Dear Colleagues,

We welcome you to our 3rd annual Department of Medicine Quality & Safety Symposium. This event is an opportunity to celebrate all of the great projects that were submitted to the 2012-13 Quality & Safety Innovation Challenge (QSIC), acknowledge the award winners, and appreciate the wide efforts to improve patient care across our diverse clinical settings. This year’s record number of poster presentations, which are twice as many as last year, reflect the tremendous energy and commitment to transforming our care delivery systems.

What is the Quality & Safety Innovation Challenge (QSIC) and how did it work?
The goal of the QSIC was to provide an opportunity for DOM faculty, trainees, and staff to work collaboratively in multidisciplinary teams, and design and implement innovative solutions to improve patient care. Participating teams submitted a project proposal to the QSIC last fall and worked over the past several months to achieve their stated objectives. Each team was encouraged to choose a project that aligned with one of thematic focus areas, which were priorities for our respective medical centers:

1) **Quality Improvement** (e.g. improving the quality of care we provide, including adherence to clinical guidelines, achieving quality metrics, improved care transitions, increased access to clinical services, etc.)
2) **Patient Safety** (e.g. creating a safer environment by promoting medication safety, teamwork and communication, a culture of safety, follow-up of pending tests, etc.)
3) **The Patient Experience** (e.g. fostering a patient-centered environment, engaging patients and their families in care, creative solutions to increasing patient satisfaction, etc.)
4) **“Choosing Wisely” & Value-based Care** (e.g. a special theme this year focused on promoting efficient resource utilization and reducing unnecessary diagnostic testing, procedures and/or other treatments, etc.)

How were the QSIC projects evaluated for award selection?
The criteria used to rate each project centered on:

1) Trainee engagement and multidisciplinary teams
2) The magnitude of the problem or quality/safety gap in care
3) The nature and scope of the innovation
4) Generalizability
5) Thoroughness of project evaluation
6) Potential sustainability of results

Three award-winning projects were selected and will be recognized at today’s symposium. A special award will also be given to a “Choosing Wisely” project that best generated value in our healthcare system. We want to express our thanks and appreciation to the rating committee who themselves are key leaders and champions of our quality and safety programs. This year’s committee included Delphine Tuot, Jinoos Yazdany, Will Huen, Claire Horton, Urmimala Sarkar, Jeff Critchfield, Edgar Pierluissi, Sei Lee, Rebecca Shunk, Ralph Gonzales, Adrienne Green, Ning Tang, Bob Wachter, Maya Dulay, Henry Crevensten, Erika Price, Kara Bischoff, and Emily Gottenborg. Finally, we also want to express our sincere admiration to all of our trainees, staff, and faculty who committed time, energy, and their leadership to these projects. Your efforts are an inspiration.

Naama Neeman, MSc
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Niraj Sehgal, MD, MPH
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San Francisco General Hospital (SFGH)

Documentation of Surrogate Decision-Maker at San Francisco General Hospital Adult Medicine Clinic
V. Dzul-Church, A. Chodos, A. Kinderman, U. Sarkar

Improving the Safety of Patients on Chronic Opioid Medication Agreements

The Esther Project: Using Patient Personas to Drive Organizational Change
C. Carlson, E. Davis

Performance Measurement for Glycemic Control in Diabetes Patients in a Safety-Net Population
S. Baxi, J. Lakin, C. Lyles, C. Horton, S.A. Berkowitz, U. Sarkar

Promoting Teamwork in the Medical Home through a Team-based Data Dashboard

Choosing Wisely: Reducing Overutilization of Liver Ultrasounds in Non-Cirrhotic Patients with Hepatitis C
S. M. Soni, G. Chang, N. Omahen

Increasing access to specialty care: developing consensus statements for safe discharges from specialty clinics
D. Tuot, J. Sewell, L. Day, L. Murphy, J. Park-Sigal, K. Leeds BA; L. Johnson, A. Chen

Implementing an Outpatient Geriatrics Consult at SFGH
A. H. Chodos, J. Myers, C. Ritchie, E. Pierluissi

SFGH Internal Medicine Duty Hours Pilot
M. Roosevelt, G. Berger, R. Brooks

Telephone Outreach with Direct Mailing of Fecal Immunochemical Test to Increase Colorectal Cancer Screening
G. Chang, J. Liu, C. Ramillo, C. Horton

Teaching Outpatient Quality & Safety Principles through Ambulatory Morbidity & Mortality Conference
A. Goel, R. Gupta, U. Sarkar, K. Soni, C. Horton

Chronic Kidney Disease Group Medical Visits in the Primary Care Setting
A. Sridha, E. Davis, R. Siege, T. Cahill, C. Greene; B. Bagdorff, A. Toke, C. Horton; D. Tuot

Team-Based Effort to Reduce Heart Failure Readmissions Through Multi-Disciplinary Nutrition Education
D. Margolius, S. Buchmann, A. Villanueva, C. F. Barnett

Beyond Pilots: Toward Sustainable Quality Improvement Implementation

The Effectiveness of an Evidence-Based Critical Care Ultrasound Course
S.M. Muni MD, D. Sweeney, M.A. Matthey, A. Gomez, J. L. Davis, and C.F. Barnett

A Roadmap to Patient Engagement through Patient Advisory Boards
L. Angel, H. Hammer, J. Ruffo, E. Davis, C. Horton
Alcohol Related Hospitalizations at San Francisco General Hospital in Housed and Homeless Patients
T. Poore, R. Heidt, Will Huen

Improving Provider Experience and Interdisciplinary Collaboration in the Complex Care Management Program
A. Johnson, J. Janssen, F. Ebeling, L. Tang, L. Evans, C. Horton, R. Gupta, E. Davis

Diabetes self-management in a low-income, low health literacy population
S. Kim, V. Ruiz-Barros, A. Tang, W. Mu, C. Kuo, C. Horton, E. Murphy

UCSF Medical Center

Incorporation of small group reflection on adverse events into a resident quality improvement rotation
L. Thomas, B. Gregory B. Calton

Improving Communication between Outpatient and Inpatient Oncologists
P. Cinar, J. Gordan, E Bergsland

Assessing the impact of an arrival time policy and phlebotomy workflow on clinic wait times
E. Walker, E. Cedars, K. Coontz, K. Jackson, L Hill-Sakurai

Patient Centered Design
L. Damon, J. Smith, T. Maxfield, L. DeBerry, R. Lipsy, R. Gaderlund, D. Dandekar

Improving the Patient and Provider Experience by Increasing MyChart Enrollment and Creating a Messaging Triage Protocol
E. Turner, T. Kumar, K. Buchanan, D. Null

Action Research Program: Improving specialty care access through system redesign and team-based care

Customer Service Training to Improve the Patient Experience

Improving Physician Patient Communication on an Inpatient Medical Service
D. Sliwka, K. Quinn, N. Neeman, J. Phillips, S. Alves Rankin, S. Ludwin, J. Koppel, N.F. Miraflor, B. Sharpe, MD, M Mourad

Using Facesheets to Improve Patient Understanding of the Primary Team
E. Gottenborg, S. Ludwin, MD, C. Sherman, D. Sliwka

Provider Awareness of Inpatient Fall Precautions
E. R. Stewart, S. Ranji

Improving Patient Satisfaction through Accountable Care Organizations
G. Berger, J. Phillips, A. Parekh

Improving the Patient Experience: Front-Desk Peer Observations
M. Bedrich,, P. Zand, G Solorzano, N Neeman, MSc, Z. Martin, N. Sehgal,

Improving the Patient Experience by Implementing an Innovative Patient Education and Engagement Tool
J.P. Terdiman, S. Eppel, Z. Shor

Implementing Weekly Huddles to Improve the Patient and Staff Experience
G. De Alva, M. Ferretti, P. Gadzinovsky, S. O’Leary, M. Simpson, G. Solorzano
Evaluating ZipRounds: Assessing the Effectiveness of a Novel Healthcare Technology  
L. Santhosh, J. Harrison, R. Khanna

A Housestaff Incentive Project to Decrease Door-to-Floor Time for Medicine Inpatients  
A. Buck, E. Gottenborg, J. Hom, A. Vaidya, A. Goel, H. Hollander, B. Monash, S. Ranji,

Obtaining Real-Time Patient Feedback to Improve the Patient Experience  
D. Lee, G. Solorzano, N. Neeman, Z. Martin, N. Sehgal

Improving Healthcare for Transgender Patients at UCSF Lakeshore  
J. Carroll, E. Kalmar, V. Lalu, C. Sonquist Forest

Teaching Transitions of Care through Analyzing Readmissions  

Improving Our Response to Severe Sepsis and Septic Shock: Implementation of a Code Sepsis Team  
J. Mansoori, J. Stotts, M. Mourad

eConsult: Improving Access and Timeliness of Specialty Consultation  
N. Gleason, C. Ho, M. Wang, D. Collado, J. Monacelli, S. Ackerman PhD MPH, Ralph Gonzales MD MSPH

iPads in the hands of hospitalized patients: Inpatient Technology Outreach Unifying Communication & Health (inTOUCH)  
SR Greysen, R. Khanna, RJ Jacolbia BS, H Lee, A. Auerbach

Development of a Hospitalist Committee Focused on Improving Healthcare Value  
C. Moriates M. Novelerio, M. Mourad K. Quinn, B.A. Sharpe, R.M. Wachter

iReduce iCal: Decreasing Unnecessary Ionized Calcium Lab Draws  
C. Moriates, S. Ludwin, M. Novelerio, K. Quinn, M. Mourad

Neb's No More After 24: Improving Use of Appropriate Respiratory Services  
C. Moriates, M. Novelerio, M. Cascino, K. Quinn T. Omachi, S. Ranji, R. Khanna, M. Mourad

Implementation of a Structured, Electronic Referral System to Support the Principles of the PCMH-Neighborhood  
N. Gleason, C. Ho, M. Wang, D. Collado, J. Monacelli, S. Ackerman R. Gonzales

Take a Seat: an Innovation to Encourage a Seated Dialog on Physician Rounds  
A. Bekmezian, S. Alves-Rankin, J. Philips, M. Mourad

Stress Ulcer Prophylaxis: Pilot Project to Reduce Inappropriate Use in the Intensive Care Unit  
S. Sharpton, K. Quinn, C. Tasaka C. Burg, S. VanOsdl, N. Sehgal, S. Rennke

Patients recovering from abdominal surgery who walked with volunteers had improved postoperative recovery profiles  
H. Le, P. Khankhanian, N. Joshi, J. Maa, H. Crevensten

**Veteran Affairs Medical Center (VAMC)**

Transforming Care Transitions: Implementing Project RED at a VA Medical Center  

Improving Patient Recall Process to Address Patients Lost to Follow-Up  
Documentation of Advanced Directives Among Downtown Clinic Patients
E. Bowman, T. Jensen, C. Kim, P. Panguluri, S. Patel, L. Petrillo, E. Stewart

Medication Reconciliation: Identifying and Correcting Medication Errors
A Buck, AD Coelho, J Chua, E Hardin, B Samuelson, A Spahillari, S Stapleton, J Van Nuys, M Wongchaowart, M Bachhuber, R Shunk

Improving Recruitment for the Medical Practice Advance Directive Group
A. Cintron

Coordinated Outreach Program to Increase Rates of Annual Lipid and Hemoglobin A1c Tests in Patients with Diabetes

Development and Implementation of After Visit Summary

Before Discharge, Take Your Patient’s POLST: An Effort to Increase Durable Documentation of Code Status at the VA
Laura Petrillo MD¹, Aparna Goel MD¹, Eric Widera MD²

Improving Advance Directive Completion Rates

UCSF Fresno

Utilization of Clinical Performance Dashboard and Quality Improvement Initiative

Multi-Center Projects

Physician Attitudes Towards Breast Cancer Risk Assessment in UCSF Primary Care
A. Chang, A. Lee, C. Van Belle. L. Doan, C. Kaplan

“Choosing Wisely” in an Academic Department of Medicine
J. Z. Hines, J. L. Sewell, N. Seghal, C. Moriates, C. Horton, N. Neeman, A. Chen
**The Problem**

- A quality indicator for palliative and end-of-life care and ambulatory care through the Affordable Care Act is the documentation of surrogate decision-maker in the outpatient chart. (Loewen, JAGS 2007)
- Important steps in advanced-care planning (ACP) are identifying surrogate decision-makers for outpatients and documenting this in a streamlined, easily accessible location. (Sudore, Annals Intern Med, Aug 2010)
- A 2011 outpatient adult medicine provider survey found that there is uncertainty about how to and significant variability in where to document ACP, including surrogate decision-maker information, at San Francisco General Hospital (SFGH). (Chodos, QHC survey, 2011) see results section

**Project Goal(s)**

**Aim:** Streamline documentation of surrogate decision-makers for adult medicine outpatients in the electronic medical record (EMR) at SFGH over the course of 2 months (Nov ’12-Dec ’12).

**Goals:**
- Give 30 minute pre-clinic conference for residents about outpatient ACP and documenting surrogate decision-makers in an Advanced Directive Note.
- Brief participating medical assistants (MEAs) about protocol for verifying surrogates and updating emergency contact information.
- MEAs update emergency contact information reflecting the appointed surrogate decision-maker in an easily accessible location in the EMR.
- Providers document the surrogate in an Advanced Directive Note that is easily identified in the EMR.

**Project Plan**

**Step 1:** Pre-clinic conference with subset of residents discussing importance of outpatient documentation of surrogate decision-makers and demonstration of how to access an Advanced Directive Note. Individual discussions with participating MEAs about paperwork and protocol.

**Step 2:** MEAs verify surrogate decision-makers while taking patient vitals with a pre-scripted prompt (English, Spanish, Chinese). The patient confirms or changes "emergency contact" to reflect their surrogate decision-maker. This is updated in the demographics section of the EMR by the MEA.

**Step 3:** Providers confirm the surrogate decision-maker with the patient during the visit and enter this information in an Advanced Directive Note, a template found in the EMR. This note is easily visible and found during chart review in both inpatient and outpatient settings.

**Getting to Advanced Directive Note in a multi-step process:**
1. Go to Progress Note
2. Enter/edit progress note
3. Change note type to Advanced Directive
4. Change "clinic or department" to Advanced Directive
5. Insert note and sign

**Results / Progress to Date**

**MEA Intervention:**
- 72% (n=23/32) of the emergency contacts documented in the EMR were confirmed by patients to also be their surrogate decision-maker.
- 100% of these patients’ (32/32) surrogates were successfully verified and updated as emergency contacts by the MEAs during the intervention.

**Provider Intervention:**
- Prior to intervention, chart review of subset of patients showed only 16% (5/32) had documentation of surrogate decision-maker anywhere in EMR and none had an Advanced Directive Note. Four were documented at the end of the progress note. One had an inpatient note documenting an advanced directive.
- Post-intervention chart review showed only one (1) new Advanced Directive Note (delta 3%) and the original 5/32 (16%) documentation anywhere (delta 0%).

**Lessons Learned & Next Steps**

**Lessons Learned:**
- An inexpensive, low time-intensive strategy to change provider behavior of documenting surrogate decision-maker was not effective. Given significant between-visit workload for providers (Doerr JGIM Nov 2009), an additional multi-step process for documentation appears untenable for physicians.
- Medical assistants are able to effectively verify and document surrogate decision-makers as emergency contacts. This demonstrates that some aspects of surrogate discussions and documentation may be able to be transferred to non-physician providers.

**Next Steps:**
- Target patients ≥ 65 years old and have MEAs provide reminder prompts to providers for surrogate documentation. This would be an additional check-box for "health care maintenance" pre-rounding by the MEA. If provider does not document in that visit, the MEA would remind the provider at future visits.
- As the clinic moves to a new EMR (e-clinical works) efforts should focus on streamlining documentation within parameters of the new EMR. For example, identify an ICD-10 problem code that would serve as the primary location for documentation and be easily accessible.

**UCSF Department of Medicine**

**Discussion surrogate decision-maker today. The surrogate is _______ (name) _______ who can be contacted at _______(phone #)_____. This person is also the emergency contact, noted in the LCR. This person is/is not the legal durable power of attorney.**
The Problem

• Approximately 270 patients in the General Medicine Clinic (GMC) take treatment agreement based opioids for relief of chronic, non-cancer pain (>3 months).
• Guidelines from the American Pain Society and American Academy of Pain Medicine (2009) recommend that patients on chronic opioids receive regular assessment of the management plan. This is particularly important given increasing evidence of safety risk with these medications.
• Despite this, the majority of patients in GMC have not received an annual assessment.
• Additionally, a high percentage of patients on chronic opioids have evidence of stimulant use (cocaine, amphetamine, and/or methamphetamine) by urine toxicology present in urine toxicology screens (25%). Since active substance use is a risk factor for unintentional overdose, this presents a safety risk. Provider response to this aberrant behavior has been erratic in the past due to lack of a consistent policy.
• Additionally, if diversion of opioids is taking place, this presents a public health risk to the broader community.

Population Characteristics

Number of Patients = 271
• Mean, daily morphine equivalent dose = 293mg
• Demographics:
  - 61% M
  - 39% F
  - Afr-Amer (19%), White (31%), Asian (5%), Lat (20%) Other (5%)

Project Goal(s)

1. Increase the Number of Annual Pain Assessments Among Patients on Treatment Agreements for Chronic Opioids
   The Pain Assessment is an opportunity to review the risks and benefits of opioid treatment for the patient, and to determine whether further therapy is needed.

2. Initiation of a Guideline for Management of Abnormal Urine Toxicology Testing
   Previous provider response to stimulant use has been non-standardized. Given the safety risk, a new policy with a mandatory 3 month suspension was initiated in concert with pharmacy who manages all patient opioid refills.

Team Members:
Pharmacy, Panel Managers, GMC Intern, GMC Provider Lead, GCM Clinic Leadership, DSM Faculty Providers

Lessons Learned & Next Steps

Initiative 1
1. A disease registry provides a valuable opportunity to manage the quality of care provided to individuals on chronic opioid therapy. The following quality indicators can be tracked: pain assessments, urine toxicology testing, treatment agreements, and patient activity reports (“CURES report”).
2. This type of project requires staff that are able to do data management and outreach to patients. This effort was possible through use of a pre-medical intern in the General Medicine Clinic, which may not be sustainable over the long-term. It highlights the need for salaried clinic staff to do panel management and outreach.
3. Barriers to increasing pain assessment rates include: patients who did not attend the scheduled visit (no incentives or consequences utilized), providers not having time to complete the assessment (competing issue), and limited provider appointments. Additionally, this depends on providers being committed to this intervention.

Initiative 2
1. A central registry with a standardized process regarding to stimulant-positive urines has been regarded as a welcome change for providers in GMC. Many providers have expressed interest in additional clinic “policies” to guide the response to aberrant behaviors.
2. The majority of patients that have been positive for stimulant use have elected not to voluntarily submit subsequent urine samples, which may reflect a lack of understanding of the policy, potentially a lack of need for the medication, or a lack of organization related to having an active substance use disorder.
3. Continued follow-up of patients will be necessary to determine the clinical outcome of these individuals and our QI initiative.

Next Steps:
Several Quality Improvement Efforts: Use of group visits for chronic pain and opioid education; Creation of an opioid oversight committee; Provision of naloxone for overdose prevention for patient on opioid therapy; EMR optimization for managing chronic opioid therapy.
The Esther Project: Using Patient Personas to Drive Organizational Change

Charlotte Carlson, MD, MPH, Department of Medicine, UCSF
Elizabeth Davis, MD, Division of General Internal Medicine, San Francisco General Hospital, UCSF

The Problem

• While traditional, analytic design is favored in most quality improvement projects, creative design techniques, such as using patient “personas” to map care processes and identify patient needs, can be powerful tools to inform change efforts.
• Patient “personas” define unique patient groups in a clinical microsystem who share similar needs, behaviors, and goals.
• In Sweden, the persona of Esther, an elderly woman with complex needs, was successfully used to drive dramatic improvement in the health care system.
• The Esther Project at SFGH seeks to create patient personas for the care management program, a program for complex patients based in the General Medicine Clinic (GMC) at SFGH.

Project Plan

1. Identify key patients in care management program
2. Identify key care processes and patterns
3. Interview providers and patients
4. Define strengths and weaknesses of current state
5. Create personas based on design principles and quality goals of care management program
6. Translate personas into curriculum to inform staff about current care delivery and goals for future work

Results / Progress to Date

Jackie has had COPD and back pain for the last fifteen years. She develops shortness of breath with her daily chores. She hates waiting in the ED so avoids the hospital, unless she has a thick cough and fever. During her last admission, a CT scan shows a 5 mm lung nodule, and she is told to follow-up with her primary care doctor for a follow-up scan. No communication to primary provider is made directly from the inpatient team. At discharge, she leaves with five days of antibiotics.

Carmen has had diabetes for the last ten years. She did not see doctors regularly until this last year, when developed a foot infection that wouldn’t go away and required antibiotics and hospitalization. Since retiring from working as a cook, she doesn’t go out much and needs help with basic chores in house. While she lives close to SFGH, she has missed several appointments because she can’t walk due to foot pain. She is monolingual Spanish-speaking.

Project Goals

• Understand needs, behaviors, and goals of complex patients in the GMC care management program at SFGH
• Develop personas to highlight key care processes in delivery of care and elucidate gaps in care
• Develop curriculum to spread persona-based design into other clinical microsystems at SFGH

Lessons Learned

• Patients in the care management program value close communication with known providers.
• Influencers of whether patients utilize services depends on access to known providers.
• Outreach to patients at home anticipates care needs and may prevent future hospitalization.

Next Steps

• Use patient personas to refocus improvement efforts and validate current or future initiatives (i.e. What would Carmen or Jackie think of this process?)
• Expand persona-based design to programs and clinics outside of the GMC care management program and SFGH as a whole through use of curriculum developed in this project
• Use patient personas to discuss processes of care with community-based programs

Acknowledgements

Paul Batalden, Tom Bodenheimer, Alice Chen, Fern Ebeling, Clare Horton, William Huen, Julia Janssen, Iman Nazeri-Simmons, Baljeet Sangha, Lisa Tang, Nicole Wackerberg, and GMC staff, patients, and providers

UCSF Department of Medicine
Points for Improvement: Performance Measurement for Glycemic Control in Diabetes Patients in a Safety-Net Population
Sanjiv Baxi, MS, MD, Joshua Lakin, MD, Courtney Lyles, PhD, Claire Horton, MD, MPH, Seth A. Berkowitz, MD, Urmimala Sarkar, MD, MPH
San Francisco General Hospital and Trauma Center

The Problem

• Diabetes complications account for significant worldwide morbidity and mortality
• Improving glycemic control decreases microvascular complications, particularly among those with worse control
• Current national performance measures fail to prioritize outcome improvements for those in the worst control

Project Plan

• Population of adults with type 2 diabetes mellitus in a General Medicine Clinic
• Retrospective cohort analysis of all patients with:
  • confirmed diabetes mellitus
  • at least 2 glycosylated hemoglobin values (2007-2011)
• Stratified into five groups based on maximum and earliest glycosylated hemoglobin level:
  • < 7%, 7-8%, 8-9%, 9-10% and > 10%
• Analysis of change in glycosylated hemoglobin was assessed over time and compared to standard HEDIS® performance measures

Project Goal(s)

• To compare a common performance metric for glycemic control against one measuring change in glycosylated hemoglobin over time in a safety-net population.

Results / Progress to Date

• 1,122 patients were included in the analysis with mean glycosylated hemoglobin of 7.9%
• There was a modest annual decrease in the average glycosylated hemoglobin and ≥19% of patients improved by 1% or more over each of the last three years
• For patients who had maximum glycosylated hemoglobin values greater than 10%, there was a significantly greater reduction in glycosylated hemoglobin which was not reflected in the standard performance measure

Table: Change in glycosylated hemoglobin versus HEDIS

<table>
<thead>
<tr>
<th>Year</th>
<th>Propportion with A1c &lt;7 (HEDIS)</th>
<th>Propportion with A1c&gt;9 (HEDIS)</th>
<th>Average Change A1c from previous year</th>
<th>Propportion with A1c changed 1%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011 (n=166)</td>
<td>21%</td>
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<td>22%</td>
<td>+0.03%</td>
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Table: Change in A1c by Maximum A1c Categorization

<table>
<thead>
<tr>
<th>A1c Category</th>
<th>5-7</th>
<th>7-8</th>
<th>8-9</th>
<th>9-10</th>
<th>&gt;10</th>
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Lessons Learned & Next Steps

• Patients with the worst glycemic control tend to have the greatest improvements, but are often overlooked by conventional performance measures
• It is feasible for safety-net clinics to analyze diabetic patients by level of disease control based on change in glycosylated hemoglobin over time
• We recommend that improved performance measures focus on longitudinal diabetes control, and that they emphasize reducing risk of complications among those at highest risk

Promoting Teamwork in the Medical Home through a Team-based Data Dashboard
Darren Pang, Claire Horton, Jennifer Coffey, Rosaly Ferrer, Brenda Barros, Elizabeth Davis, Reena Gupta
General Medicine Clinic, San Francisco General Hospital

The Problem

• Nationwide, approximately 50% of primary care patients receive recommended chronic and preventive care services. In addition, access to primary care is a growing problem, and high no show rates result in limited appointment access for patients.

• Team-based care – the cornerstone of patient-centered medical home transformation – can improve delivery of health maintenance services as well as expand capacity to improve access to care for primary care patients.

• In 2012, the General Medicine Clinic (GMC) at San Francisco General Hospital implemented an interdisciplinary team-based care model with collective responsibility for sharing the care for a panel of patients.

Project Plan

Team-Based Care Model

We created 3 teams that each care for approximately 2200 patients with the following staffing ratios: 1 FTE continuity NP, 1 FTE RN, 3 FTE behavioral health clinician, 2 FTE clerical staff, 3 FTE medical assistants, 8 part-time faculty, and 16-18 residents. Each team member has defined roles for the care of the team’s patients.

