Letting patients decide: a novel strategy for increasing use of patient decision aids in primary care

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Statement of Problem or Question (one sentence): Patient decision aids have been shown to help inform and engage patients in decision making, however, implementation of decision aids in primary care has had limited success. A significant barrier is the identification of eligible patients for decision aids. We have tested an intervention of patient self-ordering of decision aids.

Objectives of Program/Intervention (no more than three objectives): 1. Design an intervention that allows patients to self-order decision aids. 2. Identify differences in ordering patterns of patient-triggered versus physician-initiated decision aid ordering. 3. Identify areas of unmet need for decision support based on patient ordering patterns of decision aids.

Description of Program/Intervention, including organizational context (e.g. inpatient vs. outpatient, practice or community characteristics): Our intervention was conducted in an internal medicine primary care clinic that has a well-established program in which physicians can order DVD and booklet decision aids for patients through the electronic medical record. Most of these orders take place during the office visit and patients view programs after the visit.

We created an order sheet to be included with the mailed reminder letter for the annual visit. The sheet listed 14 commonly-used decision aids and patients were instructed to select up to two decision aids of interest. Medical assistants processed the returned forms and the decision aids were mailed to patients prior to the annual visit.

Measures of success (discuss qualitative and/or quantitative metrics which will be used to evaluate program/intervention): We analyzed information on ordering patient gender and age, and number and types of decision aid orders by patients and providers (data follows). We are also surveying patients who have received decision aids on their knowledge about the target conditions and their decision-making process. We will also be measuring office staff and provider satisfaction with the distribution process and enhanced use of the decision aids.

Findings to Date (it is not sufficient to state “findings will be discussed”): We analyzed information on gender, age, and decision aid orders by patients and providers during a three-month period. From Sept-Nov 2012, 54/767 (7%) patients returned the order form, 57% were female and the average age was 60. Patients ordered 121 decision aids, an average of 2.2 decision aids each. The top three programs ordered by patients were advance directives (n=18), anxiety (n=16) and insomnia (n=15). During that same time period, physicians in the practice ordered 83 decision aids. The top three programs ordered by physicians were prostate cancer screening (n=20), advance directives (n=14) and insomnia (n=11).

The ordering process was well-received by patients and by office staff. Medical assistants and front desk staff became engaged in the decision aid program and were integral to project design. The project successfully introduced a new workflow to a practice that had previously relied solely on physician-driven ordering of decision aids.

Key Lessons for Dissemination (what can others take away for implementation to their practice or community?): Engaging patients in self-ordering of decision aids has the potential to significantly increase the use of the tools. There appears to be an unmet need given the level of interest patients have in ordering these programs. Patients ordered programs on chronic symptomatic conditions (e.g. insomnia and anxiety) at a higher rate than did physicians, who ordered more programs on cancer screening options and advance directives planning. Further research is needed to determine whether the programs have a different impact when patients self-select programs versus receive them from physician prescription. The program continues with full engagement of office staff and physicians.
Multidisciplinary longitudinal approach toward patients with high admission rates

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Statement of Problem or Question (one sentence): To identify high-volume users and develop a process for creating longitudinal care plans that would be implemented at the time of Emergency Department (ED) arrival so as to optimize care and decrease readmissions.

Objectives of Program/Intervention (no more than three objectives): 1. Create a multidisciplinary committee (Complex Care Committee or CCC) to review identified patients and determine and fix gaps in care. 2. Develop brief care plans that can be placed into the ED record to help assist providers in decision making regarding admission and care. 3. Improve transitions in care and ultimately reduce readmission rates.

Description of Program/Intervention, including organizational context (e.g. inpatient vs. outpatient, practice or community characteristics): Patients were selected for review if they had greater than 3 admissions over 3 months, or if they were designated by case management as a good candidate for intervention. At each biweekly meeting, the charts for the last few hospital stays are pulled for each patient. Input is obtained from committee members and the primary care physician regarding the medical and social history, baseline vitals and medications, therapeutic interventions and key consultants. Following discussion, a care plan is created and placed on a password protected share drive. Because the ED has an electronic medical record (EMR) and is independent of the hospital system, which lacks an EMR, key components from the care plan are placed into the ED record for reference by providers. Some interventions for these patients include designating the same hospitalist across all visits, predetermined pain regimens, and prepaid patient phones at time of discharge. At each CCC meeting, updates on all CCC patients are discussed and care plans are modified accordingly.

Measures of success (discuss qualitative and/or quantitative metrics which will be used to evaluate program/intervention): The primary success outcome was a reduction in the number of admissions to less than 1 hospital admission per month. This was calculated by rate of admissions per month prior and after care plan development. Secondary outcomes were the rate of ED visits and length of stay prior and after care plan development.

Findings to Date (it is not sufficient to state “findings will be discussed”): From August 2011 to August 2012, we reviewed 61 patients. For purposes of data analysis, we excluded patients with a diagnosis of sickle cell disease, patients which we had discussed less than 3 months ago, and patients that did not have a care plan placed into the ED medical record. In the remaining population (n=31), after creation of a care plan we decreased the hospitalizations by 49% (p=.004) and overall acute care visits (ED and hospital visits) by 30% (p=.19). We also saw a slight decrease in ED visits in this population by 2% (p=.954).

