UCSF Department of Medicine
Quality & Safety Symposium

MAY 29, 2012
Dear Colleagues—

We welcome all of you to our 2nd annual Quality & Safety Symposium. This event is an opportunity to celebrate the great projects that were submitted to the 2011-12 Quality & Safety Innovation Challenge (QSIC), acknowledge the award winners, and recognize the wide efforts to improve patient care across our clinical sites.

What is the Quality & Safety Innovation Challenge and how did it work?
The QSIC offers an opportunity for DOM trainees, staff, and faculty to work collaboratively as teams over the course of the year to design and implement innovative solutions for improving patient care. The goals of the initiative are to engage trainees to participate in and lead improvement projects, while providing them guidance and mentorship by faculty, including around dissemination and scholarship. Interested trainees and faculty formed teams and submitted a project proposal to the QSIC last fall. Each team was recommended to choose a project that aligns with one of the thematic focus areas listed below:

1) Improving care transitions
2) Improving patient safety
3) Improving clinical effectiveness
4) Promoting efficient resource utilization
5) Fostering a patient-centered environment
6) Improving access to clinical services
7) Improving teamwork and communication

How were the QSIC projects evaluated by the award committee?
The basic criteria used to rate each QSIC project submission were the following:

- The magnitude of the problem or quality/safety gap in care
- How creative is the project/approach to the problem
- Generalizability (utilizing improvement processes that could be applicable to other services within DOM, our respective hospitals, and/or other organizations)
- Thoroughness of project evaluation
- Potential sustainability of results

We want to thank our rating committee for their contributions and engagement in the QSIC. They include Alice Chen, Jeff Critchfield, Nat Gleason, Ralph Gonzales, Seth Landefeld, Sei Lee, Delphine Tuot, and Bob Wachter, along with two of our outstanding trainees and future Chief Residents, Aparna Goel and Tacara Soones. Three award winners were selected and will be recognized today at the Symposium.

Finally, we also want to express our sincere admiration for all of our trainees, staff, and faculty who committed time, energy, and leadership to improve the care we provide to patients across our clinical sites. Your efforts are an inspiration.

Naama Neeman, MSc
Administrative Director for Quality & Safety Programs

Krishan Soni, MD, MBA
Chief Resident for Quality & Safety

Sumant Ranji, MD
Associate Program Director, Residency Program

Niraj Sehgal, MD, MPH
Associate Chair for Quality & Safety
Quality & Safety Innovation Challenge
2011-12 Project Submissions by Site

San Francisco General Hospital (SFGH)

Addressing disparities in colorectal cancer screening at SFGH
J. Viloria, E. Chen, N. Bennett, L. Phengrasamy, H. Hammer, C. Horton

A discharge clinic to develop an educational experience in transitions in care
S. Azari, B. Chen, L. Thomas, M. Roosevelt

Primary care management of high-risk patients: implementing evidence based practice in a real-world clinic
E. Davis, J. Janssen, A. Johnson, C. Horton

Improving medications prescription to delivery time by addressing prior authorizations delays in a safety net population

Optimizing the kidney transplant referral process in CKD clinic
J. Lockridge, K. Fontwit, S. James

Assessing and improving internal medicine residents’ education in women’s health
P. Babaria, B. Harleman, S. Teasdale, B. Bagdorf, C. Horton, S. Teasdale

Improving health care maintenance at SFGH Monday general medicine clinic

Cost effectiveness analysis of Gene/Expert MTB/RIF
A. Millman, D. Dowdy, R. Brownell, A. Chattamanchi, J. Davis

Keeping patients at the center of the patient centered medical home
T. Smith, R. Gupta, L. Hauman

Reducing delays in administrating rheumatology medications in the SFGH infusion clinic
G. Schmajuk, M. Amodo, D. Hernandez, J. Yazdany
Residents staffed urgent care clinic: A pilot at the SFGH’s general medicine clinic
M. Roosevelt, C. Horton, R. Gupta

Increasing the treatment of alcohol dependence in the inpatient hospital setting
J. Wei, T. DeFires, W. Huen, J. Tulsky

UCSF Medical Center

Brown med medications: development and implementation of a program to provide discharge medications
E. Le, E. Kynoch, C. Monette, V. Joe, E. Tam, M. Mourad

Implementation of a unique cost awareness curriculum for medical residents
C. Moriates, K. Soni, A. Lai