MEA Chart Prep: Chronic and Preventive Care

With the launch of team-based care, team medical assistants (MEAs) began reviewing patient charts (“Chart Prep”) prior to scheduled visits to identify preventive care gaps for immunizations and cancer screening. MEAs then report on the healthcare maintenance gaps during team huddles and complete needed actions through standing orders during clinic.

Clerk Confirmation Calls: No-Show Reduction

GMC had a high appointment no-show rate (30%) for several years prior to team-based care. Team clerks now conduct robust confirmation calls to remind team patients of upcoming appointments.

Team-based Data Dashboard

We developed a weekly team-based data dashboard to provide real-time feedback to staff and providers on their new team-based roles. Each team member has a specific metric relating to their team role: clinical rates of confirmation calls, MEA rates of chart preparation, and nurse visits per session. GMC staff and providers record this data manually, and the data is compiled by the GMC Medical Home volunteer. The data is displayed for each team on a weekly basis on a dashboard in clinic and reviewed at monthly medical home team meetings where team members can discuss strategies for improvement. This complements the performance data that GMC providers have been receiving for several years.

Project Goal(s)

We developed a weekly team-based data dashboard to provide real-time feedback to teams to promote teamwork and quality improvement with the following goals:

• To reduce appointment no-show rate to 10% through confirmation calls by team clerks.

• To improve chronic and preventive care rates through 100% chart preparation completion by team medical assistants.

Results / Progress to Date

"Confirmation calls are the best improvement to GMC in years!"

-GMC Patient

Our No-Show Rate was above 30% in prior years, but it has decreased to 22-25% after implementation of the confirmation calls.

Providers noticed an uptick in pace in their shifts with a rise in patient attendance, and came to appreciate appointment call confirmation reports from their team clerks as a way to prepare for their workdays.

We’ve sustained efforts to confirm appointments, with 63% reached for a voice confirmation or voicemail reminder (week of 4/22/13). We continue to work on efforts to increase our % voice confirmed.

Lessons Learned & Next Steps

Lessons Learned:

• Weekly team-based data dashboards can support teamwork and promote quality improvement.

• Clerical confirmation calls have led to a 27% reduction in our clinic no show rate.

• Clinical quality metrics for immunizations and cancer screenings have continued to improve with medical assistant chart prep and healthcare maintenance panel management.

Next Steps:

• We continue to work with our team clerks on efforts to increase the % of appointments that are voice confirmed to further reduce the no show rate. One method involves implementing repeated call attempts if the first call is unsuccessful until the patient is reached to confirm or cancel their appointment.

• As we prepare for EHR implementation, we are revisiting workflows to improve processes for completion of healthcare maintenance care gaps with team medical assistants and providers.

References

Choosing Wisely: Reducing Overutilization of Liver Ultrasounds in Non-Cirrhotic Patients with Hepatitis C

S. Monica Soni, M.D. (Department of Medicine, SFGH), Grace Chang, B.A., B.S. (Department of Medicine, SFGH), Nancy Omahlen, N.P. (Department of Radiology, SFGH)

The Problem

Over 3 million people have chronic hepatitis C (HCV) in the United States. HCV is the leading cause of cirrhosis, hepatocellular carcinoma (HCC) and liver transplantation and the burden of disease is expected to increase in the next decade.

The CDC has recently advised that all persons born from 1945 - 1965 be screened along with traditional risk factors. However, there are few guidelines for primary care providers to follow on how to proceed once a patient is HCV positive. The American Association for the Study of Liver Diseases (AASLD) recommends HCC screening with ultrasound in patients with HCV cirrhosis but not beforehand. Providers therefore are not clear what to do before a patient develops cirrhosis.

We hypothesized that in the face of uncertainty primary care providers were over-utilizing liver ultrasounds for HCC screening in non-cirrhotic patients. In the spirit of “Choosing Wisely”, we hoped to reduce wait times, cost and waste.

Project Plan and Goals

**PLAN:**
- Determine number of limited ultrasounds done for HCV and which are indicated by AASLD guidelines.
- What are the reasons providers list in e-referral or LCR notes for ordering ultrasounds? Is the limited liver ultrasound the correct study for their request?
- Can we improve the e-referral system to limit waste and unnecessary HCC screening in non-cirrhotic patients with HCV?

**DO:**
- Receive patient data with all limited liver ultrasounds completed from January - May of 2012
- Begin data analysis through reviewing all e-referrals, LCR notes and previous imaging
- Solicit input from faculty in radiology, hepatology, and general medicine

**STUDY:**
- Present data to professors of radiology and hepatology for feedback

**ACT:**
- E-referral revised to specify which imaging study most appropriate
- AASLD guideline link posted for providers to review if their patient meets an indication for HCC screening

Results

Limited Ultrasounds by Type Jan-May 2012

<table>
<thead>
<tr>
<th>Type</th>
<th>HCV</th>
<th>Other</th>
<th>HBV</th>
<th>HCC</th>
<th>Cirrhosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>126</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
<td>33%</td>
</tr>
<tr>
<td>% of Limited U/S done for HCV+ patients</td>
<td>6%</td>
<td>0%</td>
<td>0%</td>
<td>21%</td>
<td>18%</td>
</tr>
</tbody>
</table>

Limited Ultrasounds by Type March 2013

<table>
<thead>
<tr>
<th>Type</th>
<th>HCV</th>
<th>Other</th>
<th>HBV</th>
<th>HCC</th>
<th>Cirrhosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>8</td>
<td>0%</td>
<td>8%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>% of Limited U/S done for HCV+ patients</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

**PLAN:**
- Reduction in inappropriate HCC screening in non-cirrhotic HCV positive patients
- Reduction in repeat abdominal imaging for non-cirrhotic HCV positive patients

**ACT:**
- Increased provider transparency in e-referral submissions regarding why imaging ordered

Lessons Learned & Next Steps

- Overuse often occurs in data and guideline-free areas
- Importance of soliciting input from stakeholders early on in process and getting buy-in
- Unintended downstream effects (i.e. shifting referrals to complete abdominal ultrasound from limited liver)

Next Steps:
- Data analysis of complete abdominal ultrasounds before and after intervention
- Review other metrics such as reduction in time to next available appointment and backlog
- Assess cost savings to system from intervention
- Circulate AASLD guidelines to clinics and providers
- Consider disseminating clinic and provider level data on overuse of limited ultrasound

UCSF Department of Medicine
Increasing access to specialty care: developing consensus statements for safe discharges from specialty clinics
Delphine Tuot MD MCM; Justin Sewell MD MPH; Lukejohn Day MD; Lisa Murphy MD, DPhil; Jennifer Park-Sigal MD; Kiren Leeds BA; Lisa Johnson MD; Alice Chen MD MPH

The Problem

• Access to specialty care is limited in the United States.
• Nationally, 50% of specialty care appointments are for follow-up appointments.
• Many follow-up appointments might be avoidable if a patient has a primary care provider (PCP), and if specialists and PCPs have adequate communication with each other. The Patient-Centered Medical Home is an optimal setting for such communication.
• Avoiding unnecessary follow-up specialty care appointments could save patient time, health system resources and increase availability of specialty care.

Project Plan

• We identified top reasons for GI visits at SFGH, focusing on high volume clinical entities that do not require long term GI follow-up. Post-endoscopy scenarios represented a large volume of patients who were scheduled for one visit post-endoscopy to receive their results. Scenarios included patients undergoing ISIS for dyspnea or melanoma, EGD and colonoscopy for iron deficiency, or colonoscopy for colorectal cancer screening/surveillance or hematochezia.
• We used a modified Delphi consensus building process to identify patients appropriate and safe to discharge from GI to primary care. An advisory panel, composed of specialists and PCPs from different primary care groups who refer to SFGH helped coordinate these efforts. The Delphi process consisted of 2 rounds of surveys over 6 months.

Round 1
• Survey participants (PCPs and specialists) were asked to rate their comfort level discharging/receiving patients with specific clinical entities assuming formal recommendations were communicated via the electronic medical record to the PCP.
• Data: Responses from round 1 were analyzed with simple descriptive statistics.

Round 2
• Aggregated data from Round 1 consisting of either the most common response or the distribution of PCP and specialist responses were provided to Delphi participants.
• Participants were asked to repeat the rating procedure, taking into account the aggregated group data.
• Advisory panel developed discharge criteria. Criteria were edited by specialists and primary clinic medical directors.
• Final discharge criteria for SFGH GI clinic:
  1. Patients who undergo a completed colonoscopy for colorectal cancer screening/surveillance (including positive FOB/SIT), personal history of colonic polyps or colorectal cancer, or family history of colon cancer or colorectal cancer, with a good or excellent bowel preparation, who meet the following criteria:
    No malabsorption lesions are identified, AND
    No more than a few small polyps identified, AND
    All identified polyps are completely resected.
    2. Patients who undergo a completed colonoscopy for hemorrhoid, with a good or excellent bowel preparation who meet the following criteria:
    No malabsorption lesions are identified, AND
    No more than a few small polyps identified, AND
    All identified polyps are completely resected. Patient has no alarm symptoms or anemia.
• Discharge criteria were implemented January 2013. Impact on clinic scheduling to date was assessed.

Project Goal(s)

• To identify patients who could safely be formally discharged from the SFGH Gastroenterology (GI) clinic back to primary care using Delphi consensus methodology.
• To develop and disseminate formal “discharge criteria” for patients who undergo an endoscopic procedure in the GI clinic.
• To implement discharge criteria and assess the impact on clinic scheduling, with a focus on waiting times.
• By encouraging specialty care providers to be better stewards of finite specialty resources, this project parallels “Choosing Wisely”.

Results / Progress to Date

Delphi consensus building process: second round survey results

<table>
<thead>
<tr>
<th>Outcome Measurements</th>
<th>% of PCP (n=150) and GI Providers (n=7) agreeing to discharge patients from clinic</th>
</tr>
</thead>
<tbody>
<tr>
<td>No gastric ulcer or malignancy identified</td>
<td>90.5 (99)</td>
</tr>
<tr>
<td>No sigmoid diverticulum</td>
<td>89.0 (82)</td>
</tr>
<tr>
<td>Exclusionary symptoms</td>
<td>96.5 (90.5)</td>
</tr>
<tr>
<td>All identified polyps are completely resected</td>
<td>92.2 (85.5)</td>
</tr>
</tbody>
</table>

GI clinic wait times (days to third next available appointment)

- Reduction of wait time by 53.3% (pre-intervention: 65.0 days; post-intervention: 29.4 days)

Lessons Learned & Next Steps

• Communication among specialists and PCPs is key to re-engineering the primary care-specialty care interface. It is vital to get all stakeholders at the table.
• Next steps:
  • Evaluate safety and sustainability of intervention in GI
  • PCP and GI provider satisfaction with process
  • Patient satisfaction among those patients discharged from GI clinic
  • Unintended consequences
    o % of discharged patients re-referred in 3 months
    o Reasons for re-referral to specialist
    o Safety of discharging patients
  • Expand process to other specialties
  • Endocrine clinic discharge criteria have been determined via same process for patients with Grave’s disease s/p ablation and patients with thyroid cancer several years after remission; implementation of criteria will be late fall 2013
Lessons Learned:

- PCPs most commonly sought help for cognitive impairment and polypharmacy.
- While few problems were addressed through electronic consultation alone, about half could be addressed through first two tiers.

Next Steps:

- Analyze provider survey data.
- Assess whether recommendations and geriatrics involvement affected patient outcomes such as care utilization.
- Develop monthly email to highlight most common problems as an educational tool for PCPs.
- Expand service collaborating with Neurology Clinic to enhance assessment for cognitive impairment and memory issues.
Duty hour compliance is a key factor for patient safety and ACME residency program accreditation.

Surveys of past cardiology residents revealed that the majority felt a 24-hour long-call for senior residents would be better for education and patient safety as compared to our current 16-hour shifts.

Studies have shown that restructuring the SFGH Medicine Wards and Cardiology services to
1) Improve Duty Hour Compliance
2) Improve resident education
3) Improve patient care by limiting handoffs

Based on our survey results, we created a pilot service structure that we thought would improve duty hour compliance, resident education and patient safety by:
1) Senior cardiology resident now takes 24 + 4-hour long-call. Through continuity of patient care, this should reduce hand-offs and improve learning through continuity of management.
2) New Swing Resident position on the Wards service helps to admit afternoon patients, take cross-over and get the long-call team out on time.

Study this system in March 2013:
1) Daily post-call surveys to track duty hours for interns and residents - First 15 days of March were in the current system - Last 16 days were in the pilot system
2) Pre- and Post-Surveys of involved cardiology residents’ impressions of the pilot

March Pre-Pilot Duty Hour Violations:
- SF Wards Senior Residents
- SF Cards Senior Residents

March Pilot Duty Hour Violations:
- SF Wards Senior Residents
- SF Cards Senior Residents

March Pre-Pilot Duty Hour Violations:
- SF Cards Interns

March Pilot Duty Hour Violations:
- SF Cards Interns

March Pre-Pilot SF Wards Resident Violations by Team
- Definite Violation
- Likely Violation
- Close Call

March Pilot SF Wards Resident Violations by Team
- Definite Violation
- Likely Violation
- Close Call

March Pre-Pilot SF Cards Resident Violations by Team
- Definite Violation
- Likely Violation
- Close Call

March Pilot SF Cards Resident Violations by Team
- Definite Violation
- Likely Violation
- Close Call

March Pre-Pilot SF Cards Intern Violations by Team
- Definite Violation
- Likely Violation
- Close Call

March Pilot SF Cards Intern Violations by Team
- Definite Violation
- Likely Violation
- Close Call

March Pre-Pilot: SF Cards Pre-Pilot
- Intern Duty Hour Violations

March Pilot: SF Cards Pilot
- Intern Duty Hour Violations

Major Findings:
1) Significant reduction in senior resident duty hour violations on both SF Wards and SF Cards
2) No reduction in intern duty hour violations on either service
3) On both services, duty hour violations were consolidated on one team suggesting that “team factors” as opposed to “system factors” played a major role in these violations.

Next Steps:
- Work with residents to modify the pilot system to optimize the system for education and patient care
- Implement the pilot for an extended period and study impacts on patient care, education and duty hour compliance
Combined Efforts of Telephone Outreach with Direct Mailing of Fecal Immunochemical Test to Increase Colorectal Cancer Screening at San Francisco General Hospital

Grace Chang, BA., BS. (Department of Medicine, SFGH), Jenny Liu, BA., BS. (Department of Medicine, SFGH), Charles Ramillo, MPH (Department of Medicine, SFGH), Claire Horton, M.D., MPH(Department of Medicine, SFGH)

The Problem

With the launch of the new Fecal Immunochemical Test [FIT], studies have consistently shown the change from the Fecal Occult Blood Test [FOBT] to the FIT has increased colorectal cancer [CRC] screening rates. According to the CDC, there will be an estimate of 102,000 new cases of CRC and at least 50,000 deaths resulting from CRC. The CDC also states that 6 out of 10 deaths could be prevented through early detection methods such as the FIT, sigmoidoscopy, and colonoscopy.

With the recent switch from the FOBT to the FIT at the SFGH, patients do not need to worry about past limitations with the FOBT. These past limitations included food restrictions, medication restrictions, sample sent was too large, sample sent was too small and/or sample sent was on the wrong side of the card.

Studies focused on improving CRC screening have shown that certain methods (telephone outreach calls and direct mailing) have independently increased CRC screening rates. The problems our patients encountered were lack of education on CRC and the importance of completing the FIT, shortage of time to discuss CRC screening during appointment times, unclear instructions and also misplacement of the kit.

Project Plan and Goal

<table>
<thead>
<tr>
<th>January 2012:</th>
<th>September 2012:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Launched FIT test in General Medicine Clinic</td>
<td>- Attended CRC Outreach Event, gathered data and different methods utilized for CRC Outreach from other health centers in San Francisco</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>October 2012:</th>
<th>December 2012:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Uplifted new FIT instructions, began sending kits out to patients. Patients were not required to send postage</td>
<td>- Test trial of Safeway gift card incentive to those who completed FIT during December.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>January 2013:</th>
<th>February 2013:</th>
<th>March 2013:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Launched DUE FIT project, who have never received kit, and outreached to patients who need FIT kit.</td>
<td>- Launch new FIT/Colonoscopy Flowchart, helped map out flow chart for future electronic clinical works (eCW) FIT/Colonoscopy process with eCW IT department.</td>
<td>- Continue follow-up with patients, brainstorm ideas during quarterly team meetings</td>
</tr>
</tbody>
</table>

Materials and Methods

Results / Progress to Date

![Increase in CRC Screening ratings over the past 16 months.](image)

Patient Interaction:

“Thanks for calling and speaking to me in my own language, it's easier to understand.”

“The calls were very helpful because they reminded me to complete my test”

“The instructions you sent were very helpful, clear and thorough, the kit was really easy to use compared to the old test”

“FIT was very convenient”

“Yes, I know what colon cancer is. My friend who has colon cancer taught me what colon cancer was. He told me to get screened right away, so I did.”

“I didn’t know how to use the FIT before, so I just left it on my desk. After you called and explained to me the instructions, I was able to complete the test and mail it in.

Lessons Learned & Next Steps

Lessons learned:
- A portion of patients were completely new to FIT testing, colon cancer screening and its importance
- Barriers to screening include culturally-based misconceptions about CRC.
- Providers’ recommendations significantly affect patient’s willingness to complete FIT test.
- Some patients not aware insurance covers CRC screening.

Next Steps:
- Expand educational efforts about the importance of CRC screening
- Devise better method of recording date on FIT test tube (common problem with many patients)
- Prepare for new electronic health record FIT testing procedures

References
Curricular Development: Teaching Outpatient Quality & Safety Principles through Ambulatory Morbidity & Mortality Conference

Aparna Goel, MD; Reena Gupta, MD; Urmimala Sarkar, MD, MPH; Krishan Soni, MD, MBA; Claire Horton, MD, MPH

1Department of Medicine, University of California, San Francisco; 2Division of General Internal Medicine, San Francisco General Hospital, University of California, San Francisco

Objectives

Implement an ambulatory M&M case conference series to:

1) Discuss outpatient medical errors and adverse events using a non-judgmental approach
2) Identify opportunities for inter-professional communication, practice-based learning, and systems improvement
3) Foster a culture of ambulatory quality and safety

Methods

• Clinic directors of General Medicine Clinic at San Francisco General Hospital and the Quality & Safety chief resident identify a case for discussion
• Cases are presented to all internal medicine residents and clinic faculty each month (examples in Table 1)
• SFGH M&M Matrix (Figure 1) is reviewed after the case presentation to discuss the case in context with ACGME core competencies

Results

• Program evaluation from conference attendees (n=68, 70% response rate)

<table>
<thead>
<tr>
<th>Survey Question</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall quality of the conference</td>
<td>95.2% very good or excellent</td>
</tr>
<tr>
<td>Ability of conference to teach how to analyze medical errors and adverse patient outcomes</td>
<td>76.5% very good or excellent</td>
</tr>
<tr>
<td>Ability of conference to identify strategies to improve patient safety</td>
<td>79.4% very good or excellent</td>
</tr>
<tr>
<td>Would you apply the contents covered in conference to improve your practice</td>
<td>85.0% very likely or definitely</td>
</tr>
</tbody>
</table>

Table 1: Examples of cases discussed and learning objectives at ambulatory M&M conference during 2012-2013

<table>
<thead>
<tr>
<th>Case</th>
<th>Objectives &amp; Next Steps</th>
</tr>
</thead>
</table>
| Medication Error
42 yo M on chronic opiates discharged with a new pain medication regimen. He was found down at a subway station and pronounced dead 5 days post-discharge with concern for opioid overdose. | • Review outpatient protocols for patients on chronic opiate therapy including alerts, requirements (toxicology screens, clinic visits) and documentation by clinic provider for patients to continue receiving their opiate prescriptions • Discuss access to CURES database • Discuss methods of integrating EMRs from other CHN clinics to SFGH LCR |
| Missed Critical Imaging Result
64 yo M with poor follow-up, heavy tobacco abuse seen in clinic for fatigue and weight loss. CTA chest from 2 years prior showed RUL & LUL nodules c/f malignancy, but this final read was not communicated to the PCP. He was ultimately diagnosed with primary lung adenocarcinoma. | • Review national guidelines for communication of critical imaging results • Describe methods for disclosing medical errors to patients • Discuss safety strategies in clinic to review records, especially in patients with poor adherence to follow-up • Collaborate with radiology to streamline process of communicating abnormal/critical imaging results for clinic patients |
| Delayed Diagnosis
59 yo M w/poorly controlled diabetes, candida pyelonephritis with persistent candiduria, h/o candidemia developed progressive R-sided weakness and blurry vision. He was sent to the ED three times from clinic or after concerning patient calls to advice line within three weeks. Ultimately diagnosed with candida medullary brain abscess. | • Review the current system in clinic for transferring patients to the ED and the ED system for accepting clinic patients • Improve the clinic handoff process to nurses who are transporting clinic patients to the ED • Improve signout to the ED physician by explicitly providing PCP expectation of admission to hospital, diagnostics, and other concerns. If information is conveyed in note, state this during signout • Create a follow-up system in GMC for patients transferred to or seen in the ED |

Figure 1: SFGH M&M Matrix: adapted from Vanderbilt Healthcare Matrix

<table>
<thead>
<tr>
<th>Patient Care</th>
<th>Practice-Based Learning &amp; Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Overall Assessment: Was there an Adverse Event? Medical Error?)</td>
<td>(What went well?) (What could be improved?) (How do we improve?)</td>
</tr>
<tr>
<td>Medical Knowledge</td>
<td>Successes</td>
</tr>
<tr>
<td>(What do we know?)</td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td></td>
</tr>
<tr>
<td>(What should we say?)</td>
<td></td>
</tr>
<tr>
<td>Professionalism</td>
<td></td>
</tr>
<tr>
<td>(How should we behave?)</td>
<td></td>
</tr>
<tr>
<td>System-Based Practice</td>
<td></td>
</tr>
<tr>
<td>(What is the process? Who do we depend on?)</td>
<td></td>
</tr>
</tbody>
</table>

Conclusions

• Ambulatory M&M is a feasible, effective educational tool to teach trainees about outpatient errors and adverse events
• Use of the SFGH M&M Matrix ensures review of systems of care that may contribute to errors and identifies areas for active quality improvement

References

Objective

To improve patient knowledge of kidney disease and strengthen adherence to practice guidelines [achievement of blood pressure (BP) <130/80, use of ACEi/ARBs, and yearly quantification of proteinuria] in patients with stage 3 CKD in an urban safety net clinic.

Design

• English-speaking patients with stage 3 CKD were referred by their primary care providers to attend four nurse-led educational visits discussing the basics of kidney function, causes and consequences of kidney disease, the importance of blood pressure control, and lifestyle modification.
• After each visit, participants met briefly with a nurse practitioner or physician to review medications and address blood pressure and proteinuria.
• Change in kidney knowledge was assessed by a questionnaire given to participants at the beginning and end of the intervention. Change in provision of guideline-concordant CKD care (BP <130/80, use of ACEi/ARB and quantification of proteinuria) was determined by chart review.
• Unpaired t tests were used to determine whether changes in patient knowledge and adherence to selected clinical guidelines were statistically significant after the intervention.

Results

• While our sample size is small, the data suggest that group medical visits for patients with CKD in an urban safety net primary care clinic can improve patient knowledge of kidney disease and strengthen adherence to practice guidelines. Total knowledge scores improved by a mean of 82%, from 39% pre-intervention to 71% post-intervention (p = 0.005).
• 90% of patients had a target BP of <130/80 and were on an ACEi/ARB both pre- and post-intervention (p = 0.95 and 1.00, respectively). Annual quantification of proteinuria increased from 55% to 100% after the intervention (p = 0.009).

Table 1: Changes in patient knowledge of kidney disease

<table>
<thead>
<tr>
<th>Knowledge Area</th>
<th>Pre-Intervention</th>
<th>Post-Intervention</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knows that the kidneys are nephrotoxic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Understands relationship between CKD and heart disease</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knows the kidneys make urine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knows the kidneys clean blood pressure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knows the kidneys regulate blood pressure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Can identify the symptoms of renal failure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knows the goal BP is 130/80</td>
<td>0%</td>
<td>100%</td>
<td>0.022</td>
</tr>
<tr>
<td>Knows the significance of proteinuria</td>
<td></td>
<td></td>
<td>0.010</td>
</tr>
<tr>
<td>Knows that NSAIDs are nephrotoxic</td>
<td></td>
<td></td>
<td>0.05</td>
</tr>
<tr>
<td>Knows the kidneys make urine</td>
<td></td>
<td></td>
<td>0.41</td>
</tr>
<tr>
<td>Knows the kidneys clean blood pressure</td>
<td></td>
<td></td>
<td>0.10</td>
</tr>
<tr>
<td>Knows the kidneys regulate blood pressure</td>
<td></td>
<td></td>
<td>0.05</td>
</tr>
<tr>
<td>Can identify the symptoms of renal failure</td>
<td></td>
<td></td>
<td>0.06</td>
</tr>
<tr>
<td>Total Knowledge Score</td>
<td></td>
<td>71%</td>
<td>0.005</td>
</tr>
</tbody>
</table>

Table 2: Changes in adherence to selected clinical practice guidelines

<table>
<thead>
<tr>
<th>Clinical Practice Guideline</th>
<th>Pre-Intervention</th>
<th>Post-Intervention</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BP &lt; 130/80</td>
<td>90%</td>
<td>100%</td>
<td>0.95</td>
</tr>
<tr>
<td>Taking ACEi/ARB</td>
<td></td>
<td></td>
<td>1.00</td>
</tr>
<tr>
<td>Quantification of proteinuria in the last year</td>
<td>55%</td>
<td>100%</td>
<td>0.01</td>
</tr>
</tbody>
</table>

Summary

• The data obtained from the questionnaires can be used to improve the educational curriculum of future CKD group visits.
• The program successfully utilized an interdisciplinary team of nurses, nurse practitioners, and physicians to meet its objectives.
Up to one-third of patients admitted to U.S. hospitals for heart failure exacerbations are readmitted within 30 days of being discharged from the hospital. One component of this defect in our health care system is inadequate teaching and reinforcing of nutrition recommendations for patients with heart failure. Hospitalized patients are ideal candidates in whom to encourage change behavior, such as improved diet.

