 2) interest in details regarding the methods and results of scientific studies, and 3) perceived value of information about scientific studies from trusted sources.

**Conclusions:** The study reports a wide range of attitudes and beliefs regarding scientific studies in health. Attitudes and beliefs were informed by individual factors including scientific literacy, education, culture and family values, and personal health experiences. A segment of the study population expressed a strong interest in detailed information regarding methods and findings of scientific studies in health. These findings have policy implications. Efforts are needed to effectively communicate comparative effectiveness research findings to patient populations who desire and value this information. Communication strategies may include identification of trusted sources and tailoring information to levels of scientific literacy.
Treatment Trials in Intensive Care

Yael Schenker¹, Greer A. Tiver¹, Seo Yeon Hong², Douglas B. White³; ¹. Medicine, University of Pittsburgh, Pittsburgh, PA, United States. ². Biostatistics, University of Pittsburgh, Pittsburgh, PA, United States. ³. Critical Care Medicine, University of Pittsburgh, Pittsburgh, PA, United States.

**Background:** Family members of critically-ill patients in the ICU face complex choices about whether to continue life-sustaining therapies or transition to comfort care. Offering limited trials of intensive care for patients with an uncertain but relatively poor prognosis has been recommended as a way to frame treatment options that accords with many patients’ preferences. However, to date it is not known the extent to which treatment trials are discussed or how they are presented in actual practice. We sought to characterize whether and how the option of a treatment trial is discussed with families during decision making about life-sustaining treatment.

**Methods:** We conducted a mixed-methods cohort study of audio-recorded family conferences in 5 ICUs at two hospitals in San Francisco, California. We identified conferences about life-sustaining treatment decisions by asking physicians beforehand if they anticipated discussion of withholding or withdrawing treatment or bad news. We used the analytic technique of qualitative description with constant comparative techniques to inductively develop a framework categorizing: 1) types of trials and 2) discussion of advantages or disadvantages of trials. Based on prior work, we also assessed whether and how three key elements of a trial were discussed: clinical milestones to evaluate outcomes of the trial, a suggested timeframe for re-evaluation, and a description of potential actions at the end of the trial. Kappa statistics for our main results ranged from 0.85-1.0, indicating excellent inter-rater reliability.

**Results:** A total of 169 family members and 54 physicians participated in 72 family conferences for patients at high risk of death or severe functional impairment. Audio-recorded conferences took place an average of 10 days after ICU admission. The inpatient mortality rate was 72%. Trials were offered in 15% (11 of 72) conferences and consisted of two types: 1) time-limited trials, defined as continuing life-sustaining treatment with a plan to reassess after a defined period of time using clinical milestones and 2) symptom-limited trials, defined as discontinuing life-sustaining treatments but continuing basic medical care aimed at survival - rather than transitioning to a purely palliative approach - with a plan to reassess based on the patient’s symptoms. Discussion of advantages and disadvantages of a treatment trial focused on whether a trial would be in accordance with the patient’s wishes; whether the patient may be more comfortable, live longer or recover; and whether a trial might provide benefit to the family. Clinicians frequently did not fully address key elements of a trial, such as specific criteria by which its effectiveness would be evaluated and possible next steps based on the results of the trial.

**Conclusions:** In this cohort of patients with advanced critical illness, trials were infrequently and incompletely discussed. We present an empirically-derived framework describing two types of treatment trials in intensive care. Additional work is needed to improve communication about treatment trials and evaluate their impact on patient and family outcomes.
Building cost-consciousness through cost transparency: is this the right approach? The clinician perspective

Jenna Kruger¹, Alice H. Chen¹, Alex Rybkin², Kiren Leeds¹, Dominick Frosch³,⁴, L. E. Goldman¹; ¹. Medicine, University of California, San Francisco, San Francisco, CA, United States. ². Radiology, University of California, San Francisco, San Francisco, CA, United States. ³. Medicine, University of California, Los Angeles, Los Angeles, CA, United States. ⁴. Palo Alto Medical Foundation Research Institute, Palo Alto, CA, United States.

Background: The demand for radiologic imaging studies has increased dramatically, contributing to rising health care costs and exposing patients to radiation. Medicare and Medicaid reimbursement policies are moving towards global payments and capitation, increasing pressure on health systems relying on these payers to increase clinicians’ cost-consciousness. One strategy to increase clinician cost-consciousness is greater cost transparency when clinicians order imaging studies. We sought to evaluate (1) clinician attitudes and practices toward considering cost information when ordering diagnostic imaging studies in an urban outpatient safety-net setting; and (2) clinician reactions to a planned intervention posting Medicare reimbursement information for imaging studies at the point of clinician electronic order entry.