Key Lessons for Dissemination (what can others take away for implementation to their practice or community?): By examining high volume, high utilizing patients in this manner, organizations can design a targeted approach that encompasses both the medical aspect and the socioeconomic difficulties that face these patients. Using this methodology, organizations can start to think of each hospitalization almost as a ‘clinic visit’, with the ultimate goal of achieving good outpatient follow-up and care. Providers will also become more aware of surrounding community resources that were previously underutilized, as well as gaps in the hospital and community safety net.
A population management system for improving colorectal screening rates in a primary care setting

Statement of Problem or Question (one sentence): Provision of colorectal cancer (CRC) screening in primary care is currently suboptimal because of uncoordinated care systems and poor patient-provider communication.

Objectives of Program/Intervention (no more than three objectives): Our goal was to optimize adherence to evidence-based guidelines for CRC screening in a large hospital-based academic primary care clinic by shifting non-visit-based health maintenance tasks from a physician-dependent to team-based model using an interactive IT registry tool (TopCare-PIMS).

Description of Program/Intervention, including organizational context (e.g. inpatient vs. outpatient, practice or community characteristics): TopCare-PIMS is an automated, closed-loop network of 5 inter-related registries that monitor and track patients overdue for CRC screening at the Phyllis Jen Center at Brigham and Women’s Hospital. This system is rooted in a population-based, rather than visit-based, workflow and empowers providers to utilize non-clinical support staff to perform tasks, including:
- contacting patients via mail and phone
- obtaining and scanning outside records
- systematically documenting patient decline after discussion of risks and benefits
- deferring patients from screening for specified periods of time
- excluding patients permanently from screening

Provider training in TopCare-PIMS was performed in 5 suites, with plans to expand to 3 remaining suites, representing approximately 2400 total overdue patients. LEAN/six sigma quality improvement principles and process mapping guided implementation.

Measures of success (discuss qualitative and/or quantitative metrics which will be used to evaluate program/intervention): First, we conducted semi-structured interviews and observations with providers to understand barriers to registry use and task delegation to other team members.
Second, we began extracting monthly data from TopCare-PIMS to provide real-time trends in physician compliance with CRC screening. Reasons for patient non-participation were obtained to guide future interventions to increase screening rates.

Findings to Date (it is not sufficient to state “findings will be discussed”): During Phase 1 implementation in the first two suites, 19 of 31 physicians received 1:1 training while the rest were trained via written materials. Prior to implementation, 445 patients were overdue for colonoscopy out of a total of 1050 patients. The screening rate improved from 58% to 68% over 9 months. The overall rate of adherence to the evidence-based algorithm (including documented deferred tests, as well as outside tests) increased to 83%.

Among 445 overdue patients: 44 new colonoscopies were ordered via the TopCare-PIMS, 164 patients were deferred, and 88 outside colonoscopies were documented.

After system optimization based on Phase 1, including integrating a real-time algorithm for PCP-patient linkage and improving capture of outside colonoscopy record entry from our EMR, we began Phase 2 implementation to 3 additional suites in 12/2012.

Key Lessons for Dissemination (what can others take away for implementation to their practice or community?): We have begun to successfully implement a population management system that uses closed loop communication to improve CRC screening rates.
- Well-designed IT systems can enable sharing of patient care responsibilities and allow physicians to practice at the top of their license.
- Process mapping helped us understand deficiencies in the current siloed screening process and helped us build a safer, more efficient process.
- Interdepartmental collaboration with the endoscopy team was crucial for project success.
- Implementing population management systems present novel opportunities for working across institutions and departments in the evolving “medical neighborhood.”
Providing timely, low-cost, access to specialty care in a fee-for-service setting: Implementation of an eConsult system

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Statement of Problem or Question (one sentence): Electronic consultations (eConsults) allow primary care physicians (PCPs) efficient access to specialist input on clinical questions that do not require an in-person evaluation, and integrated delivery systems have shown that eConsults can improve access to specialty care; however, implementation of eConsults in a traditional fee-for-service setting has structural and financial barriers.

Objectives of Program/Intervention (no more than three objectives):
1. To develop common expectations, and a financial model, for an eConsult program with robust input from PCP and specialist stakeholders.
2. To integrate the workflow into the shared Electronic Health Record (EHR).
3. To evaluate the utility, acceptability and impact of the eConsult program.

Description of Program/Intervention, including organizational context (e.g. inpatient vs. outpatient, practice or community characteristics): The program was designed and implemented at an academic medical center with support from the Medicaid Delivery System Redesign and Innovation Program (DSRIP). Participating specialties included Cardiology, Endocrinology, Gastroenterology, Hepatology, Pulmonary Medicine, Sleep Medicine, Rheumatology, and Nephrology. The expected turnaround time for eConsults is 72 hours. Both the PCP and specialist are compensated the equivalent of 0.5 wRVU for each eConsult completed. Specialist e-consultants can elect to decline the eConsult due to case complexity, and convert the referral to an office visit.