Our team (one registered nurse, one registered dietician, one medicine resident, and one attending cardiologist) created the following plan:

- Identify patients admitted to 5D (telemetry unit at SFGH) for CHF-related diagnoses.
- Use “Caring For Your Heart” booklets as tools to teach healthy eating advice to identified patients.
- Reinforce teaching by floor nurses on 5D by using a multiple choice post-test.

Create an interdisciplinary team approach to provide nutrition advice to all patients admitted for heart failure-related diagnoses on 5D at SFGH.

“The Caring For Your Heart” booklets present nutrition education in English and Spanish in language and pictures for learners with low health literacy.
More than half of all quality improvement (QI) projects eventually fail

Employing a context-sensitive approach to QI may improve sustainability

Naltrexone is FDA approved for alcohol use disorder and has proven effective

To use principles of implementation science to sustainably offer naltrexone to patients with alcohol use disorders at a safety-net hospital

A pilot at this hospital increased naltrexone prescribing and reduced 30-day hospital readmission

Naltrexone is FDA approved for alcohol use disorder and has proven effective

To use principles of implementation science to sustainably offer naltrexone to patients with alcohol use disorders at a safety-net hospital

A pilot at this hospital increased naltrexone prescribing and reduced 30-day hospital readmission

Project Team

• Residents, attending physicians, pharmacists, social workers, information technologists, and hospital executives

Intervention

• An existing patient care handoff database was modified to identify patients with alcohol use disorder.

• An automated list is generated from the handoff database which supports provider activation at multidisciplinary rounds (MDR).

• Patients agreeing to start naltrexone are given the medication as inpatients and a prescription at time of discharge with outpatient follow-up arranged.

Measures

Through retrospective chart review, the proportion of eligible patients who were newly prescribed naltrexone at the time of discharge and the number of readmissions within 30 days were measured before and after the intervention.

One explanation for the variable success of QI projects is inattention to the context in which these efforts take place.

A context-sensitive QI framework may enhance the sustainability of successful pilot projects.

Our efforts focused on:

1) Improved buy-in from key stakeholders,
2) Automated identification of target patients to limit workload and eliminate the need for a single champion,
3) Provider activation through education and timely prompting.

All of these make it easier for providers in the health system to “do the right thing”.

We believe this approach will increase the sustainability of a simple, effective intervention and provide a foundation for further cycles of improvement.

UCSF Internal Medicine Residents; Jennie Bryant, MSW; David Smith, Pharm.D.; David Hersh, MD, Former Director of the Treatment Access Program; Jacqueline Tulsify, MD, Professor of Medicine, Positive Health Program, SF GH

Figure 1. Pre-intervention, January 2013 Chart Review

Figure 2. Post-Intervention, March 2013 Chart Review

Figure 1. Project Implementation – Process Map

Figure 2. Project Implementation – Process Map
**Effectiveness of an Evidence-Based Critical Care Ultrasound Course**

Sarah M Muni MD¹, Daniel Sweeney MD², Michael A. Matthay MD, Antonio Gomez MD¹, J. Lucian Davis MD MAS¹, and Christopher F Barnett MD³

¹Division of Pulmonary and Critical Care Medicine, University of California, San Francisco; ²Washington Hospital; ³Division of Cardiology, University of California, San Francisco

### Background
- Critical care ultrasound (CCUS) is a focused bedside exam performed by intensivists to immediately answer specific clinical questions
- CCUS reduces procedural complications, improves patient outcomes, and patient satisfaction
- There are currently no established criteria for CCUS training

### Research Question
Is an intensive evidence-based ultrasound course effective in learning and retaining focused ultrasound knowledge and skills?

### Methods

**Study design:**
- Prospective, pre vs. post intervention study

**Sample:**
- 18 ICU fellows and attendings at UCSF affiliated hospitals (Moffitt, SFGH, VA)

**Data Source:**
- Survey administered pre, post and 6 months after intervention
  - Response rate 100% at pre and post time points; 72% at 6 months

**Predictor variable/intervention:**
- Participation in a two day focused critical care ultrasound course

**Outcome variables:**
- Knowledge
- Self-rated confidence in ultrasound (US) use in clinical practice

**Statistical Analysis:**
- Wilcoxon rank-sum test

### Results

#### Table 1: Baseline sample characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>% (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training level</td>
<td></td>
</tr>
<tr>
<td>Attending</td>
<td>78% (14)</td>
</tr>
<tr>
<td>Fellow</td>
<td>22% (4)</td>
</tr>
<tr>
<td>Training background</td>
<td></td>
</tr>
<tr>
<td>Pulmonary CCM</td>
<td>62% (11)</td>
</tr>
<tr>
<td>Anesthesia CCM</td>
<td>33% (6)</td>
</tr>
<tr>
<td>Hospitalist</td>
<td>5% (1)</td>
</tr>
<tr>
<td># Lung US exams performed</td>
<td></td>
</tr>
<tr>
<td>0-25</td>
<td>75% (12)</td>
</tr>
<tr>
<td>25-50</td>
<td>6% (1)</td>
</tr>
<tr>
<td>50-100</td>
<td>13% (2)</td>
</tr>
<tr>
<td>&gt;100</td>
<td>6% (1)</td>
</tr>
<tr>
<td># Cardiac US exams performed</td>
<td></td>
</tr>
<tr>
<td>0-25</td>
<td>100% (16)</td>
</tr>
<tr>
<td>25-50</td>
<td>0</td>
</tr>
<tr>
<td>50-100</td>
<td>0</td>
</tr>
<tr>
<td>&gt;100</td>
<td>0</td>
</tr>
<tr>
<td># Vascular US exams performed</td>
<td></td>
</tr>
<tr>
<td>0-25</td>
<td>6% (1)</td>
</tr>
<tr>
<td>25-50</td>
<td>22% (4)</td>
</tr>
<tr>
<td>50-100</td>
<td>44% (8)</td>
</tr>
<tr>
<td>&gt;100</td>
<td>28% (5)</td>
</tr>
<tr>
<td># Abdominal US exams performed</td>
<td></td>
</tr>
<tr>
<td>0-25</td>
<td>94% (15)</td>
</tr>
<tr>
<td>25-50</td>
<td>0</td>
</tr>
<tr>
<td>50-100</td>
<td>6% (1)</td>
</tr>
<tr>
<td>&gt;100</td>
<td>0</td>
</tr>
</tbody>
</table>

**Figure 1:** Confidence in performing and interpreting US increased significantly after course without time related decay

**Figure 2:** Proportion affirmatively responding “Has an ultrasound performed by you influenced your clinical care?” at 6 mo follow up

#### Table 2: Knowledge increased after course without time related decay

<table>
<thead>
<tr>
<th>Knowledge test score</th>
<th>Median (IQR)</th>
<th>P value (compared to baseline)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>24 (22,26)</td>
<td></td>
</tr>
<tr>
<td>After the course</td>
<td>31 (30,32)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>6 months</td>
<td>29 (24, 31)</td>
<td>0.01</td>
</tr>
</tbody>
</table>

### Limitations
- Lack of validated assessment tools for CCUS limits the interpretation of these results
- Knowledge assessment may represent a learning effect

### Conclusions
- This pilot study showed
  - Strong interest in CCUS
  - Low baseline confidence in US abilities
  - Improvement in US confidence and knowledge after the course that persisted at 6 months after the course
- Future CCUS curriculum will employ a complimentary ongoing educational program to improve CCUS knowledge and skills so that it can be utilized for patient care

---

**Table 1: Baseline sample characteristics**

<table>
<thead>
<tr>
<th>Characteristic</th>
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</tr>
</thead>
<tbody>
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</tr>
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<tr>
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</tr>
<tr>
<td>&gt;100</td>
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<td># Vascular US exams performed</td>
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<td>6% (1)</td>
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<td>0</td>
</tr>
</tbody>
</table>

**Figure 1:** Confidence in performing and interpreting US increased significantly after course without time related decay

**Figure 2:** Proportion affirmatively responding “Has an ultrasound performed by you influenced your clinical care?” at 6 mo follow up
A Roadmap to Patient Engagement through Patient Advisory Boards: Lessons Learned Promoting Patient-Centered Care in Two Safety Net Clinics

Lucia Angel, Hali Hammer MD, Julia Ruffo, Elizabeth Davis MD, Claire Horton MD

Family Health Center and General Medicine Clinic, San Francisco General Hospital, University of California San Francisco

Timeline to Patient Engagement

2007-2010: Initial efforts to create a Patient Advisory Board were challenging and although group of patients were challenging and bringing about desired level of patient engagement.

February: As part of Team Up For Health (TUFS), a project focused on trying to close the disparity between Latino patients with diabetes at the Family Health Center, we began the Spanish Patient Advisory Board (S-PAB) as provided by the Institute for Patient and Family Centered Care.

January: The S-PAB site and membership began addressing clinical issues in non-Latino Spanish speakers.

February: The same model used with the S-PAB was applied to the already existing English speaking Patient Advisory Board (E-PAB). Within a few months it had grown in size and became an invaluable part of the quality improvement efforts in the clinic. Patient advisors started participating in and leading many projects.

Sponsor: With the help of the Family Health Center’s experience and lessons learned, the General Medicine Clinic initiated an advisory council for patient and family engagement called the Care Management Program.

2013: The General Medicine Clinic launched a clinic-wide Patient Advisory Board, which will serve to foster communication between patients and providers and act as an avenue of patient feedback.

Patient Outreach, Education, Quality Improvement Projects:

- Partnered with staff to improve patient education materials
- Gave perspective on diabetes patient teaching module
- Initiated Para-Transit Clinic for patients
- Started and continued to publish the Patient’s Voice Newsletter (2 Issues completed)
- Led orientation walk with new resident physicians
- Increased methods of gaining patients’ input by creating comment boxes
- Produced comment box videos for FHC waiting rooms
- Helped develop computer classes for patients
- Initiated Patient Navigator program
- Provided workshops, as well as input on a Care Management Brochure, introducing and explaining the program.

Clinic and Hospital Wide Quality Improvement Efforts:

- Assisted and translated the first hospital-wide Spanish volunteer orientation
- Participated and helped promote patient walking group
- Shared experiences with medical director of SFGH specialty clinics
- Supported Noche de Rascarreas-Fundraising Event
- Met with hospital Security Department to discuss patient concerns
- Established stronger link with SFGHP Wellness Center
- Initiated a patient representative in the Family Health Center

Using the Patient Advisory Board Toolkit Developed by the Family Health Center to Initiate Boards at the General Medicine Clinic:

- With the success of the Family Health Center’s 2 Patient Advisory Boards, now with 16 active members, FHC helped the General Medicine Clinic launch both its Care Management Advisory Council and Patient Advisory Board
- Thanks to the wisdom gained and lessons learned by the Family Health Center, the General Medicine Clinic successfully initiated both boards, which already have 14 active and eager members
- The creation of the Family Health Center Patient Liaison Handbook, as well as regular planning meetings, encouraged the smooth exchange of knowledge and skills needed to successfully start a Patient Advisory Board.
- The Family Health Center continues to meet with other clinics to discuss and help encourage the initiation of Patient Advisory Boards.
- The Patient Liaison Handbook is an excellent toolkit to guide others in their launching and maintenance of a Patient Advisory Board.
- While there are many tools available which advocate and assist clinics in initiating Patient Advisory Boards our toolkit speaks specifically to the challenges faced engaging patients in safety net clinic.
- The collective 5 of operating Patient Advisory Boards at the Family Health Center and General Medicine Clinic now serve an integral role, facilitating feedback and patient engagement.

LESSONS LEARNED / GOALS FOR IMPROVEMENT:

- Launching and maintaining a Patient Advisory Board requires dedicated Patient Liaison time.
- A toolkit can expedite the process for new clinics establishing Patient Advisory Boards.
- To achieve long term sustainability, board members must have a sense of ownership and responsibility.
- Patient advisors using a phone tree for reminder calls improves attendance and relationships between advisors.
- Reimbursement board members for expenses incurred by attending meetings is essential and must be part of the roll out plan (bus fare, taxi vouchers, small gift cards).

Acknowledgements
California HealthCare Foundation, Team Up For Health Team at FHC, Patient Advisory Boards at the SFGH Family Health Center and General Medicine Clinic, and the Institute for Patient and Family Centered Care

Contact & Resources
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angel@fcm.ucsf.edu
415-206-6539

Lessons Learned Promoting Patient-Centered Care in Two Safety Net Clinics

PROBLEM

The Family Health Center (FHC) and General Medicine Clinic (GMC) at San Francisco General Hospital lacked systems for engaging patients in quality improvement.

AIM (DESTINATION)

• To establish Patient Advisory Boards as venues for patients to participate in quality improvement
• To create a toolkit that other clinics can use to quickly and successfully launch patient advisory boards

STRATEGY FOR CHANGE (ROUTE)

- Procure strong support from leadership behind creation of Patient Advisory Board
- Identify and train staff persons for Patient Liaison role
- Develop definition of roles and responsibilities of Patient Liaisons
- Identify tools and mentors to help guide Board development process
- Develop definition of patient and family advisors roles, responsibilities and qualities needed
- Meet with staff and providers to gain buy-in
- Organize patients, caregivers, and family recruitment and orientation process
- Train patients to become fully engaged and effective advisors
- Plan for tracking involvement and improvement
- Plan for long term Advisory Board sustainability

MEASURING IMPROVEMENT

- Expand avenues for patients and their families to give input about their care at the clinic
- Participation in quality improvement efforts from patients and their families
- Culture shift to patient centered care and importance of patient engagement

Patient Comment Cards (June 2011-Dec 2012)

Promoting Input from Patients: Comment Boxes
By having comment boxes in each of our waiting rooms we encourage patients to provide written feedback at the end of their visit.
Background

Alcohol in the US
- Extensive worldwide morbidity and mortality
- 80,000 annual deaths
- Annual costs are approximately $223.5 billion to Individuals and society
- In San Francisco, there are approximately $18 million in unreimbursed costs annually

San Francisco General Hospital
- Safety net hospital with 20% of San Francisco’s inpatient care
- Extensive worldwide morbidity and mortality related to alcohol

Alcohol and Homelessness
- Alcoholism affects up to 73% of homeless adults
- Longer hospital stays, frequent use, and high alcohol related morality (30-70%)
- All add to the significant financial cost to care for this population

Study Aims

Better Characterize Alcohol Related Admissions to SFGH
- Demographics
- Service Use
- Specific Diagnoses
- Charges and Costs
- Compare Homeless and Housed Patients on Cost and Service Use
- Provide data to assist in the development of strategies for reducing preventable hospital admissions and alcohol related costs at SFGH

Study Design

Descriptive Study
- Population: All SFGH Patients discharged with a primary alcohol related diagnosis by ICD-9 Code (see Table 1)
- Timeframe: January 1, 2009 through December 31, 2012

Methods

Hospitalization data was extracted from both the University Health Consortium Database (UHC) as well as the SFGH EMR. Lifetime Clinical Record (LCR) using ICD-9 Code Diagnoses

Results

Between January 1, 2009 and December 31, 2012, there were 1345 discharges of a total of 960 patients with primary alcohol diagnoses. Of those patients, 55.8% were identified as white, 22.9% Hispanic, and 11.4% black. Males made up 85.6% of the population, and average age across all patients was 48, with a range of 14 to 84.

Results Continued

Data Extracted
- Date of admission, date of discharge, age, race/ethnicity, insurance provider, ICU days, visit charge, visit cost, homeless status, zip code, and ICD-9 code diagnoses

Results Continued

Table 1: Alcohol Related ICD-9 Code by Diagnoses Group

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>ICD Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol Intoxication</td>
<td>780.5, 291.85, 291.9</td>
</tr>
<tr>
<td>Alcohol Withdrawal</td>
<td>303.00, 303.01, 303.02, 303.03, 303.9</td>
</tr>
<tr>
<td>Alcohol Abuse</td>
<td>305.1</td>
</tr>
<tr>
<td>Alcohol Dependence Syndromes</td>
<td>305.00, 305.01, 305.10, 305.11, 305.12, 305.13, 305.14, 305.15, 305.16, 305.17, 305.18, 305.19</td>
</tr>
<tr>
<td>Alcohol Affecting Pregnancy, Fetus, or Newborn</td>
<td>642.81, 642.82, 642.83, 642.84, 642.85, 642.86, 642.87, 642.88, 642.89, 642.90, 642.91, 642.92, 642.93, 642.94, 642.95, 642.96, 642.97, 642.98, 642.99</td>
</tr>
<tr>
<td>Alcoholic Cardiomyopathy</td>
<td>425.5, E860, E860.0, E860.8</td>
</tr>
<tr>
<td>Personal History of Alcoholism</td>
<td>291.96, 291.97, 291.98, 291.99</td>
</tr>
<tr>
<td>Non-Dependent Alcohol Abuse</td>
<td>303.01, 303.02, 303.03, 303.9</td>
</tr>
<tr>
<td>Alcohol Related Diagnosis by ICD-9 Code (see Table 1)</td>
<td></td>
</tr>
</tbody>
</table>

Results Continued

Table 2: Alcohol Related Admissions and Cost By Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Patients</th>
<th>Homeless</th>
<th>Housed</th>
<th>Percent Homeless</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>203</td>
<td>769</td>
<td>1272</td>
<td>37.9</td>
</tr>
<tr>
<td>2010</td>
<td>184</td>
<td>626</td>
<td>1214</td>
<td>34.0</td>
</tr>
<tr>
<td>2011</td>
<td>204</td>
<td>704</td>
<td>1337</td>
<td>34.8</td>
</tr>
<tr>
<td>2012</td>
<td>233</td>
<td>922</td>
<td>1409</td>
<td>39.9</td>
</tr>
</tbody>
</table>

Results Continued

Table 3: Alcohol Related Admissions and Cost By Homeless Status 2009-12

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Patients</th>
<th>Homeless</th>
<th>Housed</th>
<th>Percent Homeless</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>203</td>
<td>769</td>
<td>1272</td>
<td>37.9</td>
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<tr>
<td>2010</td>
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<td>204</td>
<td>704</td>
<td>1337</td>
<td>34.8</td>
</tr>
<tr>
<td>2012</td>
<td>233</td>
<td>922</td>
<td>1409</td>
<td>39.9</td>
</tr>
</tbody>
</table>

Results Continued

Table 4: Medical Service Use and Cost Per Patient 2009-12

<table>
<thead>
<tr>
<th>Service Use</th>
<th>Housed</th>
<th>Homeless</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Charge ($)</td>
<td>70,049.95</td>
<td>57,987.50</td>
<td>12,062.45</td>
</tr>
<tr>
<td>Total Cost ($)</td>
<td>19,318.34</td>
<td>25,808.72</td>
<td>6,490.38</td>
</tr>
<tr>
<td>Number of Admissions</td>
<td>1.72</td>
<td>1.92</td>
<td>0.20</td>
</tr>
<tr>
<td>Length of Stay (days)</td>
<td>3.67</td>
<td>4.73</td>
<td>1.06</td>
</tr>
</tbody>
</table>

Discussion

Summary
- Alcohol related hospitalizations cost approximately $18 million over the four year period studied
- Alcohol withdrawal accounted for a large majority of costs
- A small percentage of patients accounted for a significant amount of the cost
- Homeless patients cost significantly more than housed patients—mostly secondary to number of visits
- Most patients from San Francisco’s Mission District

Interventions
- Reducing alcohol withdrawal admissions in the homeless
- Housing First Model (no sobriety requirements)
- 53% reduction in cost in similar settings
- Shelter-based managed alcohol administration
- Shown to sig. reduce alcohol related ED visits
- Focus interventions on the Mission District

Limitations
- Underestimation of Alcohol Related Costs
- Some diagnoses are automatically made primary
- Charting is often inaccurate
- Did not incorporate Alcohol Attributable Factors (AAFs)
- Lack of Reimbursement Data
- Cost Calculation is an Estimate of Total Cost
- No data on alcohol related ED or Outpatient visits which are likely account for significant costs

References

5. The City and County of San Francisco. The cost of alcohol to San Francisco: analyses supporting an alcohol mitigation fee. Sacramento, CA: Lewin Group Inc., 2010
Improving Provider Experience and Interdisciplinary Collaboration in the Complex Care Management Program at the General Medicine Clinic at San Francisco General Hospital

A. Johnson, J. Janssen, F. Ebeling, L. Tang, L. Evans, C. Horton, R. Gupta, E. Davis, Division of General Internal Medicine, San Francisco General Hospital, University of California San Francisco, San Francisco, CA

The Problem

- Providers often feel overwhelmed caring for complex patients
- The General Medicine Clinic Care Management program is an interdisciplinary program that seeks to improve care for frequently admitted patients, but it is unclear if it also improves provider experience.
- Residents often have limited experience working with interdisciplinary care management teams

Objective of Program

1) Improve provider satisfaction with caring for complex patients
2) Evaluate provider satisfaction with the General Medicine Clinic Care Management Program (CCMP)
3) Determine optimal methods of communication between the care management team and providers
4) Educate residents about care management and interdisciplinary teams

Description of Program

We used the following strategies to achieve our aims:

- Meeting with providers and care management team informally to elicit feedback about communication needs and optimal methods for communication.
- Creating guidelines for charting and email communication
- Conducting interdisciplinary case conferences during resident pre-clinic conferences.
- Conducting enrollment surveys of providers whose patients were entering the program and sharing this information with the care management team to inform program design.
- Conducting follow up provider surveys

Results

- Provider satisfaction with the care management program increased across multiple domains of patient care.
- Provider satisfaction improved across multiple domains of patient care.
- The General Medicine Clinic Care Management program is an interdisciplinary program that seeks to improve care for frequently admitted patients.

Findings to Date

- Of 28 providers with patients in CCMP, 12 completed the initial survey and 13 completed the follow up survey.
- 100% of providers responded that the care was ‘better’ or ‘much better’ than prior to enrollment in CCMP.
- Provider satisfaction improved across multiple domains of patient care.
- CCMP decreased the amount of time providers spent on coordination and paperwork, but not the amount of time they spent on the phone with patients, families, and other providers.
- Providers and CCMP team find huddling before clinic useful for in-person communication.
- Residents found case conferences increased their knowledge of how interdisciplinary teams function.

Key Lessons Learned

Complex care management can improve provider experience and perceived quality of care. Email guidelines and huddles help optimize communication between interdisciplinary teams and providers. Interdisciplinary case conferences can help improve resident knowledge about interdisciplinary care management.

Measures of Success

- Providers surveys at time of CCMP enrollment and six months post enrollment. Surveys address: 1) physician satisfaction with chronic care management, 2) time spent managing complex patients and 3) knowledge of patients’ clinical characteristics.
- Informal feedback was also elicited from providers and the care management team.

San Francisco General Hospital – University of California, San Francisco
Table: 2: Table of Baseline Characteristics (n=50)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male, %</td>
<td>31</td>
<td>62</td>
</tr>
<tr>
<td>EGM-related risks attended, %</td>
<td>24</td>
<td>48</td>
</tr>
<tr>
<td>Age</td>
<td>45.1 ± 12</td>
<td></td>
</tr>
<tr>
<td>Patients with 1 of the following in the past year, %</td>
<td>32.6</td>
<td></td>
</tr>
<tr>
<td>Diabetes</td>
<td>31</td>
<td>62</td>
</tr>
<tr>
<td>Hypertension</td>
<td>27</td>
<td>54</td>
</tr>
<tr>
<td>Heart failure</td>
<td>23</td>
<td>46</td>
</tr>
<tr>
<td>Stroke</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>Skin ulcers</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>106</td>
<td>212</td>
</tr>
<tr>
<td>White</td>
<td>32</td>
<td>64</td>
</tr>
<tr>
<td>Hispanic</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>Non-Hispanic</td>
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<td>32</td>
</tr>
<tr>
<td>NA</td>
<td>5</td>
<td>10</td>
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<tr>
<td>Diabetes-related visit or emergency care at GMC, %</td>
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<td>100</td>
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<td>EGM-related symptoms attended, %</td>
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<td>Hispanic</td>
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<td>White</td>
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<td>Age, years</td>
<td>45.1 ± 12</td>
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Figure 1: Figure of Call Completion Trend

Figure 2: Diagram of Phone Call Flow

Figure 3: Figure of Telephone Self-Management Program

Figure 4: Figure of Patient Response to Call Backs

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Table: 2: Table of Baseline Characteristics (n=50)

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<tr>
<th>Characteristic</th>
<th>Count</th>
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<tbody>
<tr>
<td>Male, %</td>
<td>31</td>
<td>62</td>
</tr>
<tr>
<td>EGM-related risks attended, %</td>
<td>24</td>
<td>48</td>
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<tr>
<td>Age</td>
<td>45.1 ± 12</td>
<td></td>
</tr>
<tr>
<td>Patients with 1 of the following in the past year, %</td>
<td>32.6</td>
<td></td>
</tr>
<tr>
<td>Diabetes</td>
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<td>62</td>
</tr>
<tr>
<td>Hypertension</td>
<td>27</td>
<td>54</td>
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<tr>
<td>Heart failure</td>
<td>23</td>
<td>46</td>
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<tr>
<td>Stroke</td>
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<td>18</td>
</tr>
<tr>
<td>Skin ulcers</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>106</td>
<td>212</td>
</tr>
<tr>
<td>White</td>
<td>32</td>
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<tr>
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<td>24</td>
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<tr>
<td>Non-Hispanic</td>
<td>16</td>
<td>32</td>
</tr>
<tr>
<td>NA</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Diabetes-related visit or emergency care at GMC, %</td>
<td>92</td>
<td>100</td>
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<tr>
<td>EGM-related symptoms attended, %</td>
<td>80</td>
<td>100</td>
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Incorporation of small group reflection on adverse events into a resident quality improvement rotation

The Problem

Adverse events and medical errors have important implications for the physicians involved:

- Having committed a medical error is positively associated with subsequent distress and burnout.
- High levels of burnout correlate with increased self-reported errors.