Engaging patients and care-partners in re-designing their hospital experience
N. Neeman, K. Quinn, M. Shoeb, S. Alves-Rankin, D. Sliwka

Improving advanced care-planning documentations through a resident-led incentive program

“PACD Note”: Pilot of a documentation checklist to promote safety
C. Bowman, N. Neeman, N. Sehgal

“Special Wednesday:” Building an interdisciplinary care team
M. Bui-.Duy, K. Soni, R. Ramanan, L. Kroon, R. Pierce

Assessing students perceptions of safety culture during internal medicine and surgery clerkships
C. Bowman, N. Neeman, N. Sehgal

The impact of a radiology utilization campaign on test ordering practices
N. Neeman, K. Quinn, S. Ranji, M. Mourad, K. Soni, N. Sehgal

A peer evaluation program to improve the quality of fellow-written inpatient consolation notes
D. Tout, N. Neeman, K. Soni, A. Auerbach, N. Sehgal

Improving the signout process: an updated approach to a patient safety imperative
K. Soni, A. DeKosky, C. Pierce, A. Gangpadhyay, V. Arora, S. Ranji, B. Sharpe

“High Users”: Characteristics of frequently admitted patient population
K. Quinn, M. Novelero, M. Raven, M. Mourad, R. Greysen, M. Showeb, M. Hwa
Increasing readmissions awareness: do you know your patient was readmitted?
K. Quinn, M. Caroll, M. Singh, M. Mourad, S. Renkke

Veterans Affairs Medical Center (VAMC)

Use of a Hepatitis C template to improve adherence to recommended guidelines'
P. Panguluri, E. Stewart, A. Ng

Improving rates of annual LDL checks in patients with diabetes
N. Chua, A. Spahillari, A. Rajkomar, A. Goel, R. Shunk, M. Dulay

Improving the medication renewal process at the San Francisco VAMC

Increasing surveillance of glycemic control among hard to reach diabetics
A. Hoffman, A. Patel, D. Lange, M. Fitzpatrick, R. Wirka, S. Puri, S. Janson, M. Dulay

A trainee-led project to patient care coordination via a 48-hour post-discharge phone call

Improving Health Care Maintenance (HCM): Implementation of an enhanced HCM template
A. Briner, D. Westerdahl, J. Dixson, J. Keller, J. Andrews

Multi-Center Projects

Driving primary care innovation: enhancing capacity for improvement in California’s safety net

A brief structured peer-to-peer feedback intervention to improve the quality of residents’ discharge summary
K. Soni, M. Lozada, M. Schneidermann
Background

Colorectal cancer (CRC) is the third most common cancer and second leading cause of cancer death in the U.S.
- Approximately 130,000 deaths could be saved each year; and 60% of CRC deaths prevented if all U.S. adults over 50 were screened.
- Unfortunately, national rates of CRC screening rates are low (55%), and significant disparities exist for racial minorities.
- At San Francisco General Hospital, the Family Health Center (FHC) and the General Medicine Clinic (GMC) are on-campus clinics providing general adult primary care. Given limited resources within our safety net system, CRC screening is offered through annual FOBTs in primary care, with referral to colonoscopy for abnormal results.

In 2010, 40% of our patients completed CRC screening.
- Groups with lowest screening rates include whites, African-Americans, and patients with marginal housing, substance use, and psychiatric comorbidities.


Project Plan

| April 2011 | Analyze registry data for subgroups with lowest screening rates to examine interactions between race/ethnicity and identify barriers to screening. Conduct focus groups with patients who have been offered CRC screening but not returned their cards. Share a plan for visual run charts for sharing data on CRC screening with staff and providers at both clinics. |
| May 2011 | Analyze registry data for subgroups with lowest screening rates to examine interactions between race/ethnicity and identify barriers to screening. Conduct focus groups with patients who have been offered CRC screening but not returned their cards. Share a plan for visual run charts for sharing data on CRC screening with staff and providers at both clinics. |
| August 2011 | Conduct focus groups made of patients who have been offered CRC screening but not returned their cards. Share a plan for visual run charts for sharing data on CRC screening with staff and providers at both clinics. |
| September 2011 | Conduct focus groups made of patients who have been offered CRC screening but not returned their cards. Share a plan for visual run charts for sharing data on CRC screening with staff and providers at both clinics. |
| January 2012 | Conduct focus groups made of patients who have been offered CRC screening but not returned their cards. Share a plan for visual run charts for sharing data on CRC screening with staff and providers at both clinics. |
| May 2012 | Conduct focus groups made of patients who have been offered CRC screening but not returned their cards. Share a plan for visual run charts for sharing data on CRC screening with staff and providers at both clinics. |