Methods: We conducted a qualitative study consisting of 9 focus groups among a diverse group of salaried clinicians representing 12 safety-net clinics using a common electronic order entry system (6 focus groups with primary care clinicians and 3 with subspecialty physicians in nephrology, pulmonary, and neurology, total N=44 clinicians). Focus group guides focused on clinician attitudes about how costs to patients and to society affect their practice, potential harms and benefits of posting Medicare reimbursement information at clinician electronic order entry for imaging studies (ultrasound, cat scan, and magnetic resonance imaging), and suggestions to improve the intervention. Focus groups were audio-recorded and transcribed. Two researchers (JK, LG) systematically coded the transcripts, and discussed differences to reach consensus using an inductive thematic analysis framework to identify emergent themes.

Results: Clinician responses to incorporating cost in clinical decision-making varied widely. Some clinicians reported regular discussions with patients about costs (to patients and to society) while others were highly concerned about cost influencing individual patient care decisions. In general, clinicians believed that they only ordered clinically impactful tests due to resource constraints in the safety-net and lack of personal financial incentives to order imaging, yet most noted that the lack of patient co-pays in their practice limited their consideration of costs in clinical decisions. Several clinicians expressed ethical concerns with posting reimbursement information at the site of electronic order entry; they worried that it could lead to inappropriate rationing of care, and if viewed by patients, could exacerbate patient perceptions of receiving “second class” care. Many clinicians emphasized the limitations of an intervention focused on the costs of imaging tests without a global understanding of other health system costs. Clinicians recommended that cost-consciousness be promoted through system-wide education and peer-practice feedback rather than a point of service intervention, particularly in safety-net settings.

Conclusions: Initiatives to increase cost-consciousness in health care should incorporate an educational component relevant to the target audience and should monitor for potential unanticipated adverse consequences for patient care, particularly in safety-net settings where patients may be more vulnerable. System-wide education and peer-practice feedback may be more appropriate tools to building cost-consciousness among clinicians in the safety-net than cost transparency at the site of order entry.
Patients Have Something to Say: Analysis of 514 Patient Safety and Quality Comments from the PROMISES Patient Survey

Namara Brede1, Sara Singer3,5, Harry Reyes Nieva1, Judy Ling2, Nicholas Leydon2, Caitlin A. Colling1, Patricia Satterstrom4,3, Catherine Yoon1, Endel J. Orav1,3, Joel S. Weissman1,5, Donald Goldman6, Madeleine Biondolillo3, Gordon D. Schiff1,5; 1. Division of General Internal Medicine and Primary Care, Brigham and Women's Hospital, Boston, MA, United States. 2. Department of Health Care Safety and Quality, Massachusetts Department of Public Health, Boston, MA, United States. 3. Harvard School of Public Health, Boston, MA, United States. 4. Harvard Business School, Boston, MA, United States. 5. Harvard Medical School, Boston, MA, United States. 6. Institute for Healthcare Improvement, Boston, MA, United States.

Background: The PROMISES (Proactive Reduction of Outpatient Malpractice: Improving Safety, Efficiency, and Satisfaction) project is an AHRQ-funded quality improvement initiative to assess and reduce malpractice risks in primary care practices in Massachusetts. As part of the project’s baseline evaluation component, a patient survey was administered that included a free-response question. This paper draws on responses to that question to describe patients’ ideas about how their providers and practices could improve the care and services they received.

Methods: Data were collected by a professional research firm using a newly developed mail survey tool that combined elements of CAHPS and AHRQ patient safety culture instruments. In each of 25 practices across Massachusetts, we recruited from 81 to 150 patients seen over several weeks. Patients were given the opportunity to opt out of the survey, and the survey was administered to the remaining 3582 patients. Qualitative comments were transcribed by the research firm and then coded thematically by PROMISES investigators into categories reflecting broad themes; each individual comment was placed into one or multiple categories. Comments falling into each category were coded as either positive or negative, and we summarized the number of responses in each group.