There is currently little space in the residency curriculum, however, to reflect on the impact of medical errors on trainees.

Encouraging self-reflection within training programs may help create a culture of openness in which residents welcome frank discussion of errors with one another.

Project Plan

The session consists of a 60 to 90-minute small group (3-5 first year Internal Medicine Residents) during the month-long PQJ rotation (11-12 sessions/year), as part of a larger residency well-being curriculum.

Each session is facilitated by a faculty member or ACGME fellow, who opens the session by giving ground-rules and a short didactic on research linking burnout to adverse events. After the facilitator models by sharing a brief reflection of his/her own, residents volunteer to share their reflections.

- Residents are given a prompt in advance of the session to reflect on an adverse event that personally affected them.
- Written reflection is encouraged but optional.
- No one is required to share.
- Focus is on personal experience and emotions related to the event, rather than root cause analysis.

To close the session, the facilitator leads a 10-15 minute group discussion to discuss overarching themes and brainstorm ways to enhance resident support and promote well-being, followed by discussion of further available resources for psychosocial support.

Project Goal(s)

- We sought to develop and incorporate an Adverse Event Reflection Session into the UCSF internal medicine residency quality rotation (the “PQJ rotation”) during the 2012-2013 academic year.
- We anticipated that this intervention would facilitate the processing of medical errors and enhance resident well-being for a majority of participating trainees.

Results / Progress to Date

- From October 2012-March 2013, four groups of residents (16 total residents) participated in an adverse events reflection session.
- Nearly all residents shared a personal experience during the session.
- 14 residents, including one resident who was on the rotation but unable to attend the session, returned surveys.

- Strengths of the session included:
  - Small group size, safe environment
  - Unique opportunity to share difficult experiences
  - Effective facilitation

- Areas for improvement included:
  - Desire for longer or additional sessions
  - Discussion of specific strategies to promote well-being, avoid burnout

Lessons Learned & Next Steps

- Integration of well-being innovations into the quality improvement curriculum is well-received by residents.
- The adverse events reflection session was perceived to be a valuable experience by the vast majority of participants.
- Participants felt that the session had particular value in contributing to personal well-being.
- Next steps include incorporating resident feedback to maximize effectiveness of sessions for future resident classes.
- Further evaluation is needed to determine if such sessions impact long-term resident burnout and well-being.

References:

In March 2012, oncology fellows and faculty participated in a survey to evaluate the possible communication gap between the outpatient and inpatient care of oncology patients.

- 86% of the faculty (n=21) and 91% of the fellows (n=11) indicated that the communication between the outpatient and the inpatient oncology teams could be improved.
- When asked whether a template submitted at the time of admission would improve patient care, 86% of the faculty (n=23) and 100% of the fellows (n=10) stated that the template would improve patient care.
- 91% of the fellows (n=11) reported that they learned about an admission from the charge nurse rather than the patient’s primary oncologist or their practice nurses.
- 59% of the faculty (n=22) reported that the implementation of a template with details regarding the patient’s hospitalization at the time of discharge would improve patient care.

Figure 1. Frequency at which the inpatient team contacted outpatient oncologists as reported by faculty (n=19).

To teach a goal rate of 75% discharge template completion by the fellows when patient charts are audited during randomly selected weeks.

To improve the communication between the outpatient oncologists and the inpatient oncology consult team by implementing discharge templates.

- Discharge templates will summarize the hospitalization and will include any complications related to chemotherapy.

Lessons Learned & Next Steps

- For a successful project, it is essential that all of the involved partners are motivated and excited about the project.
- Fellows are busy and monthly reminders via email and Round Table meetings allowed for increased compliance with the rate of discharge template completion.
- Auditing charts more frequently allowed us to account for the variability in the patient census on the consult service and how busy the fellows were in a particular week.

Next Steps:

- We have implemented pre-admission templates in APEX that are being completed by the outpatient oncologists prior to each patient’s planned chemotherapy admission. A future project will analyze the data regarding the frequency of pre-admission template completion by the outpatient oncologists.
- Practice assistants have started emailing the inpatient fellows with a list of patients who are tentatively scheduled for elective chemotherapy admission.
- We are working with representatives from APEX to determine if a specific note-type can be created with pre-populated templates for pre-admission and discharge. This will allow the outpatient oncologists and the inpatient team to find the appropriate notes more effectively and efficiently.
Background

UCSF Lakeshore Family Medicine Center

An off-site clinic providing a range of clinical services including primary care, OB/GYN, and outpatient procedures.

Process of Student QI at Lakeshore

- Medical students in the FCM 110 rotation work on discrete steps of longitudinal projects during their 6 week rotations.
- The current project has been ongoing for almost 2 years

Challenge: Too Much Waiting!

Previous surveys of patients and providers have identified clinic wait times as a significant source of patient frustration at the clinic.

Data collection tool

Chris Coontz and Elizabeth Cedars adapted a time motion protocol to collect data on patient wait time. Their data revealed that, on average, patients arrived for their appointments seven minutes after their appointment time (27 minutes after the time they were asked to arrive).

Intervention #1: Arrival Policy

- Patients were instructed to arrive 20 minutes before their appointment time.
- Patients were NOT seen if they arrived 15 minutes AFTER their appointment time.

In consultation with the patient advisory panel, the arrival policy was changed:

- Patients are assigned an arrival time 20 minutes prior to their scheduled appointment time.
- If a patient arrives after their arrival time but before their appointment time, their visit is truncated.
- If the patient arrives after their scheduled appointment time, they are rescheduled.

Intervention #2: Blood Draw Station

- All patients wait in their exam room for phlebotomy.
- Patients return to waiting room and are brought to a dedicated room for their blood draw.

Data Collection

The effects of these interventions are being measured with a repeat time motion study. So far, the data include 172 patients. We will gauge the efficacy of the new policies by comparing current wait times and total visit length to the previous data.

Results to Date

Visit Summaries

- Pre-Arrival/Phlebo Changes: Median Total: 58 min, n = 99
- New Arrival Policy: Median Total: 60 min, n = 85
- New Arrival Policy and Phlebotomy Workflow: Median Total: 48 min, n = 82

Conclusions to Date

- The data gathered so far suggest that the combined interventions of the new arrival policy and new phlebotomy workflow decrease total patient visit times and provider tardiness. Statistical significance has not yet been reached, but the project is ongoing. As both patients and staff become accustomed to the interventions, we expect to see further improvement.
- The time motion tool allows quick turn around for evaluation of clinic procedure changes.
- Longitudinal QI projects with rotating students can affect significant clinic improvements.

Lessons Learned & Next Steps

- These interventions necessitate excellent communication between clinic staff.
- For the arrival time policy to be effective, the front desk staff needed to understand and strictly enforce the rules.
- In order for the phlebotomy workflow to be efficient, physicians needed to communicate the need for a blood draw to the nurses promptly through APEX.

Many thanks to the Lakeshore Patient Advisory Panel, who volunteer their time, Lakeshore patients who participate in time motion study, and Lakeshore staff who assist in the time motion study.
Patient Centered Design
Lloyd Damon MD, Janelle Smith MHA, Tricia Maxfield RN, Lynne DeBerry RN, Ron Lipsy, Robert Gaderlund, Deepak Dandekar
Department of Medicine, Ambulatory QI Working Group

The Problem

- The current physical plant for the Hematology Clinic and Transfusion/Infusion Unit is too small and poorly designed to treat cancer patients.
- It lacks not only square footage but a healing environment for patients and families.
- The space does not embrace health information technology needs.
- The space is a sub-standard work environment for staff from a safety perspective.
- Press Ganey survey results/comments and staff engagement survey results have demonstrated dissatisfaction regarding our physical plant.

Project Plan

- In the process of building a new Hematology Clinic and Transfusion/Infusion Unit, we incorporated evidence based design (EBD) principles as well as input from staff and patients/families.
- The architects built a 3-D mock-up of an infusion "bay" and received feedback from staff, patients and families on the layout, potential patient and guest chair options and staff equipment areas.

- Feedback was incorporated into a re-design of the space to create a better ergonomic setting for the staff and a more comfortable space for the patients.

Project Goal(s)

- Improve the patient experience by creating a space that is centered around patients and families.
- Engage staff and patients/families in the design process.
- Create a unit that increases the quality and safety of patient care, allowing patients to focus their energies on getting well.
- To create an environmentally sustainable space that will promote healing and enhance health.
- Provide a positive work environment that reduces physical stress on providers and staff and has flexibility for future use of the space.

Results / Progress to Date

- Planning and design is complete.
- Pre-construction began on April 8, 2013.

Lessons Learned & Next Steps

Lessons Learned:

- Evidence based design can assist with reducing medical errors, improving satisfaction and efficiency of caregivers, use of health information technology and providing adaptive design for the changing healthcare environment.
- Learn from your peers. We gained a tremendous amount of knowledge by visiting other centers (Dana Faber, Cedars-Sinai Medical Center and Beth Israel Deaconess Medical Center) and speaking to facilities/clinical staff about what lessons they learned during their design processes.

Next Steps:

- Construction is scheduled to be completed in May, 2014.
- Outcome measures will include performance on Press Ganey surveys, patient, family and staff feedback as well as results of hand hygiene audits and job-related injuries of staff.
Improving the Patient and Provider Experience by Increasing MyChart Enrollment and Creating a Messaging Triage Protocol

Eva Turner, Taruna Kumar, Kathie Buchanan, RN, Dan Null, MD, and the DGIM 1701 Faculty Practice
Department of Medicine, Ambulatory QI Working Group

The Problem

- The Division of General Internal Medicine (DGIM) has the largest ambulatory patient volume in UCSF. As such, we had a significant challenge in supporting the medical center’s ambulatory goal of 50,000 MyChart patient activations.
- As we rapidly increased the number of MyChart enrollees, the message volume increased exponentially. This created a challenge for managing providers’ time in processing and responding to these messages.
- Many MyChart incoming messages lack key information needed for clinical decision making or are requests that do not need review by a provider and can be handled by support staff.

Project Goal(s)

- Enroll 12,000 DGIM patients to MyChart.
- Create a messaging triage protocol and a smart phrase dictionary to reduce providers’ time in responding to incoming messages.
- Enhance providers’ workflow efficiencies by improving the quality of messages that are forwarded for their review.

Project Plan

Increase MyChart activations by enrolling patients at every entry point to the practice:

- Enroll 12,000 DGIM patients to MyChart.
- Create a messaging triage protocol and a smart phrase dictionary that answers most common communications sent via MyChart.
- Enhance providers’ workflow efficiencies by creating a messaging triage protocol and a smart phrase dictionary that answers most common communications sent via MyChart.

Results / Progress to Date

- DGIM has over 13,000 patients enrolled in MyChart as of March 2013 and UCSF Ambulatory has achieved its goal of 50,000 activations.
- The DGIM MyChart dot phrase dictionary has over 27 types of message responses and more get added or modified as needed.
- Providers report receiving fewer messages in their inbox that do not need to be handled by them, saving some time with daily message processing.

Lessons Learned & Next Steps

- One size does not fit all for the dot phrases, which only work with about 25-30% of the total messages. Many responses are complex and need to be written as free-text.
- It is often more efficient for the provider to have a patient come in for an appointment than to continue to dialogue through MyChart. Efforts are also being made to give providers wRVU or visit volume credit from MyChart communications.
- Patients do not always realize that MyChart communications become a permanent part of the medical record and so misunderstandings can occur over what constitutes the “Medical Record”.
- During weekends, messages sit in triage pools so that providers do not see incoming messages until after the staff has had an opportunity to start processing them on Monday. However, since some patients are expecting rapid response even over the weekend or after hours, a few providers requested to be removed from message triaging and handle all incoming messages on their own.
- The DGIM patient advisory council recommended to allow for direct access scheduling through MyChart to reduce MyChart messaging and call volume to DGIM.
- Moving forward, periodic meetings will be scheduled to enhance triaging and coach staff how to better process MyChart messages.
1. Limited access for new patients to outpatient specialty care
   - Identified by the medical center as a “hot spot” for improvement
   - Decreased access to timely specialty care impacts the following:
     o Patient experience
     o Referring physician experience
     o Healthcare quality
     o Healthcare costs
   - Medical group market share

2. Lack of experiential learning opportunities in implementation science for medical students

The Problems

Project Goals

Results / Progress to Date

Lessons Learned & Next Steps

1. Through partnership between Endocrinology Division at UCSF Medical Center and the Action Research Program (ARP) team, to develop a rapid-cycle improvement program for increasing new patient access with the following characteristics:
   - Financially self-sustaining
   - Acceptable to patients
   - Acceptable to clinic staff
   - Acceptable to specialists

2. To integrate trainees into the implementation science team for data collection, analysis, interpretation and system redesign

Lessons Learned:
A. Increasing Subspecialty New Patient Access
   - **Facilitators**
     - Engagement of clinic providers and staff lead to significant changes in proposed models but increased likelihood of model adoption
     - Expanding the medical assistant role to include outreach and between visit communication and can increase clinic visit efficiency, continuity, and patient satisfaction
   - **Barriers/Challenges**
     - Physicians are already operating at maximum, and modifications to clinic operations must not increase physician workload
     - Not all clinic visits are the same amount of work for clinicians. Factors such as internal vs. external referral and whether individual clinic has seen patient previously play a large role in how much work goes into a clinic visit

B. Educating Trainees on Implementation Science and Clinical Operations
   - Trainees can play key roles in an implementation science team and gain valuable knowledge about healthcare system operations
   - Implementation projects must be flexible to tailor project activities to trainee interests, skill sets, and schedules

Next Steps:
- Continue data collection and analysis; present final report to the Endocrinology Division
- Adapt and implement model to other UCSF specialties clinic
- Work with UCSF Bridges curriculum redesign to include medical students in delivery system operations (e.g. pre-visist care, health coach)

UCSF Department of Medicine

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### Figure 1. High no show rates found in two clinics; rates dramatically improved after MA pre-visit calls

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<td><strong>Family Medicine</strong></td>
</tr>
<tr>
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| Table 3. Themes from patient interviews about having scheduled MA telephone follow-up in lieu of clinic visit |
| --- | --- |
| **Communication Facilitation** | **Anticipation of increased frequency, quality of communication via clinic visit** |
| **Anticipation of increased frequency, quality of communication via clinical visit** | **Potential to contribute to increased clinic visit access for other patients** |
| **Potential to contribute to increased clinic visit access for other patients** | **A variety of patients expressed reservations about phone follow-up, including the following concerns:** |
| **A variety of patients expressed reservations about phone follow-up, including the following concerns:** | **Whether the physician would continue to be in charge of medical decisions** |

---

### Action Research Program (ARP) Team

- **Members:**
  - Implementation Science Faculty & Staff
  - 1 program coordinator
  - 4 medical students (3 MDs; 1 MS and 1 MD)
  - 1 VA quality improvement fellow

- **Main Activities:**
  - Participation in weekly team meetings
  - Medical and education trainees on qualitative and quantitative data collection and analysis
  - Participate in weekly team meetings
  - Interact with data analysts, interview patients and clinicians, and analyze qualitative and quantitative data

- **Roles:**
  - 2 physician champions
  - 2 clinic staff, including 1 MA

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### Evolution of MD clinic schedule:

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<td></td>
</tr>
</tbody>
</table>

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### Results / Progress to Date

- **Increased New Patient Visit Efficiency:**
  - **Decrease No Show Rate for New Patients**
  - **Decrease Time Alloted for New Patient Visits**
  - **Increase Number of Discreetony Clinic Visits**
  - **Increase New Patient Access to Specialty Care**

- **High New Patient No Show Rate**
  - **MA Pre-visit Patient Call**
  - Confirms appointment
  - Times patient prevented from getting to appointment

- **High New Patient No Show Rate**
  - **MA Pre-visit Patient Call**
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### Project Plan

- **UCSF Department of Medical Center:**
  - **UCSF Division of General Internal Medicine**
  - **UCSF Department of Endocrinology and Metabolism**
  - **UCSF Graduate School of Nursing**
  - **UCSF School of Pharmacy**

- **UCSF Division of General Internal Medicine:**
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### Lessons Learned & Next Steps

- **Lesson 1:** Increasing Subspecialty New Patient Access
  - **Facilitators**
    - Engagement of clinic providers and staff lead to significant changes in proposed models but increased likelihood of model adoption
    - Expanding the medical assistant role to include outreach and between visit communication and can increase clinic visit efficiency, continuity, and patient satisfaction
  - **Barriers/Challenges**
    - Physicians are already operating at maximum, and modifications to clinic operations must not increase physician workload
    - Not all clinic visits are the same amount of work for clinicians. Factors such as internal vs. external referral and whether individual clinic has seen patient previously play a large role in how much work goes into a clinic visit

- **Lesson 2:** Educating Trainees on Implementation Science and Clinical Operations
  - Trainees can play key roles in an implementation science team and gain valuable knowledge about healthcare system operations
  - Implementation projects must be flexible to tailor project activities to trainee interests, skill sets, and schedules

---

### Presenting: Jessica Eng, MD, MPH; Sara Askarman, PhD, MPH; Christy Boscardin, PhD; Laura Cantino, MD; Ralph Gonzalez, MD; Margaret Handleay, MD; MPH; Cecily Hunter; Evie Kalmar, MS; Sunny Lai; and Caterina Yuan

- **Endocrine Works-in-Progress Team:**
  - **Marlene Bedrich, MD; Chunying Liu, MD; Christa Manasalis, Aaron Neinstein, MD; Katrina Poon**

- **UCSF School of Medicine:**
  - **UCSF Division of General Internal Medicine:**
  - **UCSF Department of Endocrinology and Metabolism:**
  - **UCSF Graduate School of Nursing:**

- **UCSF Medical Center:**

- **Supported by the UCSF Center for Healthcare Value and UCSF Clinical and Translational Sciences Institute Implementation Science Program:**
The Problem

- Frontline staff play a significant role in providing a positive and memorable patient experience in the ambulatory setting.
- Results from patient satisfaction surveys show that this is an area for improvement across our practices.
- Despite this, little training and tools to improve the patient experience are currently provided to staff.

Project Goals

- Enhance the patient experience by providing frontline staff with tools and skills required to excel in customer service.
- Increase employee engagement and work satisfaction.
- Foster a culture of community and teamwork for staff working across the various practices.

Project Plan

- Frontline staff from the following practices were invited to participate in a half-day customer service training: Rheumatology, Nephrology, Infectious Disease, 360 Positive Health, Pulmonary, Allergy, Endocrinology and Diabetes Teaching Center.
- The retreat was organized into the following sessions:
  I. An introductory session to frame why customer service training is important and beneficial.
  II. A patient experience overview, including an outline of available tools for measuring patient satisfaction.
  III. Tools to improve the patient experience:
    - Using AIDET in daily interaction
    - Service recovery tools
    - Tools for defusing upset patients
  IV. Breakout session focused on staff recognition:
    - Working in small groups, participants brainstormed best strategies to recognize and reward staff for their efforts to improve the patient experience.

Results / Progress to Date

Customer Service Training Evaluation:

“What was the single most useful part of this retreat?”

- “The interactions with other employees, hearing what each employee has been through and with handling / dealing with upset patients”
- “Learning how to deal with angry patients”
- “Coming together as a group. We never do this”
- “A great reminder to express empathy and great customer service skills at all times. The golden rule of “treat others the way you want to be treated”

“How might we recognize and reward staff for their efforts to improve the patient experience?”

I. Recognition

- Employee of the month 11%
- Recognition appreciation 5%
- Management recognition and verbal Acknowledgement 58%
- Open Suggestions

II. Reward

- Free Parking 4%
- Gift Cards 32%
- Breakfast/Lunch Celebration 16%
- Paid Day off 24%
- Bonus/Promotion 24%

Lessons Learned & Next Steps

- Feedback derived from the evaluation survey highlights the importance of providing frontline staff with best practice customer service tools as well as opportunities to interact with their peers in other practices and learn from each others’ experiences.
- During the second part of the customer service training, staff outlined several suggestions on how they would like to be rewarded and recognized for their efforts to improve the patient experience. The majority of these suggestions focused on management recognition and verbal acknowledgment rather than financial incentives.
- In the upcoming months the Department of Medicine QI Ambulatory Working Group will explore and cultivate opportunities for creating a supportive and engaging work environment for providers and staff. Provider and staff engagement will also be an area of focus at an ambulatory spring retreat.
The Problem

- The UCSF Division of Hospital Medicine (DHM) physician communication was rated poorly by patients as evidenced by low patient survey scores.
- Increasing consequences for poor patient experience include loss of reimbursement via the value based purchasing "pay for performance" model implemented by the Centers for Medicare and Medicaid Services.
- Nationally, improvement by other hospitals working to improve the patient experience in the changing healthcare environment further highlights poor performers.

Project Goal(s)

- To implement a multifaceted approach to understand the patient experience on the DHM inpatient service, train physicians in communication skills, provide communication tools to physicians and provide audit and feedback of performance to physicians by December 2012.
- To increase patient HCAHPS survey return from 15% to 40% by December 2012 in order to improve representative sampling of patients.
- To improve the top box performance on the HCAHPS survey MD Communication questions to 80% by July 2014.

Project Plan

- Develop multidisciplinary team
- Align Divisional goals with Medical Center goals; Setting patient experience scores as a divisional priority; Incentivize financially
- Improve understanding of patient experience through patient focus group, rounding on patients, survey comments
- Train MDs in communication skills; include housestaff
- Bedside Observations of faculty and housestaff with coaching and feedback
- Provide service level and provider level data to MDs
- 2nd survey mailings, reminder during post d/c phone calls, MD reminders to patients

Results / Progress to Date

- AIDET SMiLe (80% by July 2014)
- MD Communication questions: "Are you happy?" (75% vs 95%)
- Patient adherence rate: 38% vs 68%
- MD Improvement to performance on the HCAHPS survey to physicians by providing audit and feedback of communication tools to physicians
- Communication skills, provide service, train physicians in communication
- Improvements to patient experience on the DHM inpatient service
- Service level and provider level data to MDs

Lessons Learned & Next Steps

Lessons Learned:
- Culture change takes time and continuous effort firstly, to reach all involved, and secondly, to sustain behaviors.
- Although pockets of success are demonstrated, overall patient experience score improvement is very challenging.
- It takes a village of leaders and well respected champions of the effort to stimulate change in a large organization.

Next Steps:
- Work with individuals using individual performance data; reinforce communication skill improvement, use of communication tools, encourage team based focus on communication on teaching service
- Surveys and structured interviews of physicians to understand obstacles/tailor efforts
- Disseminate Communication Framework "AIDET SMiLe" to all physicians and staff across the organization

UCSF Department of Medicine
Using Facesheets To Improve Patient Understanding of the Primary Team

Emily Gottenborg, MD; Steven Ludwin, MD; Courtney Sherman, MD; Diane Slwka, MD
1UCSF Medicine Residency Program, 2UCSF Department of Medicine, 3UCSF Chief Residency

The Problem

- Patients on the inpatient medicine service see many healthcare providers and have difficulty knowing their names and roles.
- Patient identification of their physicians is a crucial element in establishing the high-priority patient-provider relationship.
- A literature review revealed:
  1. 70% of patients on an internal medicine service were unable to name their provider.
  2. Of those who could, only 40% were correct.
  3. 74% of patients felt it was important to know their physicians level of training.
  4. Patient satisfaction has been shown to correlate with accurate physician identification.
- Use of a physician identification tool has been shown to enhance physician identification at other institutions.

Project Goal(s)

- Explain the complex medical team structure to inpatients and provide them with a tool to identify their care providers
- Improve patient’s ability to identify members of their medical team, and enhance communication
- Improve patient satisfaction with their care
- Enhance provider perception of patient-provider relationship

Project Plan

- A physician identification tool was professionally designed and produced for each Internal Medicine resident and Department of Medicine attending.

Results / Progress to Date

- During a 7-day survey period, all appropriate medicine patients (non-ICU, English-speaking, intact mental status) were surveyed to assess the impact of the facesheet on their hospital experience.
- All participating physicians were surveyed regarding their experience with the facesheet.

Lessons Learned & Next Steps

Lessons Learned:

- Logistical challenges inherent in any Quality Improvement project have the potential to create barriers for sustainability.
- Enhanced buy-in from key stakeholders, including housestaff, medicine attendings, patients, and the medical center is essential in creating a sustainable intervention.
- This physician identification tool proved to be a high-value intervention, with modest cost but a significant impact on the patient experience.

Next Steps:

- The facesheet intervention will continue for the upcoming academic year for all inpatient medicine teams at UCSF.
- The intervention has been disseminated to San Francisco General Hospital inpatient services, including internal medicine, family medicine, pediatrics, and obstetrics-gynecology for the 2013-2014 academic year.
- We will intermittently survey both patients and providers on the facesheet intervention, specifically with respect to the overarching goals of communication, satisfaction, and physician recognition.
Inpatient falls are a Medicare “never event”, and are considered entirely preventable.

- National averages for inpatient falls in adult med-surg or stepdown units range from 2.71-4.51 falls per 1000 patient days. [1]

- The level of awareness among physicians of patient fall risk and effective interventions to prevent falls is unclear and it is not known whether higher physician awareness of fall risk might lead to safer medication orders or fewer inpatient falls.

- All physicians and medical students on the inpatient medicine teaching service were surveyed regarding patients’ fall precautions status, their opinion of patients’ risk of a fall and risk of adverse outcome from a fall.

- The following 3 questions were asked of each provider about each of the patients that they were directly following:
  1. Is this patient currently on fall precautions?
  2. In your opinion, is this patient at high risk for a fall during this hospitalization?
  3. In your opinion, is this patient at high risk for an adverse outcome if they were to fall during this hospitalization?