RESULTS

Increases seen across all groups after the launch of FIT testing
- Improvement is tightly linked to the intensity of our outreach calls and which group was targeted
- Improvements are tightly linked to the intensity of our outreach calls and which group was targeted
- Disparities persist
- Increase seen across all groups after the launch of FIT testing

CONCLUSIONS, LIMITATIONS, LESSONS LEARNED

- In two urban, academic, safety net clinics, the lowest rates of CRC screening are in patients who are white, African American, marginally housed, or with psychosocial comorbidities.
- Barriers to screening include misperceptions about colon cancer screening as well as logistical limitations caused by housing status.
- An multi-pronged intervention including targeted outreach calls, a change to an easier testing method, and resident/staff participation in PDISA cycles led to improved screening rates.
- Next steps include intensified outreach efforts for at-risk groups and incorporation of problem-solving around newly identified barriers.
A Discharge Clinic to Develop an Educational Experience in Transitions in Care
Soraya Azari, MD Bonnie Chen, MD Larissa Thomas, MD Matthew J Roosevelt, MD PGY3
UC San Francisco, San Francisco General Hospital

The Problem
In an environment that is increasingly separating inpatient and outpatient medicine practice, resident physicians in Internal Medicine need to be better trained in safe handoffs between inpatient and outpatient providers.

Project Goal(s)
- Pilot a discharge clinic staffed by resident physicians and precepted by hospitalist attendings from SFGH
- Provide didactic and patient-based learning in transitions of care
- Evaluate the value of a discharge clinic experience as part of Internal Medicine residency training

Project Plan
- Residents from the SFGH Primary Care Program rotated in the Mini-Bridge Clinic during a 6 month pilot period
- Patients admitted to SFGH who required post-hospitalization follow-up were referred to the Mini-Bridge Clinic
- Patients were seen by residents and precepted by attendings
- Hospitalist attendings provided didactics on transitions in care to participating residents.
- Residents were invited to reflect on the quality of the handoff between the inpatient and outpatient settings
- Residents were surveyed to assess for perceived value of their clinical experience in the discharge clinic

Results / Progress to Date
The Patients:
- 70% of patients attended their appointment
- 88% did not have established primary care
- 79% did not have access to health coverage
The Resident Experience:
- 13 Residents participated in at least 1 afternoon bridge clinic session
- 100% of respondents agreed or strongly agreed that they have an understanding of key issues affecting safe transitions of care
- 100% of respondents agreed or strongly agreed that the Bridge Clinic training experience will help [them] to plan safe discharges in the future

Example of resident comment:
I saw a patient in bridge clinic who had recently immigrated to the USA s/p renal transplant with new infectious symptoms. She had many needs in establishing care and getting insurance without fluency in the English language and with a relatively complicated pmh with limited records. Bridge clinic allowed us to do a more urgent lab check for her ad get her plugged in with renal and a new PMD. It is a highly useful clinic for high risk patients and a good educational experience for residents.

Pilot Bridge Clinic Educational Framework

Inpatient Stay Discharge Planning
PCP Assumes Care

Resident Bridge Clinic
- Follow-up of pending tests
- Medication reconciliation
- Patient/family education
- Functional status evaluation
- Linkage to health coverage
- Linkage to PCP
- Feedback to inpatient team

Lessons Learned
- Residents rotating through a precepted discharge clinic learn valuable lessons about planning a safe discharge
- Use of a discharge clinic curriculum can teach residents about the important aspects of transitions in care
- Allowing residents to reflect on what makes for a safe handoff is a useful exercise
- Developing a mechanism for feedback to the referring inpatient providers will be important
- As with all curricular improvement projects, finding time, space and attending oversight will likely be the major challenges to implementation on a broader scale

Next Steps
- Identify and quantify discharge clinic need at all three main UCSF training hospitals
- Work with the residency program to find the appropriate time/space to implement a discharge clinic experience into the overall Internal Medicine residency curriculum
- Continue to identify ways to improve follow-up for the discharge clinic
- Collect more robust data on the educational benefits and outcomes of such a curriculum for trainees and patients

UCSF Department of Medicine
Primary care-based care management for high risk patients: Implementing evidence-based practice in a real-world clinic
E. Davis, J. Janssen, A. Johnson, C. Horton, Division of General Internal Medicine, San Francisco General Hospital, University of California San Francisco, San Francisco, CA

The Problem
In the General Medicine Clinic (GMC) at San Francisco General Hospital, 2.7% of patients account for 35% of GMC patient hospital admissions, reflecting both the poor health of these patients and the high cost of their care. For this group, the top three admission diagnoses—CHF, angina, and pneumonia—are all ambulatory care sensitive.