Results: Of those surveyed, 1648 patients (47%) responded to the survey; 514 of these surveys (31%) contained patient comments. 182 patients offered positive comments about their care, 251 voiced negative comments, and 70 noted both positive and negative aspects of care. About half of the comments (228) included concrete suggestions for improvements, e.g., “follow through on referrals,” “provide for STAT appointments,” and “let me bypass the automated phone system.” The single most common theme was communication with physicians (114 comments: 20 positive/94 negative); e.g., “[my doctor] is attentive to my needs, thorough in her explanations,” and “they need to spend more time with patients and listen.” Patients also commented on communication with office staff (103 comments: 64+/39-), overall satisfaction with care (99: 60+/39-), office waiting time (79: 11+/68-), timely appointment scheduling (68: 16+/52-), professional caregiver competency (52: 34+/18-), communication with NPs/PAs (43: 18+/25-), test result management (36: 2+/34-), office visit time (28: 1+/27-), referral management (26: 7+/19-), office facilities (23: 2+/21-), insurance/billing (21: 1+/20-), office organization (19: 3+/16-), medication management (19: 3+/16-), and trust of providers (12: 9+/3-).

Conclusions: Patients provided an unexpected abundance of comments, revealing some striking patterns. While the most common themes related to communication, other concerns, including waiting time and test and referral management, were also frequently cited. Some themes were almost always mentioned in a negative light (insurance/billing and test result management), while others were more positive or mixed (communication with staff and professional competency of caregivers). These comments provided useful feedback to individual practices, and also illuminated areas of importance for patients. This rich and complex dataset highlights possible areas of focus for future malpractice risk reduction and quality improvement work in the primary care setting.
How physicians’ presentation of information about PCI to patients with stable angina may contribute to their belief that it is a life-saving intervention

Sarah L. Goff¹,², Kathleen M. Mazor³, Michael B. Rothberg⁴; 1. Medicine, Baystate Medical Center/Tufts University School of Medicine, Springfield, MA, United States. 2. CTSI/Tufts University School of Medicine, Boston, MA, United States. 3. University of Massachusetts Medical School/Meyers PCI, Worcester, MA, United States. 4. Medicine, Cleveland Clinic, Cleveland, OH, United States.

Background: More than 600,000 percutaneous coronary interventions (PCI) are performed annually in the U.S. For patients with chronic stable angina, the benefit of PCI is limited to symptom reduction, yet many patients mistakenly believe that PCI will prevent myocardial infarction or death. We sought to illuminate how physicians’ presentations of PCI may contribute to patients’ misperceptions.

Methods: Using the Verilogue Point-of-Practice Database (which includes visits with >600 physicians in 9 geographic regions throughout the U.S.), we searched outpatient/non-acute visit transcripts recorded between March 2008 and August 2012 for mention of PCI, cardiac catheterization, angiogram or stent placement. We included only transcripts of visits in which PCI was discussed with a cardiologist. After we developed an a priori codebook, one team member performed qualitative content analysis on all the transcripts, adding codes iteratively until theoretical saturation was achieved. A second member read a subset of transcripts and recommended revisions to the codebook. Codes were then revised and sorted into pertinent themes.

Results: We analyzed 36 transcripts. Patients ranged in age from 44-88 years (median = 67) and 9 (23%) were women. “Rationale for recommending PCI” was identified as a major theme; sub-themes related to how PCI benefit was presented included items that may contribute to patients’ misperceptions. Many physicians informed patients that catheterization was the “only way to know for sure” about their coronary artery disease, suggesting that catheterization would be preferable to uncertainty about the presence, extent and location of disease. The implication was that once they “know for sure”, an intervention could improve the patient’s outcome; “That will show us for sure…then we can probably just [sic] go ahead….put in a stent… [and] have it taken care of”. Some physicians over-simplified the pathophysiology by using plumbing imagery “…sometimes we can also use a Roto-Rooter [to eliminate a blockage]”. They also stated that PCI would “fix” the problem; “the next step forward is a cardiac catheterization, with the intent of fixing a problem if there is a problem”. When patients questioned the need for PCI, some physicians overstated PCI benefits both implicitly and explicitly; “You sound good, you look good, but I want to keep it that way... I don't want things to happen to you while you're walking the steps or riding your bike,” and “I wouldn’t want you to have another heart attack.” Only one physician explicitly stated that the only benefit of PCI for stable angina was symptom reduction and there would be no reduction in mortality or risk for MI. Although many physicians informed patients that they would need to take medication, few discussed maximizing medical management as an alternative to PCI. When discussions of alternatives to PCI did occur, it was generally only after a patient expressed hesitation about PCI.

Conclusions: In this study, some physicians presented information about PCI in a manner that may contribute to patients’ misperception of the benefit of PCI for stable angina. A larger quantitative study is required to understand how often physicians may misrepresent the benefits of PCI when discussing it with patients.