- Exclusion patients included those in the ICU, LSU, and those who had not yet been transferred from the ER at the time of the surveys.

- Potentially inappropriate medications (PIMs) were defined according to Beers criteria as orders for as-needed benzodiazepines or sleep aids. [2]

- Additional data was collected by chart review.

Results and Progress to Date

**Figure 1. Patient Characteristics**

<table>
<thead>
<tr>
<th>Patient characteristic</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>On fall precautions</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>Thought &quot;High risk for fall&quot; by at least one team member</td>
<td>38</td>
<td>63</td>
</tr>
<tr>
<td>Thought &quot;High risk for serious outcome&quot; by at least one team member</td>
<td>25</td>
<td>50</td>
</tr>
<tr>
<td>&quot;High risk for serious outcome&quot; who are on fall precautions</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>&quot;High risk for fall&quot; who are prescribed PIM</td>
<td>13</td>
<td>34</td>
</tr>
<tr>
<td>&quot;High risk for serious outcome&quot; who are prescribed PIM</td>
<td>9</td>
<td>18</td>
</tr>
</tbody>
</table>

**Figure 2. Level of unawareness of inpatient fall precautions**

- Provider unawareness of inpatient fall precaution status is high.
- High risk medications were more likely to be prescribed when at least one provider was unaware of fall precaution status.
- Approaches to improve provider awareness of fall risk may be beneficial for fall prevention.
- Efforts to improve awareness of fall precautions among providers, such as automatically adding it to the problem list when fall precautions are ordered, may be a feasible, cost effective way to improve awareness, decrease prescribing of PIM’s and reduce inpatient falls.

Discussion and Next Steps

- Provider unawareness of inpatient fall precaution status is high.
- High risk medications were more likely to be prescribed when at least one provider was unaware of fall precaution status.
- Approaches to improve provider awareness of fall risk may be beneficial for fall prevention.
- Efforts to improve awareness of fall precautions among providers, such as automatically adding it to the problem list when fall precautions are ordered, may be a feasible, cost effective way to improve awareness, decrease prescribing of PIM’s and reduce inpatient falls.

References:

UCSF Department of Medicine
GOAL: Our project aims to analyze patient experience data for beneficiaries enrolled in UCSF’s first ACO and benchmark this data against overall patient experience at UCSF to better understand how our ACO initiatives impact patient perceptions of quality of care.

INTERVENTION: The ACO transitions collaboration was launched in 2011. In February 2012, a care transitions manager (CTM) was hired to assist all admitted ACO patients to improve care transitions between the inpatient and outpatient setting, decrease visits to the emergency department, and reduce hospital readmissions.

Project Plan

180 unique inpatient visits eligible for post-discharge survey
• A random sample of hospitalized patients at UCSF are asked to complete a patient satisfaction survey after discharge.
• Each survey is then linked to the patient’s visit number.

Survey data during the first four quarters of the UCSF ACO showed steady gains in three key areas:
1) the extent to which patients felt ready for discharge;
2) patient comfort with instructions they received for care at home; and
3) patient belief that they were included in treatment decisions.

Results / Progress to Date

Preliminary Patient Satisfaction Data

Selected Survey Questions | Q3 2011 | Q4 2011 | Q3 2012 | Q2 2012
--- | --- | --- | --- | ---
AOC mean score (%) | SFV mean score (%) | AOC | SFV | AOC | SFV | AOC | SFV | AOC | SFV
Overall discharge | 93.0(13) | 94.9(76) | 90.6(11) | 94.4(54) | 91.3(11) | 95.1(52) | 91.5(11) | 96.6(52)
Overall assessment | 93.9(13) | 94.8(76) | 91.7(11) | 95.1(52) | 92.1(11) | 96.6(52) | 91.7(11) | 96.6(52)
Extent felt ready discharge | 75.0(13) | 87.6(77) | 76.6(11) | 87.6(54) | 79.6(11) | 91.1(52) | 79.6(11) | 91.1(52)
Instructions at home | 75.6(13) | 87.2(77) | 76.6(11) | 87.6(54) | 79.6(11) | 91.1(52) | 79.6(11) | 91.1(52)
Staff worked together to care for you | 91.1(13) | 95.5(77) | 91.7(11) | 95.5(54) | 93.7(11) | 98.1(52) | 93.7(11) | 98.1(52)
Staff included you in treatment decisions | 81.0(13) | 96.3(77) | 84.1(11) | 96.3(54) | 86.1(11) | 100(52) | 88.1(11) | 100(52)
Hospitalized less than 48 hours | 95.0(13) | 94.4(77) | 96.0(11) | 94.4(54) | 98.0(11) | 91.1(52) | 98.0(11) | 91.1(52)

Survey data from a random sample of 180 unique inpatient visits eligible for post-discharge survey

Lessons Learned & Next Steps

Overall satisfaction with the discharge process for patients enrolled in the CCSF ACO improved compared to non-ACO patients hospitalized during the same time period.

Limitations include:
1) the small number of ACO patients hospitalized during the study period which resulted in a low number of post-discharge surveys;
2) analysis of a survey designed and administered by Press Ganey, rather than the HCAHPs survey that will determine CMS reimbursement rates starting in FY2013. UCSFMC began administering the HCAHPs survey in FY2012.

Next steps for our project include:
1) Analyzing the care transitions questions on the HCAHPs survey for patients enrolled in both the CCSF ACO and for patients in a new UCSF ACO (for the employees of University of California, ~10,000 patients); 2) assessing the impact of other interventions primarily in the outpatient setting by analyzing outpatient surveys (CGCAHPS); 3) benchmark with both all UCSFMC patients as well as with other large academic medical centers such as the University HealthSystem Consortium (UHC) for external validation.

In future work, we hope to bolster our findings that participation in an ACO leads to improved patient satisfaction. Higher patient satisfaction will not only enhance UCSFMC’s reputation as a provider of excellence but could generate substantial revenue for the medical center. We will also assess how to best implement interventions that show a positive impact across the medical center.

Background

• New payment systems will be focused on quality and patient experience outcomes.
• In 2013, Centers for Medicare and Medicaid Services (CMS) will tie a percentage of revenue to scores on the HCAHPs survey (Hospital Consumer Assessment of Healthcare Providers and Systems).
• UCSF Medical Center (UCSFMC) participates in two commercial Accountable Care Collaborations (ACCs).
• Through accountable care, we hope to improve patient experience and quality while decreasing cost, thereby improving the value of care for a population of patients.
• Measuring patient experience data for our ACO populations and assessing the impact of specific interventions on patient satisfaction will allow us to identify new opportunities to enhance population health management.

UCSF Department of Medicine

Improving Patient Satisfaction through Accountable Care Organizations

Gabrielle Berger MD, Jason Phillips MA, Ami Parekh MD, JD

1Department of Medicine, 2UCSF Medical Center, 3Division of Hospital Medicine, University of California-San Francisco

Project Aims

5,510 pts in CCSF ACO
• Employees of the City and County of San Francisco (CCSF) comprise one ACO at UCSF.
• In FY 2011-2012, CCSF ACO participants had 180 unique inpatient visits to UCSFMC.

Average ACO survey responses per quarter:

Q1 2012: 94.4
Q2 2012: 91.1
Q3 2012: 91.9
Q4 2012: 90.4

Our ACO includes employees of the City and County of San Francisco (CCSF). CCSF comprises one ACO at UCSF.

1) the extent to which patients felt ready for discharge;
2) patient comfort with instructions they received for care at home; and
3) patient belief that they were included in treatment decisions.

Healthcare Providers and Systems (CMS) will tie a percentage of revenue to scores on the HCAHPs survey (Hospital Consumer Assessment of Healthcare Providers and Systems) in 2013.
Improving the Patient Experience: Front-Desk Peer Observations
Marlene Bedrich, RN, CDE, Parousha Zand, RN, Gilbert Solorzano, Naama Neeman, MSc, Zachary Martin, Niraj Sehgal, MD, MPH
Department of Medicine, Ambulatory QI Working Group

The Problem

➢ The registration process is an important yet often-neglected part of the overall patient experience in the ambulatory setting.
➢ Front desk staff have a central role in making patients feel welcomed and well-cared for, however often they do not receive sufficient guidance and training on best practice verbal and non-verbal behaviors.
➢ Allowing front desk staff to observe their peers during the registration process, can raise awareness on the importance of projecting a professional image and making a great first impression.

Project Plan

➢ We conducted 100 baseline observations of the patient experience during registration in two clinic areas, which include 6 practices (endocrine, diabetes teaching center, pulmonary, allergy, nephrology and infectious disease)
➢ The observations identified opportunities for improvement, especially at the beginning and end of the interaction. Based on these findings we have developed an observation checklist and reminder cards of best practice behaviors.
➢ Starting from March 2013, all front desk staff in the above mentioned practices are spending 15-20 min a week observing their peers (in another area) during the registration process. Additional observations are being conducted by an independent and objective observer.
➢ Data from the independent observations are compiled and feedback is distributed to staff on a weekly basis. The weekly observations summaries also include recognition of individual staff members who demonstrated outstanding customer service behaviors.

Project Goals

✓ Improve the patient experience during check-in
✓ Engage front-desk staff in improving their communication and costumer service skills
✓ Establish basic customer service behavior standards that are aligned with the UCSF “Living PRIDE” initiative and are accepted by staff
✓ Provide timely feedback while recognizing and rewarding desired performance.

Results / Progress to Date

Baseline observations* (n=50 observations per site):

<table>
<thead>
<tr>
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<th>Pulmonary, Allergy, Nephrology and ID</th>
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</thead>
<tbody>
<tr>
<td>Greet at the beginning</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Smile at the beginning</td>
<td>90%</td>
<td>100%</td>
</tr>
<tr>
<td>Eye contact at the beginning</td>
<td>90%</td>
<td>90%</td>
</tr>
<tr>
<td>Thank at the end</td>
<td>100%</td>
<td>90%</td>
</tr>
<tr>
<td>Smile at the end</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
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<td>100%</td>
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</tbody>
</table>

Peer observations tool:

Week IV observations* (n=10 observations per site):

<table>
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</tbody>
</table>

*Both baseline and week IV observations data were collected by an independent observer.

Lessons Learned & Next Steps

➢ The peer observations project is still on-going and now includes feedback and reflection discussions during staff meetings.
➢ The independent observers have now concluded 3 months of front desk observations in both practice areas and have formed the following recommendations for improving the patient experience:

✓ Implement scripted care point practices stressing the importance of body language and tone of voice, while encouraging staff to become familiar with patients
✓ Develop an order of priorities that front desk staff can adhere to when multitasking. The patient in front of them should receive priority over all other issues. Encourage providers to be cognizant of order of priorities, and not interrupt staff when they are with patients.
✓ Recognize and reward staff performance and provide opportunities for staff to further develop their customer service skills.

➢ We have conducted a half day customer service training and are currently working with the managers in both practice areas to implement additional initiatives aimed at improving the patient experience during the registration process.

UCSF Department of Medicine
The Problem

- UCSF has partnered with Emmi Solutions to deliver an innovative education and engagement tool that empower patients to take action around healthcare events or conditions.
- The Gastroenterology Division has adopted Emmi Solutions since July 2011, however patient utilizations of the program has consistently been low.

- A number of factors contributed to the low utilization rates:
  - GI staff were having difficulties with incorporating the activation of the program into the scheduling and registration workflows.
  - There has been a lack of consistency in messaging the expectations regarding program goals.
  - The implementation of Cadence in June 2012 and the subsequent reduced work efficiency were the main factors contributing to further decline in usage.

Project Goal(s)

- Increase patient utilization of Emmi Solutions as both an informed consent as well as a patient education and engagement tool.
- Activation goal: Increase the number of codes issued to > 200 a month (December 2012 baseline = 92)
- Viewing goal: Increase the utilization of the program by the patients (i.e. status "started") to > 50 a month (December 2012 baseline = 30 patients)

Results / Progress to Date

- Activation Goal: the number of Emmi Solutions activation codes increased more than fourfold in 3 months
- Viewing Goal: the number of patients used the program increased more than sevenfold in the same time period

Lessons Learned & Next Steps

- Lessons learned:
  - Strong collaboration and a unified message from administrative and clinical leadership were essential for obtaining staff buy-in.
  - Frequent emails with status report helped maintain focus and served as a constant reminder of program goals.
  - Creating a friendly competition with positive reinforcement and recognition was proven as an effective strategy for staff engagement.

- Next Steps:
  - We are currently working with the APeX team to create an interface of Emmi Solutions in the medical record.
  - At the same time, our Division is advocating for adding more procedures to the Emmi website.
  - We will continue our efforts to promote Emmi to the patients by modifying the script used by staff.
  - We are developing a report to cross reference the issued codes and scheduled procedures for increased accountability.

UCSF Department of Medicine

Project Plan

- We have taken the following steps to increase the utilization of Emmi Solutions:
  - Analyzed the current workflow for issuing codes to identify barriers.
  - Re-trained staff with the focus on collecting patients’ email addresses (for sending out activation codes and reminders) and educating the patient on the importance of watching the program.
  - Defined and communicated the “activation” and “viewing” goals to all staff.
  - Sent weekly emails with a status report from the administrative director and clinical service chief to all staff.
  - Incentivized staff by bringing the “fun” element into play: weekly emails included a friendly competition with public display of individual activation scores and recognition of top-performing staff.

Educating and Engaging Patients to Become Informed and Active in their Care
Implementing Weekly Huddles to Improve the Patient and Staff Experience
Glaiza De Alva, Marianni Ferretti, Pavel Gadzinovsky, Sharon O’ Leary, Melinda Simpson, Gilbert Solorzano
Department of Medicine, Ambulatory QI Working Group

The Problem
- 360 Positive Care Center and Women’s Specialty Program provide primary care for HIV+ men and women. The clinic includes several specialty programs: Women’s Center of Excellence, Men of Color Program, Black Health Center of Excellence, and Silver Project (serving patients over 50 living with HIV).
- The programs serve a diverse patient population many of whom contend with multiple psychosocial challenges in addition to complex medical needs.
- Patient ability to fully participate in care and provider/staff ability to provide effective care and treatment are often impacted by the complexity issues patients face outside of the clinic setting.
- Examples include: poor care plan adherence due to cognitive and/or psychiatric impairment, and disruptive behavior impacting patient and staff experience.

Project Plan
- We have instituted staff huddles with all frontline staff (medical assistants, front desk staff, nurse manager, program coordinator).
- The team has been meeting on a weekly basis at the end of the week for approximately 30 minutes.
- Agenda includes:
  - Debrief regarding previous week huddle/plan
  - Review of next week’s patient schedule to identify issues or patients requiring tailored interventions (e.g. psychiatrically compromised patient, disruptive behavior, patients requiring a high degree of discretion, sub-population with high no-show rates.)
  - Discussion and problem solving regarding status of clinic relocation, including patient room assignment planning.
  - Review of patient satisfaction survey data and comments, including recognizing individual staff members who received complementary comments.

Project Goal(s)
- Foster a culture of teamwork, trust, and transparency among frontline staff.
- Plan and manage clinic relocation
- Manage patients’ disruptive pets
- Create opportunities for staff recognition
- Reduce no shows & appointment cancellation
- Engage staff in proactively improving the patient experience

Results / Progress to Date
Weekly Huddles Checklist
I. Clinic Relocation :
- Review space planning/organization and keep staff informed and involved in the process.
- Discuss patient preparation for the move (e.g. support and reassurance regarding no disruptions in care.)

II. Disruptive Pets:
- Review strategies for real-time management of disruptive/dangerous pet behavior.
- Reinforce UCSF policy regarding service animals (i.e. verbal discussion with pet owner, followed by written warning - vetted by risk management and patient relations - disallowing animal to accompany patient to clinic appointments.)

III. Staff Recognition:
- Use patient comments from the Press Ganey survey to bolster staff morale and satisfaction by sharing with group complementary statements – particularly when staff member identified by name.
- Recognize staff as group or individually for performance excellence, including verbal compliments from patients, other staff / departments, or successful implementation of an intervention planned during huddle (e.g. pro-active management of a patient’s challenging behavior.)

IV. No Shows:
- Ensure that patients who are enrolled in specialty programs (e.g. MOCP case management) receive personal phone calls regarding appointment reminders (this also provides opportunity for case management staff to explore/address potential barriers to appointment adherence).
- Work with providers to either follow up directly with patients who no-show or request clinic support staff to contact patient with rescheduling instructions.

V. Patient Satisfaction Scores:
- Review patient satisfaction survey results with staff to identify successes and opportunities for improvement (e.g. telephone access – clinic leadership in dialogue regarding potential solutions.)

Lessons Learned & Next Steps
- Clinic relocation was successful: patient needs were addressed during transition and clinic opened its doors as scheduled – with much positive feedback from patients regarding new clinic space.
- Challenges with pets is addressed on case by case basis at this time – with recent success addressing a problematic situation – and clinic leadership is in process of developing a standard practice and intervention.
- We are increasingly using the Department of Medicine’s Patient Experience Dashboards and Patient Comments Reports to share patient satisfaction scores/comments within and beyond weekly huddles.
- We are also currently exploring additional strategies with clinic leadership for standardizing the no-show management plans.
Evaluating ZipRounds: Assessing the Effectiveness of a Novel Healthcare Technology
Lekshmi Santhosh, MD, James Harrison, PhD, Raman Khanna, MD

Background

- Structured methods are needed to evaluate the impact of healthcare technology on in-hospital efficiency.
- ZipRounds is a novel web-based tool that revolutionizes in-hospital interdisciplinary communication in an easily searchable and indestructible way (a paging/Facebook/Twitter hybrid).
- It aims to address the flaws in the current paging portal by integrating with Apex and streamlining in-hospital communication.
- Few studies to date have combined subjective survey-based data on technological improvements in the hospital with objective evidence-based measurements of clinical efficiency.
- Time-and-motion studies help document workflow and discover inefficiencies.

Methods

- POPULATION: Randomly selected group of UCSF Internal Medicine residents and Inpatient RNs at UCSF-Parnassus (intervention group) and SFGH (control group).
- SAMPLING: UCSF residents and RNs invited to participate by online anonymous survey tool via Qualtrics. Surveys were performed 2 months prior to implementation of ZipRounds and 2 months after implementation. For Module 2, UCSF residents and RNs at Parnassus and SFGH will be shadowed by trained observers as follows:

<table>
<thead>
<tr>
<th>Observation Protocol</th>
<th>UC-Parnassus</th>
<th>SFGH</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 months pre-ZR</td>
<td>Pre-Survey 50 MDs, 50 RNs</td>
<td>Pre-Survey 50 MDs, 50 RNs</td>
</tr>
<tr>
<td>2 months post-ZR</td>
<td>Post-Survey 50 MDs, 50 RNs</td>
<td>Post-Survey 50 MDs, 50 RNs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>UC-Parnassus</th>
<th>SFGH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observe 10 MDs x 5 hours</td>
<td>Observe 10 RNs x 5 hours</td>
</tr>
<tr>
<td>Observe 5 RNs x 5 hours</td>
<td>Observe 5 RNs x 5 hours</td>
</tr>
</tbody>
</table>

- OBSERVATION DATA: Time-and-motion data collected minute-by-minute will be categorized per the recommended categorization in Tipping et al. 2010 into:

<table>
<thead>
<tr>
<th>Direct Patient Care</th>
<th>Indirect Patient Care</th>
<th>Teaching Activities</th>
<th>Non-Clinical Activities</th>
<th>Clinical Communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Survey 10 MDs, 10 RNs</td>
<td>Pre-Survey 10 MDs, 10 RNs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-Survey 10 MDs, 10 RNs</td>
<td>Post-Survey 10 MDs, 10 RNs</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Time and motion data collected will be categorized per the recommended categorization in Tipping et al. 2010 into:

- Our project is designed to measure, through pre-and-post implementation survey data (Module 1), how ZipRounds will affect providers in the following ways:
  1. Clinical Efficiency
  2. Paging Procedures
  3. Inter-disciplinary Communication
  4. Provider Satisfaction

Through pre-and-post-implementation time-and-motion studies (Module 2), we also want to objectively measure:

a. How much time do Medicine residents spend on various tasks in the hospital, particularly related to communication?

b. How does the use of ZipRounds affect communication and efficiency compared to subjects at the site without ZipRounds?

c. How do time-and-motion studies of inpatient resident physicians differ from the established literature on mostly outpatient clinicians or attending hospitalists?

Results / Progress to Date

Out of the 101 pre-intervention survey participants, demographics revealed:

- 60 (59%) were MDs and 41 (41%) were RNs
- Even split between interns (42%) and residents (46%)
- More respondents at UCSF (65%) than SFGH (35%)
- A young population: 57% were <30 years old, 31% were 31-40 years old
- 86% believed strongly or very strongly that technology improves patient care

43% of providers felt that paging is a burden.

37% of providers spent approximately 30-60 minutes sending and receiving pages.

Overall, providers were dissatisfied with the current quality of paging and 46% of providers felt that they spent significant time on non-clinical activities/inefficiencies.

Providers reported delays and inefficiencies in care:

- 80% of providers reported sometimes/often paging people repeatedly to respond
- 60% of providers state that work is duplicated and multiple people are paged about the same issue
- 94% of providers state that it takes a long time to get a response from pages

Lessons Learned from Qualitative Data

- Positive feedback on the current system of paging focused on the ability to quickly communicate non-urgent updates, requests, or labs

- Providers reported that the current system of paging negatively impacts communication in the following ways:
  - Technical issues (insufficient computers, PagerBox down, difficulty logging in, dropped pages)
  - Lack of confirmation that page was received
  - Delays in time to appropriately respond to a page
  - Inability to track conversations between providers
  - Paging etiquette pitfalls (no callback numbers, ambiguous pages)
  - Fewer face-to-face interactions
  - Lack of integration with service pagers/page forwarding
  - Lack of integration with Apex so MRN/patient errors can occur

- Providers examples of errors or adverse events also focused on technical issues, lack of integration with service pagers, wrong provider/ wrong patient errors, delays in response, and difficulty in identifying the correct provider on-call

UCSF Department of Medicine
Patients admitted to the UCSF inpatient medicine service are in the Emergency Department (ED) for an average of 400-500 minutes, longer than the national average.

Despite efforts by the Department of Medicine in the previous year to decrease this time, it has been unchanged.

As a result, ED wait times increase, patient satisfaction decreases, and there is the potential for delays in time-sensitive diagnostic and therapeutic interventions.

According to the Joint Commission on Accreditation of Healthcare Organizations, over one half of sentinel event cases of adverse events due to delays in treatment occur in hospital EDs, with overcrowding cited as a factor in 31% of these cases.

A project team consisting of internal medicine residents generated a process map to identify inefficiencies in the admitting process.

The team determined that the search for an inpatient bed begins after placement of admission orders, which typically occurs after the comprehensive intern evaluation, leading to significant delays in patient movement and care.

We proposed a process change, one where the senior resident places admission orders as part of their initial triage evaluation, to allow for simultaneous intern evaluation, leading to significant delays in patient movement and care.

We presented the proposal to the admitting service, and the team recognized the necessity of the change.

To decrease the time that patients admitted to the inpatient medicine service spend in the ED, described as Door-to-Floor time, by implementing a new process of placing admission orders.

Specifically, to decrease the mean time between when the resident is notified of an admission to the placement of admission orders (“Decision-to-Orders” time) by 10%, to ≤130 minutes, for 7 out of 10 months of the 2012-2013 academic year.

Increase awareness among housestaff regarding the importance and consequences of prolonged door-to-floor time.

A comprehensive educational plan, a small financial incentive from the medical center, and monthly data-analysis with timely feedback were essential components of the intervention.

Result Overview

1. Pre-Intervention: Decision-to-Orders time: 143 Minutes
2. Post-Intervention: Decision-to-Orders time: ≤130 minutes for 6/8 months
3. Overall Door-to-Floor not significantly changed

Table 1: Mean Decision-to-Order, Door-to-Floor Time

<table>
<thead>
<tr>
<th>Months</th>
<th>Mean Decision-to-Orders Time, Minutes</th>
<th>Average Door-to-Floor Time, Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>June, 2012</td>
<td>140</td>
<td>580</td>
</tr>
<tr>
<td>July, 2012</td>
<td>135</td>
<td>570</td>
</tr>
<tr>
<td>August, 2012</td>
<td>138</td>
<td>612</td>
</tr>
<tr>
<td>September, 2012</td>
<td>114</td>
<td>584</td>
</tr>
<tr>
<td>October, 2012</td>
<td>120</td>
<td>586</td>
</tr>
<tr>
<td>November, 2012</td>
<td>122</td>
<td>696</td>
</tr>
<tr>
<td>December, 2012</td>
<td>126</td>
<td>660</td>
</tr>
<tr>
<td>January, 2013</td>
<td>135</td>
<td>570</td>
</tr>
<tr>
<td>February, 2013</td>
<td>140</td>
<td>591</td>
</tr>
<tr>
<td>March, 2013</td>
<td>140</td>
<td>546</td>
</tr>
</tbody>
</table>

Lessons Learned & Next Steps

Lessons Learned:
Process and culture change within an established admitting system is difficult and wrought with barriers. Most processes in the hospital require the use of an EMR, and attempting process change without corresponding EMR functions and adjustments leads to inefficiencies and work-arounds, prohibiting meaningful improvement and sustainability.

Next Steps:
Complete data analysis for the remaining two months of the academic year to assess whether or not the incentive goal was achieved.

Continue to pilot targeted interventions, including the use of a hospitalist triage role, and restart efforts to create a brief admission order set in the EMR.