Measures of success (discuss qualitative and/or quantitative metrics which will be used to evaluate program/intervention): The observation period was June-November 2012. The 8 weeks prior to eConsult launch served as the baseline period, and the subsequent 13 weeks as the study period. EHR data was used to determine referral rates, and email surveys to examine acceptability. The primary outcome was defined as the total number of referrals to participating specialists per 100 primary care visits per week. Our a priori hypothesis was that the introduction of eConsults would decrease the standard office-based referral rates without increasing the overall referral rate (eConsult + office-based). Differences in average referral rates between baseline and study periods were compared with a paired t-test.

Findings to Date (it is not sufficient to state “findings will be discussed”): During the study period, 79 different PCPs submitted 176 eConsults to 8 specialties. 14% were converted by specialists to in-office visits. The 151 completed eConsults represented 8% of primary care referral volume to participating specialties. 77% were completed within 72 hours. The average weekly referral rate for standard office-based visits was 12.1 (SD = 1.63) during the baseline period, compared with 9.7 (SD = 0.79) during the study period (P<0.001). Survey response rates were 61% for PCPs and 78% for specialists. Among PCPs, 83% “strongly agreed” that the eConsult response influenced their care plan. Among specialists, 65% “strongly agreed” that the eConsult question was clear, and 61% “strongly agreed” that the question was of “optimal complexity”. The distribution of time spent in responding to each eConsult was 56% (<10 min), 36% (10-20 min) and 8% (>20 min).

Key Lessons for Dissemination (what can others take away for implementation to their practice or community?): This fee-for-service eConsult program has high acceptability and utility among primary care and medicine subspecialty providers, and appears to reduce office-based referral rates. Since total wRVU-based payments for eConsults (1.0 wRVU) are less than 50% of typical office-based wRVU (2.4-3.2) for new patient visits, this program has the potential to reduce specialty-related health care costs.

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Statement of Problem or Question (one sentence): Performance measures are increasingly being used to rank physicians and determine reimbursement through pay-for-performance programs and value-based purchasing; however, systematic methods to identify quality measures attributable to individual hospitalists have been limited.

Objectives of Program/Intervention (no more than three objectives): 1. Determine criteria for selecting measures that can be attributed to individual hospitalists. 2. Apply these criteria to currently collected and reported quality and safety measures to generate attending-physician-level metrics. 3. Assess the distribution and variability of these metrics to compare individual hospitalist providers and programs.

Description of Program/Intervention, including organizational context (e.g. inpatient vs. outpatient, practice or community characteristics): We used a mixed-methods approach to evaluate and select inpatient performance measures. First, we used a series of interviews to perform a multi-stakeholder analysis with 2 hospitalists, 3 hospital administrators, and 2 quality improvement experts to determine qualitative criteria for selecting appropriate attending-physician-level measures. Next, we applied these criteria to 64 mandated, publicly reported Maryland Potentially Preventable Complications (PPCs) and 50 Joint Commission Core measures to determine a set of quality metrics. Finally, we examined both metric distribution and variability. For the PPCs, we examined the number of events from 2011-12 in 4 hospitalist programs within our network; for the Core measures, we compared 45 Maryland hospitals during a performance period (2010-11) against a baseline period (2008-9) and scored each measure on achievement of benchmarks and improvement to determine a final performance score ranging from 0 to 100.

Measures of success (discuss qualitative and/or quantitative metrics which will be used to evaluate program/intervention): To minimize cost and resource utilization we examined standardized, commonly reported performance measures. For the qualitative criteria used in the selection of metrics, we sought and achieved consensus amongst the stakeholders. For the quantitative evaluation of the selected metrics, we examined distribution and variability to distinguish both between hospitalist programs and individual providers.

Findings to Date (it is not sufficient to state “findings will be discussed”): Stakeholders reached consensus that measures should be actionable, attributable, and accountable. Actionable was defined as a measure which could be actively intervened upon during a single hospital admission or a preventable adverse event. Attributable was defined as measures associated with, or under the supervision of, an attending physician. Accountability was defined as being within the direct or indirect responsibility of an attending physician. Thirty-four of the 64 Maryland PPCs and 19 of the 50 Joint Commission Core measures reviewed met all three criteria. Regional review of PPCs over time showed variation both between and within 4 hospitalist programs in our network, with a range of 0 to 54 events per month. Statewide examination of the Core measures showed a near normal distribution with a performance score ranging from 18 to 100, indicating good discrimination amongst hospitals.

Key Lessons for Dissemination (what can others take away for implementation to their practice or community?): Our analysis identified criteria to assign commonly collected, standardized quality and safety measures to individual hospitalists. Regional and statewide analysis of these measures suggests adequate variation to assess quality. These measures may be used in the future to compare individual hospitalists and programs both within and between institutions.