Continue to provide housestaff feedback regarding best practices for admitting patients, and current door-to-floor time, in order to motivate change.
Obtaining Real-Time Patient Feedback to Improve the Patient Experience

Darlene Lee, NP, Gilbert Solorzano, Naama Neeman, MSc, Zachary Martin, Niraj L. Sehgal, MD, MPH
Department of Medicine, Ambulatory QI Working Group

The Problem

- Obtaining timely feedback is essential for understanding the patient experience and how it can be improved.
- Post-care patient satisfaction surveys provide important insight into the patient’s perspective, however these are limited by a number of factors, including:
  - Low sample size and response rate;
  - Recall bias related to delay in obtaining information; and
  - Prolonged data processing time, which limits the ability to respond promptly to patients’ expressed desires and needs.
- To address this, we developed a brief “patient experience” survey which was administered to patients seen in the rheumatology and cardiac EP practices (both practices share a common space as well as staff) at the end of their appointment.

Project Plan

- We surveyed a total of 117 patients (78 rheumatology and 39 cardiac EP patients) during the month of January 2013. The surveys were administered by an independent individual (medical assistant intern) who was not involved in the patient care.
- Patients were asked to complete the survey as they were leaving the practice. The survey addressed basic best practice behaviors of front desk staff, medical assistants, and providers.
- Questions selected were aligned with the UCSF “Living PRIDE” initiative as well as the “AHEAD” (acknowledge, introduce, duration, explanation, thank you) principles. In addition to the five questions outlined below, patients were asked to comment on their overall experience as well as identify areas of best practice and opportunities for improvement.

<table>
<thead>
<tr>
<th>Did the following person:</th>
<th>Receptionist</th>
<th>Medical Assistant</th>
<th>Doctor / Nurse Practitioner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acknowledge your presence with a smile?</td>
<td>☐ Yes</td>
<td>☐ Yes</td>
<td>☐ Yes</td>
</tr>
<tr>
<td>Maintain good eye contact with you?</td>
<td>☐ Yes</td>
<td>☐ Yes</td>
<td>☐ Yes</td>
</tr>
<tr>
<td>Introduce themselves by name and role?</td>
<td>☐ No</td>
<td>☐ No</td>
<td>☐ No</td>
</tr>
<tr>
<td>Addressed you by your last name?</td>
<td>☐ Yes</td>
<td>☐ Yes</td>
<td>☐ Yes</td>
</tr>
<tr>
<td>Thanked you at the end of the interaction?</td>
<td>☐ Yes</td>
<td>☐ Yes</td>
<td>☐ Yes</td>
</tr>
</tbody>
</table>

Results from the real-time patient satisfaction survey (n=117):

% of patients

<table>
<thead>
<tr>
<th></th>
<th>Smile</th>
<th>Eye Contact</th>
<th>Introductions</th>
<th>Last Name</th>
<th>Thanked</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front Desk</td>
<td>94%</td>
<td>88% 93% 100%</td>
<td>95% 100% 98%</td>
<td>94% 100% 75%</td>
<td>93% 100%</td>
</tr>
<tr>
<td>MA</td>
<td>94%</td>
<td>95% 100%</td>
<td>95% 98% 100%</td>
<td>94% 100% 75%</td>
<td>93% 100%</td>
</tr>
<tr>
<td>Provider</td>
<td>94%</td>
<td>95% 98% 100%</td>
<td>95% 98% 100%</td>
<td>94% 100% 75%</td>
<td>93% 100%</td>
</tr>
</tbody>
</table>

Lessons Learned & Next Steps

- Survey findings indicate that both front desk staff, medical assistants and providers were performing exceptionally well on all observed items. The very high results tallied from the survey data were insufficient for identifying areas of improvement with regards to basic customer service behaviors. We have therefore utilized additional patients’ comments to better understand the patient experience and how it can be improved.
- The most frequently commented upon area for improvement was wait time in the clinic. Another clear area for improvement exists for phone services and access. Patients noted that their messages were not returned in a timely manner, or at all, or that the phone messages left for them by staff were not clear. They also noted that the time it took to get an appointment was too long and that there was limited flexiblity in the scheduling process. Finally, A few patients noted language barriers and the need to improve the availability of an in-person interpreter.
- We are currently implementing several process improvement projects to address these areas. The Department of Medicine’s ambulatory operations working group has already made significant strides in reducing time to appointment. Additionally, we are currently working to improve the processes of providing patients information on delays, as well as increasing staff’s sensitivity to patients’ cultural needs and language barriers.
- With regards to expanding this initiative to other areas, our experience suggest that obtaining real time feedback from patients is feasible and beneficial, however manpower considerations should be taken into account. For other practices interested in engaging in similar efforts we recommend using kiosks or computer stations for survey administration. This may compromise response rate to some degree, nonetheless will overall improve workflow efficiencies and cost.

UCSF Department of Medicine
Transgender people are faced with many barriers to health care, including poorly trained providers and poor access to care. In a 2011 study by the National Center for Transgender Equality, nearly 50% of transgender patients reported that they had to teach their providers about transgender health; 19% of transgender patients had been refused care at some point on the basis of their gender identity (Grant et al., 2011). Health care options friendly for transgender people are focused on transition and are delivered in specialty clinics. In San Francisco, these clinics are clustered in the metro area, often in poor or oppressive surroundings. Finally, although a leader in LGBT health, UCSF has no primary care training or services targeted at transgender adults in specific topics such as hormonal therapy, and students and faculty lack opportunities to see these patients in UCSF practices.

Lessons Learned & Next Steps

Barriers to project moving forward:
- Residual attachment to silo and specialist care only model for transgender care
- Failure to accept that access to care and integration of primary care desired by transgender patients - particularly after initial transition.
- Fear of liability for irreversible changes in primary care community
- Lack of transportation to satellite faculty practice

Next Steps:
- Finalize best structure of clinic.
  - multidisciplinary medical home occurring outside regular clinic hours?
  - team of thoroughly trained providers with fully integrated clinic?
  - combination of separate early transition focused clinic with rotating clinicians in training plus permanent trans-care competent Lakeshore attendings?
- Outreach to transgender identifying people who could be patients at UCSF Lakeshore once a transgender only clinic is established.
- Assess ways that transportation can be allocated towards transportation barriers.
- Continue to assess the quality of care at UCSF Lakeshore for transgender patients, and patient satisfaction, as training inervices are completed and as the number of transgender patients at Lakeshore grows. Allocate appropriate training as these needs change.

References:

4. Transmarch Survey data: (n= 94 transgender respondents)
  - 60% have avoided health care in the past
  - 49% prefer integrated clinics (trans and non-trans patients seen at same time and place).

Lakeshore Interview Data: (n = 11 patients identified, 4 indepth interviews performed)
- Qualitatively, all interviewees prefer integrated clinics. They emphasized the simplicity of caring for transgender patients and expressed frustration with requirements for hormonal treatments. Finally, they had useful suggestions for outreach.

Acknowledgments:
We would like to thank Marnya Janowitz (Pomona College) and Kelsey Forest (Vassar College) for their help with Transmarch data entry.

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Teaching Transitions of Care through Analyzing Readmissions

Kara Bischoff MD, Jayson Morgan MD, Yimdriuska Magan, Harry Hollander MD, Michelle Mourad MD, Sumant Ranji MD

NEEDS AND OBJECTIVES

• Nearly one in five Medicare patients is readmitted within 30 days of discharge from the hospital. Many medical centers have developed multifaceted programs aimed at improving transitions of care and reducing readmissions.
• Residents have not been fully utilized in these efforts; literature suggests improvements are needed in how we educate and employ residents in efforts to decrease readmissions.
• By engaging residents in analyzing their patients’ readmissions, and providing individualized feedback, we aimed to hone residents’ practice of transitions of care.

DESCRIPTION OF THE INNOVATION

Discharge counseling for patients: “In the future I will be sure to include written instructions about what to do if symptoms return/ worsen and when to return to the ED, and not simply verbal instructions.”

Patient education about medications: “The patient went home with poor understanding of her medications… Med teaching may need to happen more than once.”

Involving the PMD and family: “We could have involved the PMD more up front or made a point of contacting the caregivers to get input… I will put more effort into getting information from all parties participating in my patient’s care.”

Motivating patients to care for themselves: “His case is a reminder of how brittle our patients with exacerbation-prone illnesses can be, and also the enormously important role that proper self-care plays in keeping patients out of the hospital.”

TAKE-HOME POINTS

• We describe an educational innovation that actively engages residents in analyzing transitions of care.
• Residents identified many important issues that arise around the time of discharge.
• Residents believe this experience will improve their practice, is worth the time and effort it requires, and should be required for all residents.
• Our results suggest that this is a valuable exercise that fills a current educational gap.
• Further study is needed to evaluate if intended changes in practice occur and if residents’ observations can fuel system changes.

FACTORS IDENTIFIED BY RESIDENTS

Residents identified factors that they believed contributed to readmissions. These divided into the following categories.

- Insufficient timely outpatient follow-up
- Education on medical issues
- Inadequate communication with patients, care givers
- Insufficient advance care planning
- Lack of services after discharge
- Timing of discharge
- Inadequate communication with outpatient providers

LESSONS LEARNED BY RESIDENTS

Discharge counseling for patients: “In the future I will be sure to include written instructions about what to do if symptoms return/ worsen and when to return to the ED, and not simply verbal instructions.”

Patient education about medications: “The patient went home with poor understanding of her medications… Med teaching may need to happen more than once.”

Involving the PMD and family: “We could have involved the PMD more up front or made a point of contacting the caregivers to get input… I will put more effort into getting information from all parties participating in my patient’s care.”

Motivating patients to care for themselves: “His case is a reminder of how brittle our patients with exacerbation-prone illnesses can be, and also the enormously important role that proper self-care plays in keeping patients out of the hospital.”

Advance care planning: “The patient’s goals of care rapidly evolved during these two admissions… This reminds me how important it is to engage family members and the patient throughout the hospitalization as the patient’s condition evolves in order to provide the most appropriate care.”

Medication availability upon discharge: “I will try to ensure med availability prior to discharge.”

Timing of outpatient follow-up: “This case highlighted the importance of close follow-up - our team identified that this patient’s poor baseline functional status put her at high risk for complications at the time of her transition to home. Fortunately, early appointments with her outpatient providers allowed her persistent/recurrent infection to be identified early.”

PCP communication: “With complicated discharges, always make sure to complete a thorough verbal sign-out to the PCP if possible!”

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• Residents identified many important issues that arise around the time of discharge.
• Residents believe this experience will improve their practice, is worth the time and effort it requires, and should be required for all residents.
• Our results suggest that this is a valuable exercise that fills a current educational gap.
• Further study is needed to evaluate if intended changes in practice occur and if residents’ observations can fuel system changes.

RESIDENTS’ IMPRESSIONS OF THE EXERCISE

Percentage of residents who agree or strongly agree.

- Post-dc follow-up will lead to improvements in my care: 95%
- All medicine residents should complete this activity: 83%
- This activity was worth the time and effort required: 64%
- I am likely to pursue a system change: 86%

RESIDENTS’ IMPRESSIONS OF THE EXERCISE

Percentage of residents who agree or strongly agree.

- Post-dc follow-up will lead to improvements in my care: 95%
- All medicine residents should complete this activity: 83%
- This activity was worth the time and effort required: 64%
- I am likely to pursue a system change: 86%
Improving Our Response to Severe Sepsis and Septic Shock: Implementation of a Code Sepsis Team

Jason Mansoori, MD; Jim Stotts, RN; Michelle Mourad, MD
Department of Medicine, University of California, San Francisco, CA

Background
- Prompt recognition and treatment of severe sepsis and septic shock reduces mortality.
- Alert systems have been shown to improve compliance with sepsis bundle elements and improve sepsis survival.

Aim
- To evaluate the effect of implementing a Code Sepsis Team at UCSF Moffitt-Long Hospital on outcomes in patients who screen positive for severe sepsis and septic shock.

Methods
- A Code Sepsis Team comprised of a pharmacist, respiratory therapist, phlebotomist, Rapid Response Team (RRT) nurse, ICU fellow, and the primary team physician was generated and implemented on pilot units.
- The Code Sepsis Team was called to the bedside via page in response to a positive sepsis screen and a lactate ≥2 or organ dysfunction.
- The Code Sepsis Team provided consultation and management with the primary team to assure rapid diagnosis and treatment of septic patients.

Intervention
- A Code Sepsis Team comprised of a pharmacist, respiratory therapist, phlebotomist, Rapid Response Team (RRT) nurse, ICU fellow, and the primary team physician was generated and implemented on pilot units.
- The Code Sepsis Team was called to the bedside via page in response to a positive sepsis screen and a lactate ≥2 or organ dysfunction.
- The Code Sepsis Team provided consultation and management with the primary team to assure rapid diagnosis and treatment of septic patients.

Measure
- Compliance with sepsis bundle elements were recorded, including:
  - a serum lactate
  - blood cultures before administration of antibiotics
  - the administration of broad spectrum antibiotics within one hour of time of presentation
  - administration of 20cc/kg of IV fluids within six hours of time of presentation

Results

Table 1. Reasons why treatment was deferred in response to Code Sepsis.

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percent Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Previous fluid boluses</td>
<td>41.5%</td>
</tr>
<tr>
<td>Fear of hypervolemia</td>
<td>100.0%</td>
</tr>
<tr>
<td>Unknown</td>
<td>100.0%</td>
</tr>
<tr>
<td>Patient was deemed to not have sepsis</td>
<td>100.0%</td>
</tr>
<tr>
<td>Fluids (20cc/kg within 6hrs of TOP)</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Table 2. Reasons why treatment goals were not met.

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percent Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient was deemed to not have sepsis</td>
<td>41.5%</td>
</tr>
<tr>
<td>Fluids (20cc/kg within 6hrs of TOP)</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Figure 1. Code Sepsis calling algorithm.

Figure 2. Compliance with bundle elements when code sepsis was called.

Figure 3. Compliance with bundle elements when code sepsis was called, patients without sepsis excluded.

Discussion
- Adoption of the code sepsis was low in patients who developed severe sepsis on pilot units.
- When called, the multi-disciplinary team intervention had a low rate of bundle compliance in patients with presumed severe sepsis.
- While use of a Code Sepsis Alert Team provides prompt resources and expertise to the bedside, there may be other factors such as screening accuracy, provider education and provider response affecting bundle compliance.

Next Steps
- Further education to providers at all levels is needed to ensure Code Sepsis is called on appropriate patients and that sepsis bundle elements are deferred only for appropriate reasons as determined by the treatment team.

Acknowledgements
UCSF Medical Center Department of Patient Safety and Quality Sepsis Initiative Task Force
eConsult: Improving Access and Timeliness of Specialty Consultation
Nathaniel Gleason MD, Chanda Ho MD MPH, Michael Wang BS, Don Collado BS, Jennifer Monacelli BS, Sara Ackerman PhD MPH, Ralph Gonzales MD MSPH
Division of General Internal Medicine, UC San Francisco

**Background**
- Referrals to specialists doubled between 1999 & 2009
- Demand for specialty services exceeds supply at UCSF, leading to long wait times for patient appointments
- Electronic consultations (eConsults) can provide PCPs with efficient access to specialist input on clinical questions that do not require an in-person evaluation.
- eConsults are not well utilized in the fee-for-service setting.
- A clinical question resolved via eConsult could:
  - Provide access to specialty input
  - Improve access for visits by addressing demand
  - Improve PCP-patient relational continuity
  - Reduce costs

**Objectives**
- To build an eConsult program at UCSF that allows PCPs to consult with Specialists regarding a specific clinical question.
- To integrate into the EHR workflow
- To build an eConsult program at UCSF that allows PCPs with efficient access to specialist input on clinical questions that do not require an in-person evaluation.
- To evaluate acceptability, adoption, and referral rate

**Program Description**
- eConsults are based on structured referral templates that provide decision support, convey the clinical question, and package key clinical data
- 72 hour expected turn around
- Specialists are able to convert an eConsult to a standard visit if the clinical picture is too complex for eConsult
- 0.5 wRVU payment to specialist
- 0.5 wRVU credit to PCP (towards Productivity)

**eConsult Results**

### PCP Acceptability

<table>
<thead>
<tr>
<th>Response</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td>10 (20)</td>
</tr>
<tr>
<td>Somewhat disagree</td>
<td>14 (28)</td>
</tr>
<tr>
<td>Neutral</td>
<td>24 (48)</td>
</tr>
<tr>
<td>Somewhat agree</td>
<td>10 (20)</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>2 (4)</td>
</tr>
</tbody>
</table>

### Specialist Acceptability

<table>
<thead>
<tr>
<th>Response</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td>1 (2)</td>
</tr>
<tr>
<td>Somewhat disagree</td>
<td>2 (4)</td>
</tr>
<tr>
<td>Neutral</td>
<td>12 (24)</td>
</tr>
<tr>
<td>Somewhat agree</td>
<td>19 (38)</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>5 (10)</td>
</tr>
</tbody>
</table>

**Referral Rate: eConsults/100 Primary Care Visits**

<table>
<thead>
<tr>
<th>Specialty</th>
<th>SD</th>
<th>360+</th>
<th>Exec. Health</th>
<th>DGM</th>
<th>Lakeshore</th>
<th>Lakeside</th>
<th>UCSF PC</th>
<th>Wom. Health</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleep</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allergy</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Card</td>
<td>3</td>
<td>4</td>
<td>10</td>
<td>2</td>
<td>6</td>
<td>7</td>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Endo</td>
<td>4</td>
<td>6</td>
<td>79</td>
<td>13</td>
<td>9</td>
<td>9</td>
<td>12</td>
<td>132</td>
<td></td>
</tr>
<tr>
<td>GI</td>
<td>1</td>
<td>88</td>
<td>16</td>
<td>2</td>
<td>5</td>
<td>9</td>
<td>12</td>
<td>121</td>
<td></td>
</tr>
<tr>
<td>Heme</td>
<td>2</td>
<td>3</td>
<td>45</td>
<td>19</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>69</td>
<td></td>
</tr>
<tr>
<td>Hep</td>
<td>1</td>
<td>2</td>
<td>12</td>
<td>7</td>
<td>5</td>
<td>27</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID</td>
<td>1</td>
<td>8</td>
<td>2</td>
<td>1</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Renal</td>
<td>3</td>
<td>26</td>
<td>9</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>OEM</td>
<td>7</td>
<td>3</td>
<td>45</td>
<td>12</td>
<td>2</td>
<td>1</td>
<td>6</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>Rheum</td>
<td>28</td>
<td>7</td>
<td>13</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>31</td>
<td>264</td>
<td>78</td>
<td>22</td>
<td>22</td>
<td>38</td>
<td>576</td>
<td></td>
</tr>
</tbody>
</table>

**Lessons Learned and Next Steps**

- eConsults allow timely access to specialty expertise while maintaining high quality, patient centered care that is also cost effective.
- eConsults had a significant impact on referral rates and did not induce demand.
- Highly acceptable among PCPs, who report that the eConsult guided their care plan.
- Acceptable to specialists, with most eConsults taking approximately 10 minutes to complete.

**Evaluation**

- Acceptability, Adoptability, and Referral Rates
- Acceptability was evaluated through surveys sent to the specialist eConsultant and the referring PCP after the eConsult response was received. In addition to the findings shown, we found that:
  - 48% of PCPs (n=101) stated that in the absence of eConsult they would have placed a standard referral to the specialist.
  - 55% (n=121) of specialists took less than 10 minutes to respond to the eConsult, 96% took 20 minutes, and 9% took greater than 20 minutes.
- Referral Rates (see lower left): Total referrals for standard office visits decreased from 12.1 per 100 PC visits (SD=1.1) in the baseline period to 9.8 (SD=0.8) during the intervention period. Total referrals after the intervention, including eConsults, were 10.8 (SD=0.8) per 100 PC visits.

- Lessons Learned
  - eConsults allow timely access to specialty expertise while maintaining high quality, patient centered care that is also cost effective.
  - eConsults had a significant impact on referral rates and did not induce demand.
  - Highly acceptable among PCPs, who report that the eConsult guided their care plan.
  - Acceptable to specialists, with most eConsults taking approximately 10 minutes to complete.

- Next Steps
  - Qualitative study to gather PCP experiences using the eConsult system and to identify key areas for improvement.
  - Process refinement to streamline the currently intensive administration demands and to improve turn around time.
  - Specialty pilot to convert routine referrals to eConsults when appropriate.
  - Expansion to other specialties
iPads for Hospitalized Patients: Inpatient Technology Outreach Unifying Communication & Health (inTOUCH)

SR Greysen MD, R Khanna MD, RJ Jacobia BS, H Lee BS, AD Auerbach MD

Table 1: Patient Characteristics

<table>
<thead>
<tr>
<th></th>
<th>N=30</th>
<th>Percent (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (yrs)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-39</td>
<td>38%</td>
<td>11</td>
</tr>
<tr>
<td>40-59</td>
<td>31%</td>
<td>9</td>
</tr>
<tr>
<td>60-79</td>
<td>28%</td>
<td>8</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>59%</td>
<td>17</td>
</tr>
<tr>
<td><strong>Device ownership</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desktop computer</td>
<td>44%</td>
<td>12</td>
</tr>
<tr>
<td>Laptop computer</td>
<td>70%</td>
<td>19</td>
</tr>
<tr>
<td>Smart phone</td>
<td>63%</td>
<td>17</td>
</tr>
<tr>
<td>Tablet computer</td>
<td>22%</td>
<td>6</td>
</tr>
<tr>
<td><strong>Internet use</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily</td>
<td>72%</td>
<td>21</td>
</tr>
<tr>
<td>Several times a week</td>
<td>10%</td>
<td>3</td>
</tr>
<tr>
<td>Once a week or less</td>
<td>18%</td>
<td>5</td>
</tr>
<tr>
<td><strong>Pre-study online health tasks</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Looked up health info</td>
<td>72%</td>
<td>21</td>
</tr>
<tr>
<td>Communicated with provider</td>
<td>52%</td>
<td>15</td>
</tr>
<tr>
<td>Refilled prescription</td>
<td>27%</td>
<td>8</td>
</tr>
<tr>
<td>Scheduled medical app</td>
<td>21%</td>
<td>6</td>
</tr>
</tbody>
</table>

- Web-based educational videos can help inpatients learn to take discharge medications safely
- Personal Health Records (PHR) can help inpatients manage post-discharge refills and follow up visits
- Feasibility of using tablets to deliver these interventions in the hospital is not known

To use tablets to improve inpatient education about patient safety and discharge medications
To use tablets to promote inpatient engagement in discharge planning by actively using their PHR
To explore patient satisfaction with use of tablets in hospital for these tasks and barriers to usability

Pilot program with 2 tablets (Apple iPad2), distributed by Research Assistants (RAs) after AM rounds
Patients must speak English, not be cognitively impaired, and admitted to medical service
RAs train the patients in basic functions of the tablet (touchscreen, keypad, Internet use), how to access the educational videos, and access their PHR
Educational videos on medication use produced by Emmi Solutions; PHR platform is Epic MyChart
Patients complete pre-use/post-use surveys and debrief interview with RAs at end of day

We are currently implementing several new objectives into our pilot program:
1) Further develop transition care focus: education on high-risk meds and assessment of barriers to discharge
2) Integrate responses from these patient assessments into Multi-Disciplinary Team plans in real team each day
3) Train clinical staff such as RTs, RNs, or NPs to orient patients / deliver tablet interventions instead of RAs
4) Leverage tablets to improve and other hospital-wide QI initiatives (ex: switch from nebs to inhaler when appropriate)

Overall, our future goals are to expand opportunities for patients to participate in their care, engage in discharge planning, and evaluate post-discharge outcomes such as patients’ continued use of PHR.

CONCLUSIONS

- Tablets can be used to improve inpatient education and patient engagement in discharge planning
- Patients are highly satisfied with tablets and minimal time required for patient training and device management by staff
Development of a Hospitalist Committee Focused on Improving Healthcare Value

Christopher Moriates MD, Maria Novelero MA MPA, Michelle Mourad MD, Katie Quinn MPH, Bradley A. Sharpe MD, Robert M. Wachter MD

PRELIMINARY RESULTS

• Nebulizer rates on a high-acuity medical floor reduced >50%
• Ionized calcium (iCal) rates reduced >50% (following introduction of CPOE and an educational campaign)
• Inappropriate stress ulcer prophylaxis in the ICU reduced >15%
• HVCC provides an arena for vetting value-based project, even those initiated outside the committee

MISSION STATEMENT
To raise cost awareness, reduce unnecessary resource utilization, increase efficiency and patient throughput, and create stewards of high value, responsible healthcare care

GOAL
To create a framework for identifying, designing, and promoting projects specifically aimed at improving healthcare value at a large academic medical center

TECTORY TO PROJECTS

1. Wasteful
   Evaluate data to identify areas that are considered:
   - Value = Quality
   - While hospitals and physicians are beginning to implement initiatives targeting this new goal, few of them have well-developed frameworks
   - In March 2012, we created a High-Value Care Committee (HVCC) within our hospitalist group

2. Low utility for patients based on good clinical evidence
   - Nebs No More After 24: Appropriate Nebulizer Utilization
   - Promote appropriate nebulizer use and early transition to metered-dose inhalers (MDIs)
   - Decrease of Nebs on Pilot-Unit

3. Amenable to interventions that would decrease costs and improve patient care
   - DeSTRESS Patients: Decrease Inappropriate Stress Ulcer Prophylaxis
   - Decrease use of inappropriate stress ulcer prophylaxis in the ICU by 25%

4. Rational Use of Telemetry and Step-Down Beds
   - iReduce iCal: Ionized Calcium ONLY When Needed
   - Decrease the number of ionized calcium (iCal) tests ordered on inpatients
   - Decrease in iCal Labs at UCSF

INAUGURAL HIGH-VALUE CARE PROJECTS

1. Nebs No More After 24: Appropriate Nebulizer Utilization
2. iReduce iCal: Ionized Calcium ONLY When Needed
3. DeSTRESS Patients: Decrease Inappropriate Stress Ulcer Prophylaxis
4. Rational Use of Telemetry and Step-Down Beds

LESSONS LEARNED
Successful value projects require:
• Thoughtful stakeholder buy-in and robust provider education
• Compelling data and targeted feedback
• Focus on change management and culture shift with consistent messaging

CONCLUSION
The HVCC is a hospitalist-led mechanism that is successfully promoting healthcare value and engaging clinicians
**BACKGROUND**

- Studies suggest: Abnormal ionized calcium (iCal) is likely a marker of illness severity rather than an independent contributor to mortality\(^1\).
- Cochrane Review: “There is no clear evidence that IV calcium supplementation impacts the outcome of critically ill patients”\(^2\).
- Study involving >58,000 iCal tests: 75% reduction in iCal lab draws showed no effect on mortality, cardiac arrests, or seizure activity\(^3\).
- In FY2012 the Medicine Service (Data per UCSF Lab): 40% of all calcium labs were iCal - 42% of all iCal labs were on NON-ICU patients. iCal direct cost = $20.20 Total calcium direct cost = $0.49.

**PROJECT STRATEGY**

- “iReduce iCal” is an educational campaign for health professionals with input from hospital medicine, ICU, nephrology, and laboratory medicine.
- The initiative includes lectures, prepared facilitator guides, and publicity materials.

**GOALS**

- Decrease the number of iCal tests ordered on inpatients at UCSF
- Educate physicians and nurses about appropriate ionized calcium measurement
- Trigger providers to practice a targeted approach to calcium measurement
- Lower medical center lab costs

**RESULTS**

**2012 Ionized Calcium Test Volumes at UCSF**

CPOE Introduced: 48% Reduction in iCal ordering

Educational Campaign: Additional 19% Reduction in iCal ordering

**PROGRESS**

- While the iCal project was being planned, our medical center implemented a new computerized provider order entry (CPOE) system.
- This CPOE system removed iCal from the core admission order set and established the iCal lab order as one-time, rather than daily occurrence.
- This resulted in an immediate decrease in iCal lab ordering by approximately 48%.
- However, our group felt additional iCal test reductions could be achieved, and we began our planned educational campaign in October 2012.
- The introduction of “iReduce iCal” in October was associated with an additional 19% decrease in iCal ordering in November (compared to the new baseline established post-CPOE introduction).
- Next steps include further ICU nursing education and potential lab-driven interventions.

**CONCLUSIONS**

- The introduction of CPOE immediately resulted in an approximately 50% decrease in iCal ordering medical center-wide.
- This highlights the amount of wasteful iCal ordering previously at UCSF.
- Our educational and promotional campaign, “iReduce iCal,” has further decreased and sustained these changes.
- Reducing these unnecessary relatively labor-intensive lab tests may provide an ideal lab target for improving healthcare value (Quality / Cost).

**iReduce iCal**

Draw Ionized Calcium ONLY When Needed

Educa8onal and promotional campaign "iReduce iCal" has further decreased and sustained these changes.

**REFERENCES**

Nebs No More After 24: Improving Use of Appropriate Respiratory Services

Christopher Moriates MD, Maria Novelero MA MPA, Matthew Cascino MD, Katie Quinn MPH, Theodore Omachi MD MBA, Sumant Ranji MD, Raman Khanna MD, Michelle Mourad MD

BACKGROUND

- The delivery of a nebulized bronchodilator therapy (nebs) to hospitalized patients is a resource-intensive treatment involving direct care by a Respiratory Therapist (RT).
- Metered Dose Inhalers (MDIs) have been shown to be equally effective as nebs when used correctly.1,2,3
- A majority of patients misuse their prescribed MDI, but all are able to achieve mastery with teaching.4
- Administering unnecessary nebs is a missed opportunity to educate patients on the proper use of MDIs.

At our 600-bed academic medical center we spent over $1 million in direct costs for administration of nebs to non-Intensive Care Unit patients on the Medicine Service during FY2012, averaging approximately 5 nebs for every admission to the high-acuity medicine ward.

GOALS

- To decrease neb usage in hospitalized patients on a high-acuity medicine ward by at least 15%.
- To provide inpatient education on proper MDI self-administration.
- To improve resident physician knowledge regarding the use of appropriate respiratory therapies.

RESULTS: Nebulizer Utilization

Phase 1: Jun – Aug
- Removed neb treatments from the "admit order set"
- Enrolled RTs and nurses to provide MDI teaching to inpatients

Phase 2: Aug – Dec
- Launched educational program, including prepared facilitator guides for attending physicians
- Created promotional campaign including posters, flyers, and pens
- Provided targeted feedback to physicians

Phase 3: May – Jul
- Introduced CPOE intervention to link neb orders with automatic MDI transitions
- Expand project medical center-wide

RESULTS: Costs

<table>
<thead>
<tr>
<th>Neb Treatments Delivered on Pilot Unit</th>
<th>Relative Average</th>
<th>August</th>
<th>September</th>
<th>October</th>
<th>November</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmacy Costs Saved on &quot;Avoided&quot; Nibs (baseline MDI costs - avoided nebs)</td>
<td>$0.14/ neb</td>
<td>$108.80</td>
<td>$187.34</td>
<td>$168.30</td>
<td>$171.36</td>
</tr>
<tr>
<td>Respiratory Therapy Direct Costs Saved on &quot;Avoided&quot; Nibs (baseline neb costs - avoided nebs)</td>
<td>$65.85/ neb</td>
<td>$21,072.00</td>
<td>$36,283.35</td>
<td>$32,585.75</td>
<td>$33,188.40</td>
</tr>
</tbody>
</table>

Total Metered-Dose Inhalers (MDIs) Prescribed on Pilot Unit

| 6 MDIs/month | 11 | 32 | 42 | 25 |

Excess Pharmacy Costs on MDIs (baseline MDI costs - avoided nebs) (Average Pharmacy cost at UCSF)

| $46.75/MDI | ($140.25) | ($1,122.60) | ($1,589.50) | ($794.75) |

Cost Savings

| $32,165.01 | $31,174.55 | $31,348.09 | $31,460.55 |

Total Savings on Pilot Unit to Date:

| $36,032.20 | $36,032.20 | $36,032.20 | $36,032.20 |

Projected Total Savings per Year:

| $160,386.40 | $160,386.40 | $160,386.40 | $160,386.40 |

RESULTS: Knowledge and Attitudes

Pre- and post-intervention survey used to assess changes to resident physician knowledge and attitudes:

- Awareness that nebs are more expensive than MDIs: (p=0.01)
- Misassumption that nebs are more efficacious than MDIs: (p=0.01)
- Agreement with the statement that “patients receive adequate inpatient MDI teaching”: (p=0.01)

CONCLUSIONS

A multifaceted intervention has been successful in simultaneously:

- Decreasing neb treatments by approximately 50%
- Enhancing MDI patient education
- Improving evidence-based resident physician knowledge
- Saving direct costs for the medical center

Reducing utilization of these unnecessary treatments may provide an ideal target for improving healthcare value (quality/cost)

References:
Implementation of a Structured, Electronic Referral System to Support the Principles of the PCMH-Neighborhood

Nathaniel Gleason MD, Chanda Ho MD MPH, Michael Wang BS, Don Collado BS, Jennifer Monacelli BS, Sara Ackerman PhD MPH, Ralph Gonzales MD MSPH

Division of General Internal Medicine, UC San Francisco

Background

- The lack of coordination of specialty care with primary care leads to inefficient, non patient-centered care, and impedes realization of the PCMH
- Referrals often lack:
  - A clear clinical question
  - Key clinical data
- Specialists and PCPs often disagree regarding the duration of specialty care and co-management roles

Structured Referral Example And Evaluation

Clinical Question

- Appropriateness
- Minimum Data Set
- Clinical Question
- Recent Assessment

Auto-populated Data

Cardiovascular
Endocrinology
GI
Hepatology
Pulmonary
Renal
Rheumatology
Sleep
TOTAL

Referral Template Use

Audit of all referrals to intervention practices, May 2012 + Nov 2012

Card.
Endo.
GI
Hep.
Pulm.
Renal.
Rheum.
Sleep
TOTAL

Templates Developed
13
19
4
7
3
8
66

Template Use

62/83
51/57
86/97
4/4
30/38
17/21
25/30
42/59
317/389 (81%)

Specific Diagnoses

11/22
44/51
42/86
3/4
12/30
12/17
17/25
42/42
223/317 (70%)  'Unspecified'
11/22
7/51
44/86
1/4
18/30
5/17
8/25
0
94/317 (30%)

'Referral-Type Designated

58/62
48/51
55/71
4/4
27/30
13/17
20/25
40/42
265/317 (84%)

Consultation Only

Co-Management - PCP Lead

Co-Management - Specialist Lead

Results

- Chart abstraction of all referrals to intervention practices in the 2nd and 8th month of the program (2 abstractors: 100% inter-rater reliability)
- Adoption:
  - 81% of referrals used a structured template
  - Broad uptake across 8 primary care sites
  - A clinical question was included in 97% of referrals placed using a structured template (see graph)
  - Pre-Referral Testing:
    - 58 of the 66 templates request ≥1 pre-referral test
    - 220 referrals (70%) used a template that requested pre-referral tests. Of these, 75% had all requested tests complete at the time of referral
    - Of those missing ≥1 test at the time of referral, PCPs ordered ≥1 missing test for 39% of patients after viewing the template
  - Referral-Type:
    - A "Referral-Type" was designated in 84% of referrals using a structured template
    - "Consultation, recommendations, and return to primary care," was requested in 58% referrals

Implications

- Structured referrals improved communication of the clinical question, clinical data, and co-management expectations
- The high proportion of Referral-Type requests for Consultation only (58%) may present an opportunity to avoid unnecessary long-term specialty care
- The marked increase in use of a clinical question implies a fundamentally different experience of the referral process: an inter-provider communication rather than an administrative task

Objectives

- To develop structured referrals for common diagnoses, in collaboration with primary care and specialist physicians, that,
- Convey specialist recommendations
- Facilitate efficient PCP communication of clinical content and co-management expectations
- To integrate the workflow into the EHR at the point of care, maximizing usability and acceptability

Program Description

- Template elements reflect the PCMH-neighborhood model, proposed by the American College of Physicians and adopted by the NCQA. (see example)
- Structured referral templates were developed for 66 diagnoses across 8 medicine sub-specialties at a multi-site, urban academic medical center
- Guiding questions included: what diagnostic tests are needed to triage a referral for this problem? What tests should be available at the initial visit with the specialist to avoid a delay in decision making?
- Template use was implemented at all adult primary care practices (n=8 practices and 185 PCPs) across the institution

Structured Referral Example

I am referring a 58 y.o. female to Rheumatology for evaluation and treatment of possible rheumatoid arthritis.

She has a history of joint pain for 6 weeks, primarily affecting the small joints, and one of the following:

- Elevated ESR and/or CRP
- Positive RF and/or anti-CCP
- Radiographic erosions consistent with RA
- Previous diagnosis of RA by a Rheumatologist

The following studies are recommended by Rheumatology to ensure that the initial visit is productive for the patient:

CBC with diff, BUN, Creatinine, ESR, CRP, RF, anti-CCP, LFTs, hepatitis B & C, HBs & anti, jtn Ab, and hepatitis C Ab

HbC Count
0.9 12/31/2011

Hemoglobin
39.0 12/31/2011

Platelet Count
202 1/10/2012

Creatinine
0.69 10/19/2012

Sedimentation Rate
95 12/31/2011

Rheumatoid Factor
6160 8/22/2010

Anti-Cyclic Citrullinated Peptide
>10.0 8/22/2010

HCV
POS 12/16/2009

My clinical question: ****

The most current assessment of this problem can be found in the Apex note dated 12/10/2012

Pending specialist evaluation, I anticipate: (CHOOSE ONE)

CONSULTATION, Recommendations and Return to Primary Care

CO-MANAGEMENT—PCP IS FIRST CALL: PCP maintains responsibility for day-to-day management

CO-MANAGEMENT—SPECIALIST IS FIRST CALL: Specialist assumes responsibility for management of this problem

Referred to: Rheumatology

Decision: Admit to inpatient service in 2 days

I am referring this patient to the Rheumatology service for consultation. The patient presents with a 6-week history of joint pain, primarily involving the small joints of the fingers, and has elevations of ESR and CRP. Rheumatology recommends the following tests for the initial visit:

CBC with diff, BUN, Creatinine, ESR, CRP, RF, anti-CCP, LFTs, hepatitis B & C, HBs & anti, jtn Ab, and hepatitis C Ab. These tests will help to confirm the diagnosis of rheumatoid arthritis and guide management.
**BACKGROUND**

- Patient satisfaction has been linked to improved clinical outcomes.
- Previous studies have shown that when physician sit, patients perceive they spend 40% longer and patients have a more positive perception of their provider.

**OBJECTIVES**

- To facilitate seated conversations by educating providers about the impact of sitting and by providing folding chairs in patient rooms on a surgical and medical floor.

**NEEDS ASSESSMENT**

- At UCSF, “Time physician spent with you” is the lowest performing measure of physician satisfaction at 83.6%.

**METHODS**

- Obtained Medical Center funding for 32 chairs for a pilot on two adult floors.
- Partnered with facilities, nurse managers and service excellence to install chairs on hooks behind the door.
- Publicized the project using existing meetings/conferences
- Volunteers questioned a sample of patients before and after the intervention to assess communication and chair use on each of the units (Table 1).

**RESULTS, CONCEPTUAL MODEL, ILLUSTRATION, FIGURE OR TABLE**

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<tr>
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Table 1. Physician response to volunteer rounding surveys by Medical vs. Surgical floors. Demonstrates different engagement by providers and response by patients to seated communication.

**DISCUSSION**

- Physician use of the chairs and patient responses varied by medical and surgical floors.
- On surgical floors where preintervention data showed high rates of physician attention to concerns, the chairs were not used and the impact of the chairs was negligible.
- On medical floors, which had lower baseline satisfaction with physicians, and higher use of chairs, the scores improved significantly.

**CONCLUSIONS**

- Including folding chairs in patient rooms is feasible, but use is variably adopted by physician providers. Both physician adoption and patient perceptions varied greatly between medical and surgical floors.

**IMPLICATIONS / FURTHER RESEARCH**

- On the medical service, staffed entirely by hospitalists, the lack of a longitudinal relationship may explain the perceived benefits of sitting in forming a therapeutic rapport with our patients
- Patient satisfaction with care by hospitalists may be hampered by the lack of a long term relationship with patients and efforts to improve patient satisfaction could benefit from other strategies that help form a therapeutic relationship.
Stress Ulcer Prophylaxis: Pilot Project to Reduce Inappropriate Use in the Intensive Care Unit

Suzanne Sharpton M.D., Kathryn Quinn M.P.H., Chelsea Tasaka PharmD, Cindy Burg PharmD, Sheri VanOsdol PharmD, Niraj Sehgal M.D., M.P.H., Stephanie Rennke M.D.

BACKGROUND

- Clinically significant stress ulcer-related bleeding primarily occurs in patients with certain risk factors (i.e. coagulopathy or mechanically ventilated).
- Acid suppressive therapy (H2RAs or PPIs) used for stress-ulcer prophylaxis (SUP) is associated with increased medication costs and adverse effects such as increased incidence of pneumonia and *Clostridium difficile* infection.
- SUP has been identified in the “Five Things Physicians and Patients Should Question” Choosing Wisely list.

OBJECTIVES

- To develop and implement evidence-based clinical guidelines on the indications for SUP in the ICU
- To reduce inappropriate use of acid suppressive therapy for SUP
- To reduce inappropriate use of SUP upon ICU discharge

INNOVATION

**Inclusion Criteria:** All adult patients (≥18 years of age) admitted to two medical/surgical ICUs (32 bed capacity)

**Exclusion Criteria:** Patients with active upper gastrointestinal bleed, receiving dual anti-platelet therapy or concurrent anti-platelet and anticoagulation therapy, status post solid organ transplant, status post total gastrectomy, or receiving pancreatectomy via feeding tube

**Assessment:** To assess the impact of our intervention, we collected data on SUP prescribing practices before and after implementation

**APPROPRIATE**
- SUP ordered with indication present
- SUP not ordered for patients without indication

**INAPPROPRIATE**
- SUP ordered without indication
- SUP not ordered but patient has indication

**UNKNOWN**
- SUP continued from home medications without documented indication

**IMPLICATIONS**

- Inappropriate use of SUP in the ICU and upon discharge from the ICU decreased with our bundled QI intervention
- Implementation of an interdisciplinary, multi-component quality improvement intervention was effective in modifying SUP prescribing practices
- The project was well-incorporated into the pharmacists’ work-flow, thus yielding a sustainable impact on SUP use

**ACKNOWLEDGEMENTS**

We would like to thank the following members of the UCSF Department of Pharmacy for their significant contributions to this project: Noelle DeLean, Kendall Gross, Deanna Horner, Jennifer Curelio, Ashley Thompson, and Fanny Li. We would also like to thank Charlotte Garwood and Matthew Somerset from the Department of Nursing.
Patients recovering from abdominal surgery who walked with volunteers had improved postoperative recovery profiles

**Volunteer program, Walking to Recovery, ambulates postoperative abdominal surgery patients**

**Introduction**
- During postoperative recovery, patients often experience limited mobility, postoperative complications, and prolonged hospitalization.
- Many studies have shown that early walking, when combined with an enhanced recovery after surgery protocol, benefits postoperative patients.
- Despite clear clinical evidence to support early walking, this practice is hampered by the hectic inpatient setting where nurses are caring for multiple patients in any shift, physical therapists often focus on patients with complex conditions, and family members do not always visit patients often enough to walk them consistently or feel comfortable doing so on their own.
- College volunteer students, eager for clinical opportunities, were trained to help walk patients recovering from abdominal surgery.

**Methods**
- The Walking to Recovery (WTR) program works closely with UCSF Volunteer Services, Department of Surgery, Department of Physical Therapy, and the Falls and Safety Team to recruit and train college volunteers to walk postoperative patients.
- Volunteers undergo UCSF Volunteer Services training, WTR specific training, and complete a 1:1 WTR shift with a third-year medical student.
- Each volunteer works a 2-4 hour shift weekly, where patients are recruited, walked with, and enrolled in the research study. Controls were recruited as well.
- On the day of discharge, a modified postoperative recovery profile (PRP-17) was administered to patients in the study.
- The PRP-17 evaluates 17 items of a patient’s health categorized into 5 dimensions: physical symptoms, physical functions, psychological, social, and activity.
- One month post-discharge, an SF-12v2 survey was administered by telephone to assess mental and physical level of function.

**Results**

When the two groups were approximately matched by type and severity of surgery, participants had lower PRP-17 composite scores (9.9 vs. 12.5, p = 0.003) and higher indicator sums (9.8 vs. 8.4, p = 0.04) than non-participants. The mean immobilization score was significantly lower in participants (0.3 vs. 0.8, p = 0.04). Postoperative length of stay and mental composite score did not differ between the two groups, but in participants, there was a trend for higher scores in the physical composite score. The average age of participants and non-participants was similar (48.9 ± 9.8 vs. 51.4 ± 8.7 years, P = 0.28).

**Conclusions and Future Directions**
- Trained college volunteers helping ambulate postoperative patients is a sustainable, cost-effective model associated with a better postoperative recovery, as indicated by significantly improved PRP composite scores and indicator sums, in comparison to controls.
- The Walking to Recovery program is expanding to other surgical services beyond the current abdominal surgery patients. It is also extending to the medicine service, as literature suggests the ambulation benefits of post-surgical patients are similarly observed in all hospitalized patients.

**Acknowledgements:**
Victoria Riesenberg, Director of UCSF Volunteer Services | Wendy Gilchrist, RN | UCSF PHSCE Faculty | WTR Volunteers | Renee Alyancy, BMA Phd for PRP-17 questionnaire | Nooshi/kills for poster template
Transforming Care Transitions: Implementing Project RED at a VA Medical Center

Christy Welge, MD, MSc; Rachael Lucaporto, MD; Caroline Stephens, RN, PhD; Ellen Zufahl; Amalia Garcia, RN, BSN; Eileen Kennedy, RN; Shariresse Ceballos, RN; Jennifer Coit-Pickett, RN; Dolores Sapiro-Swanson, RN; Sharya Bourdet, PharmD; Kim Babcock, LCSW; Jenny Broering, RN, PhD, MPH; Jane Rudolph RN, MBA; Margie Carlton, RN, MS; Melissa Bachhuber, MD

VA Quality Scholars Program, "UCSF School of Medicine, Division of Hospital Medicine, San Francisco Veterans Affairs Medical Center, "UCSF School of Nursing, Divisions of Nursing and Pharmacy", San Francisco Veterans Affairs Medical Center

The Problem

• Care transitions are a vulnerable time for patients
• 30 and 90 day hospital readmissions may be reduced with improved care transition programs
• Project RED reduced readmissions by 30% at Boston University
• We participated in a regional collaborative reviewing care transitions at our hospital
• We sought to reduce readmissions in a veteran population
• 5 Project RED care coordinators were each assigned to a medical team
• Patients at high risk for readmission were specifically targeted for enrollment

Project Plan

Patients Targeted for Project RED:
• Marginally housed/homless
• Polysubstance abuse
• Living alone
• Age > 65 years
• Polypharmacy (>10 meds)
• >3 ER visits in last 6 months
• Mental health comorbidity
• Re-admitted in the last 90 days
• No primary care physician (PCP)
• Admission diagnosis of congestive heart failure, pneumonia, or acute myocardial infarction

Key Components of Project RED:
1. Patient Education
2. Follow-Up Appointment
3. Post-discharge Services
4. Medication Reconciliation
5. Comparison to National Guidelines
6. After Hospital Care Plan
7. Plan for Pending Tests
8. Post-Discharge Telephone Call
9. After Hours Care Plan
10. Discharge Summary to PCP
11. Teach-Back

Project Goal

Aim:
• To implement Project RED to reduce hospital readmissions

Outcome Measures:
• 30 day readmissions
• 90 day readmissions

Statistical Test:
• McNemar’s Test was used to compare pre- and post-intervention rates of readmission

Process Measures:
• Follow-up appointment with PCP within 14 days of discharge
• Medication Reconciliation
• After Hospital Care Plan
• Discharge Summary to PCP within 48 Hours
• Post-Discharge Telephone Call
• Electronic Handoff to Outpatient Team

Balance Measure:
• Length of Stay (LOS)

Results / Progress to Date

Baseline Characteristics (n=122):

<table>
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<tr>
<th>Characteristic</th>
<th>Value</th>
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<tr>
<td>Age (±12 years)</td>
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<tr>
<td>Sex</td>
<td>97% Men, 3% Women</td>
</tr>
<tr>
<td>Mental Health Comorbidity</td>
<td>33%</td>
</tr>
<tr>
<td>Polysubstance Abuse</td>
<td>22%</td>
</tr>
</tbody>
</table>

Figure 1. 30 and 90 Day Readmission Rates Pre and Post Intervention

Figure 2. Percent of Process Measures Achieved

Balancing Measure:
Average LOS for All Patients Admitted from Jan-Nov 2012: 5.7 days
Average LOS for Project Red Admissions (Dec 2012-Mar 2013): 6.5 days

Lessons Learned & Next Steps

• Early data indicate a reduction in 30 day and 90 day readmissions
• Post-discharge telephone call rates were more successful post-intervention (60% vs. 83% success)
• 98% of patients received medication reconciliation prior to discharge
• However, only 54% of patients attended a scheduled follow-up visit with their PCP within 14 days of discharge, and only 46% and received an after hospital care plan
• Future directions will aim to improve process measures to 80% or greater in all categories and achieve a sustained improvement in primary outcome measures
The Problem

- Systematically address procedural issues in the MP clinic that contribute to patients being lost to follow-up.
- Identify reasons for delinquent recalls.
- Educate providers regarding appropriate use of recall slip box.
- Implement new policies and procedures that will ensure patients are scheduled for follow-up.

Project Plan

Aim #1: Categorize the types of errors in recall slips and determine the percentage of recall form errors from one day of Medical Practice clinic.

Intervention #1: Place instructional sheet on recall slip box that reminds providers of appropriate time frame for use of recall box to decrease the provider-related error in the recall process.

Aim #2: Attempt to identify reasons for delinquent recalls by subset of providers reviewing 6-month delinquent recall list and categorizing reasons for patients not returning for appointment.

Results / Progress to Date

- Error rate 64.9% for the box slips (37 errors) and 13.3% for the window slips (4% errors).
- Post-intervention error rate decreased to 26.5% for the box slips (9 errors) and 8.6% for the window slips (3 errors).

Analysis of Delinquency Patient Recalls

Lessons Learned & Next Steps

Lessons Learned:
- Providers and ancillary staff required education on how the recall drop box system works
- Current system to identify delinquent recalls is inaccurate.
- Failure for recall seems to fall predominantly on the patient.

Next Steps:
- Plan to initiate provider recall correction slip which clerks place in mailbox of provider who makes recall form error.
- Develop a process to re-recall patients who did not schedule appointments or who cancelled or did not come to appointment.

UCSF
Department of Medicine and School of Nursing
Increase the number of completed advanced directives or advanced directive discussion notes that list a name and phone number for a DPOA or surrogate decision maker to a goal of greater than 50% of patients.

- Low income and homeless populations are often socially isolated and face end of life situations without advocacy or surrogate decision makers.
- Completion of an advanced directive (AD) and documentation of a surrogate decision maker are steps that patients can take to advocate for their treatment preferences.
- Homeless persons have higher rates of life limiting illnesses and traumatic injury, which highlights the importance of preparing for end of life needs in this vulnerable population.

Step 1 (October 2012): The team used process mapping and fishbone diagrams to evaluate current processes for collecting AD’s and to develop potential tests of change.

PDSA cycle 1 (November 2012):
A social work (SW) supervision who had been formally trained in AD completion held a session with attendings and trainees to teach the process of AD documentation and completion within the VA system. Adopted.

RN scrubbing. One week prior to the patient visit, the RN who scrubbed the charts also looked to see which patients need AD’s and informed the provider. Abandoned.

PDSA cycle 2 (December 2012- March 2013):
Attach AD to face sheet. At the time of the patient encounter, the RN who checked in the patient attached the AD packet to the face sheet that contained the vital signs. Abandoned.

AD pizza party. The team provided all patients in the waiting room with pizza and AD packets and assisted them in filling out the AD’s. Adapted.

Dedicated SW. A SW is available at all times for referrals to help patients fill out their packets. Adopted.

Over the seven months of the project, Downtown Clinic providers increased the cumulative rate of ADs from 13% in September to 37% in March. Providers documented ADs for an average of 20% of all patients seen at Downtown Clinic during this period. Individual provider data and the cumulative percent of ADs completed per month are charted below.

Lessons Learned & Next Steps

The fishbone and process map exercises were foundational in creating relevant tests of change and understanding current practices. In addition, we recommend using an “Adapt, Adopt, Abandon” strategy to cycle through PDSA’s quickly. Teamwork is a critical component of QI and it was integral to the success of this program. Monthly team meetings kept the program on track.

In the future, a wiki would allow greater continuity among team members. Although SW was an integrated part of this effort, in the future, including RN staff may benefit these efforts. In terms of AD-specific recommendations, dynamic processes are most definitely the most effective mechanisms for completing AD’s among this patient population.

It was noted that patients often needed help in understanding medical jargon. We think the dedicated staff social worker, who has extensive experience in the field, will allow patients to receive AD-related information in a respectful, culturally relevant manner.
Challenges arose on both the patient and provider side and included:

- Medication reconciliation has been considered an essential part of each MP clinic visit, but to date there has been poor communication and poor understanding of the process by both patients and providers.
- Medication errors and non-adherence are known to increase patients’ risk for poor health outcomes and hospitalization.
- Our team sought to identify a way to improve medication reconciliation and, subsequently, outcomes.
- Barriers to effective medication reconciliation include: poor health literacy, large number of medications per patient, and the fact that many patients simply do not recall which medications they take, when they take them, or what they take them for.
- At the outset of our project only 0-5% of patients were bringing their medications to each visit for complete medication reconciliation.

The aim of our project was to increase the percentage of patients bringing their medications to clinic visits from 0-5% to 25-30% over the course of 6 months and, in doing so, to create a standardized procedure that allows for interception of more medication errors and expired medications as well as an increased opportunity for medication education.

PSA Cycle 1: Team LVNs to remind patients to bring in their medications during the pre-visit reminder call.

PSA Cycle 2: A script was created for the LVNs to use, stressing the importance of medication reconciliation for patient safety. A provider data collection sheet was developed to document medication errors as they were identified and corrected. Pharmacy team members randomly selected several patients who did and did not bring in their medications and called them to identify both barriers, for those who did not bring their medications in, and motivators, for those patients who did.

PSA Cycle 3: Providers continued to encourage patients to bring their medications in to improve the medication reconciliation process.

PSA cycle 4: we partnered with another QI group developing an AVS (after-visit summary) to add a box to check reminding patients to bring in all meds. Also in our last cycle we hosted a friendly competition between teams awarding the team with the highest yield of patients an ice cream party.

The Problem

Project Plan

The Problem

Project Goal(s)

Results / Progress to Date

Lessons Learned & Next Steps

Over four PSA cycles we attempted small tests of change to see if we could increase our yield of patients who would bring in all of their medications in with them for in person reconciliation amongst a small team of 4 providers targeting one clinic day with each cycle. With roughly 18 established patients on each clinic day, the yield was small and inconsistent.

Our project revealed many challenges and lessons suggesting future potential tactics for improving the medication reconciliation process. Challenges arose on both the patient and provider side and included:

- Providers often forgot to fill out medication reconciliation tally sheets.
- Improving medication reconciliation is a large project that may require a culture shift from both providers and patients.
- Unclear that patients bringing in medications is an accurate measure or goal of an effective medication reconciliation process.
- The intervention was dependent upon changing patient behavior and involved many variables beyond PACT teams control.

Potential Next Steps

- Changing the culture to encourage patients to bring medications in for reconciliation may necessitate a longitudinal effort requiring patient, provider and team input and buy-in.
- Assess practicality of adding “bring all of your medication” reminders into clinic alerts.

UCSF Department of Medicine
Patients have the right to make their medical wishes known and designate a health care proxy. In order to support the patients rights, one goal of the clinic is to provide education, increase discussion, and support completion of advanced directives. The social work team noticed that attendance to the Medical Practice Advance Directive Group had decreased, presenting an opportunity to consider how we could reach veterans who were disconnected from services. The recruitment method at the time was primarily a letter and flyer.

The existing recruitment flyer was tested with veterans, and data was collected from social work providers regarding past approaches to group recruitment and the lessons learned. Existing literature and best practices for group recruitment strategies were also reviewed.

Based on the information collected, three recruitment letters inviting patients to the group were created. One was a personally signed letter, the second was an appointment prompting letter, and the third was the standard letter. Each month a different letter was sent and patient attendance in response to the letter was measured. To facilitate the new process, those mailing the letters and taking appointment calls were included in the planning process. Changes made in the process minimally impacted staff and were primarily managed by the team.

Following the circulation of the recruitment letters, and the collection of the attendance, the letters were compared. The appointment letter appeared to have the highest response rate. Thus, in the fourth month, April, the appointment letter was sent again, to determine if the increased turnout could be reasonably attributed to the appointment letter.

Additionally, after attending the group a focus group of patients were called and asked to provide their feedback. Eight patients participated and confirmed they had received the letter.

The recruitment letter from 2-3% to 5-6% response. Three different recruitment letters were sent. Patient attendance to the advance directive group, in response to the recruitment letter was measured for 4 recruitment cycles.

Lessons Learned:

- Even with extensive consideration of the problem there are always variables that are unanticipated or can not be controlled. For example, logistical considerations, such as which day in the week or what time of day a group is held. When working within an established system project team members have to remain flexible and creative. The projects’ focus was on improving the recruitment strategies, but it was vital to keep the larger goal of advance directive education in mind. When the goal of advance directive education was only peripheral, the group suffered. In the future, orienting providers to advance directives and the group as a whole would improve collaboration and patient satisfaction. Multidisciplinary participation has a positive impact on the veterans experience, but only if all providers involved can be fully present and educated about the topic. As a leader I learned how to bring together providers with differing styles, in order to work collaboratively toward improved patient care.

Lessons Learned & Next Steps

- Regarding recruitment, I will advocate for the use of appointment letters as the standard recruitment method. The increased patient response to these letters indicates that we are reaching a population that was previously disengaged. In the future, this may change and I highly recommend revisiting recruitment periodically. Collecting additional information to determine if the patient has an advance directive and if it was submitted before or after they attended the group, would provide additional insight into whether the group is meeting its goal of increasing advance directive completion. Also, group attendance should by tracked continuously to determine if other factors impact patient attendance. For instance, hosting the group in the morning versus the afternoon. Lastly, I would encourage follow up and continuation of the patient surveys and the introduction of provider surveys. Thus far, the patient survey results have been homogenous and a larger focus group is necessary to identify potential improvements.

UCSF Department of Medicine
Coordinated Outreach Program to Increase Rates of Annual Lipid and Hemoglobin A1c Tests in Patients with Diabetes


Centers of Excellence in Primary Care Education, San Francisco Veterans Affairs Medical Center, San Francisco, CA

The Problem

VA national goals are to measure HgbA1C and LDL levels annually in 96% of all diabetic patients. The Medical Practice (MP) Clinic at SVPA has achieved an annual measurement rate of 82.2% for LDL and 89.1% for HgbA1C. Recent changes with health care reform have incorporated more emphasis on pay-for-performance models and defined metrics for chronic disease monitoring. Further research is still needed to determine effects of pay-for-performance on patient outcomes.

Project Goals

- Increase rate of annual LDL and HgbA1C measurements to the VA national goal of 96% in diabetic patients among select resident and nurse practitioner student patient panels in MP Clinic by April 2013.
- Re-engage patients who are “lost to follow up”
- Encourage use of panel management tools to improve performance measures.

Project Plan

- Cohort consisted of ~750 diabetic veterans over a five month period who have not had a lipid or HgbA1c test in the preceding twelve months.
- Data is collected through the VA Dashboard, a database that measures clinical indicators for primary care patients at SFVAMC.
- Intervention includes sending a letter to the study cohort at month 2, a followup phone call at month 3, assessment at month 5 to see if the interventions improved lipid and A1c testing.

Results / Progress to Date

Baseline data:
- Diabetic patients meeting annual LDL measure: 82.2%
- Diabetic patients meeting annual A1c measure: 89.1%
- Target measure for annual LDL and A1c in diabetic patients: 96% 

Using only the patient panels from the primary care providers engaged in this project, there were 34 patients with diabetes who had not met the metrics of A1c or LDL measured in the previous 12 months at a set time point. After a simple intervention of sending letters to those patients, 16 had their labs checked. Four patients were removed from the denominator because they had moved to another clinic setting, leaving a success rate of 16/30, or 53.33%. The average time from intervention to completion of labs was 46 days. However, 10 patients required a phone call to follow-up the letter prior to completing their labs.

Lessons Learned & Next Steps

Lessons Learned
- Simple, automated interventions work to help the majority of patients meet national VA goals for monitoring their chronic disease
- Patient activation is a necessary component to chronic disease management
- A coordinated, team based approach to the care of patients with chronic disease helps identify those who need more outreach

Next Steps/Future directions
- Further automation will help to reduce workload on providers while improving patient care
- Integration of chronic disease management in My HealtheVet and Secure Messaging to take advantage of patient engagement
- Streamlined real-time data feedback to providers that focuses panel management and removes obstacles to simple interventions like pre-formed letters
- Create a reminder letter template in the shared templates on CPRS for current and future Medical Practice providers

UCSF Department of Medicine and School of Nursing
Enhancing Patient Communication: Development and Implementation of an After Visit Summary
Melissa Wong, Tamir Anand, Julia Carnevale, Lauren Enteen, Morgan Fitzpatrick, Jeffrey Hsu, Alvin Rajkomar, Varsha Singh, Lakshmi Sridharan, Kristo Weaver, Denise Davis, Taraca Soones
Center of Excellence in Primary Care Education, SFVAMC; Department of Internal Medicine, UCSF

The Problem
- Complex medical information is discussed with patients during each clinic visit.
- Patients forget 40 to 80% of medical information immediately after the visit.¹
- Combined verbal and written health information improves patient recall and understanding of medical information.²
- In addition, a written After Visit Summary (AVS) provided at the end of each clinic visit has been reported to increase patient satisfaction.³

Project Plan
- Surveyed providers to determine pre-intervention written instruction practices & preferences for a new AVS form
- Surveyed patients to determine baseline satisfaction with their treatment plan understanding & preferences for a new AVS form
- Designed a new AVS form based on provider and patient requests and piloted it among QI team members in Nov 2012
- Through multiple PDSA cycles, collected ongoing provider & patient feedback on the AVS & made frequent improvements
- Implemented the new AVS form in MP clinic in Jan 2013
- Collaborated with MP Clinic staff to make new AVS forms readily available in each exam room
- Initiated a poster campaign to educate patients to expect to receive an AVS form
- Repeated provider and patient surveys to determine post-intervention AVS use and treatment plan satisfaction

Project Goals
1. To develop and implement a standardized After Visit Summary instruction sheet in Medical Practice Clinic to:
   - 100% providers who regularly provide an AVS to their patients
   - 60% (pre-intervention, Strongly agree only) to 75%

   - Improved patient satisfaction from 60% to 81%
   - Patients valued written instructions on: Medication changes, Future appointments, Referrals, and What to do before next visit the most

   - 38% of providers who regularly provide an AVS
   - 40% of patients who received the new AVS and 22% received other written instructions

Results / Progress to Date

<table>
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<tr>
<th>PROVIDERS: How often do you provide a written AVS?</th>
<th>PATIENTS: Overall, I am satisfied with my understanding of the treatment plan.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>Strongly disagree</td>
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<td>0%</td>
<td>100%</td>
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<tr>
<th>Pre-Intervention (n = 34)</th>
<th>Post-Intervention (n = 34)</th>
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Lessons Learned
- Prior to our intervention, multiple barriers to AVS delivery included lack of: available forms, a patient centered template, and provider training on the benefits of written clinical instructions.
- Providers and patients differ in what they value in an AVS so we had to balance competing priorities when creating the form. It was important to seek ongoing feedback from providers and patients to improve the AVS. We are currently on its fourth iteration.
- Integration of our new AVS form into clinic workflow for LVNs (who copy forms and stock exam rooms) and providers was critical to its adoption and sustainability. We exceeded both our provider AVS use and patient satisfaction goals.
- While not all patients surveyed after implementation received the new AVS, our provider and patient education campaigns may still have indirectly impacted the increased patient satisfaction.

Next Steps
- Due to its success in Medical Practice Clinic, the new AVS is also being adopted in the SFVA Women’s Clinic.
- We will continue to collect post-intervention patient survey data.
- We will make further modifications to the form based on continued patient & provider feedback.
- We hope to incorporate training on the benefits of using our AVS in future Medical Practice Clinic intern and NP student orientations.

References
2. Coulter A, Melisa J, Varsha S, Lakshmi S, Kristo W. Patient satisfaction with their understanding of the treatment plan. Center of Excellence in Primary Care Education, SFVAMC; Department of Internal Medicine, UCSF
Before Discharge, Take Your Patient’s POLST: An Effort to Increase Durable Documentation of Code Status at the VA

Laura Pettrillo MD, Aparna Goel MD, Eric Widera MD
1. UCSF Department of Medicine, 2. San Francisco VA Medical Center, 3. UCSF Department of Geriatrics

The Problem

Though 70% of Californians say they would prefer to die at home, 42% of deaths occur in a hospital and 18% in a nursing home. 82% of Californians believe that it is important to document end of life wishes in writing, yet only 23% have done so, and 56% of Californians have never communicated their wishes to the person they would want to make decisions on their behalf. Physicians routinely discuss decisions about code status and end of life care with patients, but have very little training in how to conduct these conversations and no standardized system to make patient wishes known across healthcare settings and hospital visits.

Project Goal(s)

• To increase the percent of patients discharged with a Physicians’ Order for Life Sustaining Treatment (POLST) form to >75% among those who have a DNR/DNI code status during an inpatient medicine hospitalization.
• To improve UCSF Internal Medicine Residents’ understanding of the POLST form and increase their confidence in its use with patients.

Project Plan

We created a process for UCSF Internal Medicine Residents to document POLST forms with medicine inpatients, and encouraged them to use this process with all inpatients with code status DNR/DNI during the hospitalization. We educated the residents on the POLST form through noon conference teaching sessions and at the VA rotation orientation. We studied the residents’ perception and understanding of the POLST form before and after the intervention with a survey that was sent to all internal medicine residents.

Results / Progress to Date

We plan to expand our efforts to document POLST forms to other hospitals (SFGH and UCSF-Parnassus) as well as outpatient clinics. This would entail developing systems for documentation in the medical records at those hospitals and clinics and getting buy-in from the administrators, residents and clinic staff. We recognize that the most important factor impeding the use of the POLST is demands on residents’ time, and in future iterations will strive to create a multidisciplinary approach to POLST discussions.

Lessons Learned

The discharge process is itself the subject of quality improvement efforts because many people need to work together efficiently to create a safe discharge for every patient. Tying this project to the discharge process added to an already busy workflow, so integrating it into earlier in the hospitalization might have been more practical. I learned that extracting the data from the VA system in a timely fashion to feed back to teams is difficult, especially working in a very small team. I would expand the team and share responsibilities because team feedback is an important motivator that might have increased our numbers.

Acknowledgements

We gratefully acknowledge the UCSF Medicine Residents who participated in this project, and the VA faculty and staff who helped make it possible, particularly Ben Davoren, Tracey Kinahan and Michelle Oakley.

References


UCSF Department of Medicine
Quality Improvement Project: Improving Advance Directive Completion Rates
Yuan Yuan Liu, Ganesh Devendra, Tiffany Ly, Marion Stanley, David Oh, Jeff Dixson, and Daniel Westerdahl
Mentors: Nicole Chua, Meg Pearson and JoAnne Saxe
VA San Bruno Clinic

Background
The purpose of this project is to improve the completion rate of advance directives among the patients at the VA San Bruno clinic. The completion rate of advance directives (AD) forms is suboptimal at the San Bruno VA clinic. During 2012, only 60 patients completed new AD forms (averaging 5 per month), and from a random sampling of visits, a discussion of AD by providers were documented 40% of the time. There are potentially a number of reasons for the low rate of AD completion. The current practice is for providers to discuss advance directives during a clinic visit and clear the clinical reminder (in the CPRS electronic medical records system). There is currently no staff support from the clinic to support this process. Providers are often too busy during visits and have other priorities to address. Since there is no active tracking of the AD filing process in CPRS, providers are often unaware if the patients have received the AD packet and/or if they have filled out the forms unless the social worker has scanned the AD forms from patients whom she has usually counseled about AD.

Question to Address
Can changing the process of providing information about advance directives to patients who receive primary care at the VA San Bruno clinic increase the completion rate of advance directives in the next six months?

Design & Methods
Model 1: LVN’s provide AD packets to patients during check-in. The medical providers follow up during the visit and ask the patients if they want to have the forms filled out. A social worker referral needs to be filled out for each patient who wants to fill out the forms. If they say no, the patients will give the packets back to the providers. (Note: It is expected that the packets will never go back to the LVNs). The providers will then clear the AD clinical reminder.

Model 2: Every 4th Thursday of the month, the San Bruno VA clinic will conduct an AD group clinic. A flyer is given to all patients during their visits to provide information about the group clinic. Group clinic appointments are booked for patients during their PCP visits.

Implementation Plan
Model 2:
• Providers book AD group clinic for patients during their visit
• A flyer is given to all patients during their visits
• LVNs call to remind scheduled patients about the clinic
• The date of AD group clinic – every fourth Thursday of the month
• The first AD group clinic was run on the 28th by a resident and a social worker. The structure of the group clinic:
  - the loose structure is a 30 min clinic
  - 1st 15 minutes, social worker will go over the forms and what they mean
  - the resident will then go over the importance of ADs and answer questions
  - time permitting patients may then fill out the forms or return to do them with social worker

Performance Data

Conclusions & Further Study
• A primary care provider reminder alone does not have an effect on completion rate of AD.
• A comprehensive multidisciplinary approach is likely required to significantly improve completion of AD in the primary care setting.
• Systematic implementation of a program such as a group clinic may increase the completion rate of AD’s.
• There is a finite amount of time and resources in the primary care setting and should be considered when implementing new processes.
• Interactive group clinics may increase patient discussions, completion of written AD’s and medical records system. 

References

Funding & Acknowledgements
Shalini Patel, MD, Meg Pearson, Nicole Chua, NP fellow, JoAnne Saxe, faculty
All of the RNs, LVNs, Clerks, Social Workers at SB VA Clinic
Utilization of Clinical Performance Dashboard and Quality Improvement Initiative

Amita Kalra, Jacki Deguzman, Steven Ratcliff, Panos Danapoulous

Tin Tin Kyaw, Swee-Chin Loo, Sunitha Nalaventkato, Sunetha Dandala, Ivance Pugoy, Jian Huang

VA Central California Health Care System and Internal Medicine Residency of UCSF Fresno Medical Education Program

Background

• The VA Clinical Performance Dashboard offers real time feedback for quality improvement in outpatient care, especially in chronic disease management.
• This resource is readily available, but underutilized by residents in their VA patient continuity clinic.
• Implementation of this tool may help residents identify patients requiring individualized attention to achieve disease specific goals.

Purpose

• To help patients achieve disease specific goals by educating residents in using an established performance enhancing tool that prompts adherence to evidence based guidelines and measures surrogate outcome parameters.

Project Description

• Baseline data were collected on percentages of resident patients with diabetes (DM) and ischemic heart disease (IHD) meeting therapeutic goals of HbA1c, LDL, BP and annual tests of HbA1c, LDL, timely renal function test and retinal exams.
• Residents were instructed on obtaining access to and implementing the Clinical Dashboard in their outpatient care.
• Residents were provided with clinical guidelines for the management and treatment goals of hyperglycemia, dyslipidemia and hypertension and telephone call scripts to discuss disease management with patients.
• 90-days post intervention data were collected and compared to the baseline percentages.

Results

• McNemar’s test was used in before and after comparison analysis for categorical data.
• Most performance measures showed a trend towards improvement with intervention except BP control in patients with both DM and IHD. However, overall there are no statistically significant changes.

Areas for Improvement

• Timeliness in obtaining Clinical Dashboard access
• Protected time for reviewing patient panels and communicating with patients
• Consistent utilization of the tool by residents
• More stringent intervention, larger sample size and longer interval between data collection suggested

Next Steps

• To make it mandatory for residents to obtain Clinical Performance Dashboard access in the beginning of their residency
• To redesign resident clinic to ensure the time needed
• To encourage frequent discussion with attending and to incorporate performance measures into routine attending feedback evaluations
• To promote patient centered medical home model and train residents to work with the case manager and medical team

References

9) http://www.PathQuality.gov
Physician Attitudes Towards Breast Cancer Risk Assessment in UCSF Primary Care

Alexandra Chang¹  MS4, Andrew Lee¹  MS4, Christopher Van Belle¹  MS4, Lan Doan², Celia Kaplan² DrPH
¹UCSF School of Medicine, ²Division of General Internal Medicine, UCSF

The Problem

• Breast cancer is the 2nd leading cause of cancer deaths among women in the United States.
• Prior studies among women having mammograms in San Francisco have shown that physicians discuss personal breast cancer risk with 40-70% of their patients.
Physicians discuss risk reduction therapies (e.g., chemoprophylaxis, genetic screening, prophylactic surgery) with 7-24% of their patients.


The breast cancer risk reports are overwhelmingly acceptable to providers in terms of accuracy of data, lack of intrusion in the patient-physician relationship, and its ability to prompt increased patient awareness and discussion of breast cancer risk.

Future steps within the BreastCaRE Project will evaluate whether the breast cancer risk assessment intervention increases patient knowledge about individual breast cancer risk, patient-physician discussion of breast cancer risk reduction methods (e.g. chemoprevention), and its effect on mammography screening rates.

Survey Comments

“I think it’s a great effort to empower patients to understand their individual risk and to help primary care doctors educate patients so I’m all for it. I think I just need more education on the topic to be effective for my patients in this area.”

“If the patient has multiple other problems, usually at least 1-2 problems were not discussed in the visit due to time taken to go over the breast cancer risk assessment instead. Sometimes this is ok, but other times it leads to either an unarticulated lengthening of the visit or dropping some of the patient’s or providers’ other agenda items due to time.”

“This is important in the context of the patients’ competing demands. So we need a way to convey risk in the context of other, possibly more important and pressing risks that the patient is facing.”

Results

The Physicians, n=146
• 38% male, 62% female
• 35% attendings, 65% residents or fellows
• 63% of physicians with predominantly female panel of patients
• 74% of physicians with majority of female patients in panel aged 40 to 74

Physician Satisfaction of Breast Cancer Risk Reports
• 79% rated the physician reports as Very Good/Good (19% Fair, 2% Poor)
• 81% rated the patient reports as Very Good/Good (18% Fair, 2% Poor)

Physicians’ Positive Perceptions
• 82% agree that the breast cancer risk reports prompt discussion of breast cancer risk with patients
• 78% agree that the reports assist with communication about breast cancer risk with patients
• 73% agree that the reports support efforts to do preventive care with patients
• 60% agree that the reports help inform patients about personal breast cancer risk

Physicians’ Negative Perceptions
• 31% agree that the reports make patients anxious
• 48% believe that their patients find the reports to be confusing
• 24% find that the reports keep them from addressing other important topics with patients during visits
• 24% agree that the reports add substantially to the visit lengths
• 17% agree that the reports interfere with patient visits
• 10% do not trust the accuracy of the reports

Physicians’ Perceived Barriers to Discussion of Breast Cancer Risk
• 82% - lack of time
• 68% - complexity of visit
• 40% - lack of knowledge about breast cancer risk reduction options
• 30% - limited accuracy of available breast cancer risk estimates
• 22% - confusion about breast cancer screening guidelines
• 19% - harm profile of preventive medications (e.g. Tamoxifen or Raloxifene)
• 17% - confusion about the appropriate referral pathways

Project Goal(s)

• Determine acceptability of breast cancer risk reports to physicians.
• Elucidate barriers to use and discussion of breast cancer risk reports in a primary care setting.

Project Plan

• As part of the BreastCaRE (Breast Cancer Risk Education) Project, eligible patients scheduled for primary care visits at UCSF Mt. Zion General Internal Medicine Clinic and San Francisco General Hospital General Medicine Clinic filled out a computer survey which generated personalized patient and physician breast cancer risk reports. These reports were viewed by both the patients and physicians.
• Physicians at these clinics were surveyed to assess their satisfaction and perception about the breast cancer risk reports.

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Lessons Learned & Next Steps

• The breast cancer risk reports are overwhelmingly acceptable to providers in terms of accuracy of data, lack of intrusion in the patient-physician relationship, and its ability to prompt increased patient awareness and discussion of breast cancer risk.

UCSF Department of Medicine

Funded by Susan G. Komen for the Cure (KG090504) and the California Breast Cancer Research Program (15IB-0158).
In academic internal medicine departments, there was strong support for the role and responsibility of physicians in controlling medical costs. However, despite this support, a significant proportion of respondents disagreed with a sample of eight low-value diagnostic tests identified by an American College of Physicians working group. Level of training (trainee vs attending) was the only factor predicting support for low-value testing. This may reflect differences in tolerance of uncertainty or lack of familiarity with the evidence underlying these scenarios.

In our academic internal medicine department, there was strong support for the role and responsibility of physicians in controlling medical costs. However, despite this support, a significant proportion of respondents disagreed with a sample of eight low-value diagnostic tests identified by an American College of Physicians working group. Level of training (trainee vs attending) was the only factor predicting support for low-value testing. This may relate to differences in attitudes or lack of familiarity with the evidence underlying these scenarios.

Training institutions should integrate cost-consciousness as a core value, practice, and set of learning competencies. We should increasingly focus on value rather than simply quality in medical decision making.