Objective of Program
For patients in the GMC Complex Care Management Program (CCMP), we seek to: 1) Reduce ambulatory care sensitive admissions, 2) Reduce cost of care, and 3) Improve patient satisfaction and functional status.

Description of Program
GMC CCMP targets the 2-3% highest risk patients referred by their providers. The team is composed of an RN, health coach, LCSW, and physician. Program Activities include:
• A comprehensive patient-centered assessment in the patient’s home or in clinic focusing on self-management, function, social needs (e.g., housing), behavioral health, and safety.
• Creation of a patient-centered goal based care plan
• Frequent contacts with patients
• Management of transitions in level of care (i.e. post-discharge)
• Graduated levels of intensity until graduation
• Partnership with primary care providers, other case management programs, and the local medicaid health plan

Who is our patient population?

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<thead>
<tr>
<th>Demographic</th>
<th>Female</th>
<th>Male</th>
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<td>Race</td>
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<td>Black</td>
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<td>10%</td>
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<td>Age</td>
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<td>20-45</td>
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<td>46-65</td>
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<td>Language</td>
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<td>English</td>
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<td>Spanish</td>
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<td>Income</td>
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<td>Low Income</td>
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<td>Able Dying</td>
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<td>25%</td>
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<tr>
<td>Language (includes LOM and supportive services)</td>
<td>92.5%</td>
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<td>Medicaid</td>
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<td>18%</td>
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<td>Mental Health care</td>
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<th>Table 1: Patient Demographics of Referred Patients (N = 80)</th>
<th>Table 2: Baseline Clinical Characteristics</th>
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<td>Demographic</td>
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<th>Table 2: Baseline Clinical Characteristics</th>
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<td>Hypertension (Y/N)</td>
<td>Osteoarthritis (Y/N)</td>
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<td>Yes</td>
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<th>Measures of Success</th>
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<tr>
<td>Health Outcomes: Hospitalizations, A1c, BP, LDL</td>
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<td>Patient satisfaction and functional status</td>
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<td>Provider satisfaction</td>
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<td>Utilization and cost</td>
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<tr>
<td>Number of patients enrolled, activity of care managers, and number of patients discharged</td>
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<th>Findings to Date</th>
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<tr>
<td>Eighty patients have been referred to our program and we have conducted 15 home visits. While are patients are largely housed, they have high rates of mental illness, substance abuse, and chronic disease. The majority are less than 70 years old. Most have Medicaid or Medicaid-Medicare coverage</td>
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<th>Key Lessons Learned</th>
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<td>• This is a young, chronically ill population unlike the homeless, elderly, or severely mentally ill populations in many care/case management studies</td>
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<td>• Home visits are time consuming, but also vital to understanding patients’ situations</td>
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<td>• Communication and tracking needs can be met using EMR and spreadsheets</td>
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<td>• Partnering with San Francisco Health Plan provides funding and access to clinical data for clinical care and evaluation</td>
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Improving Medication Prescription to Delivery Time by Addressing Prior Authorizations Delays in a Safety Net Population


**The Problem**
As GMC patients with Medi-Cal shifted from fee for service to managed care, there was a sharp increase in the number of prior authorization (PA) requests for medications.

PAs were a major source of delay in patients receiving medications after they were prescribed by providers. This delay caused frustration for providers and patients, and was also a safety issue when the delays were for vital medications.

**Project Goal(s)**
To decrease the time from receipt of PA to approval of PA by 10% by June 2012.

**Project Plan**
Process map created to understand current prior authorization process.

Time from prescription to receipt of PA to approval of PA were measured by a table in the mail room for one month (3/12-4/12).

Patient and provider satisfaction were measured qualitatively.

Project was conducted in concert with wider clinic and health plan focus on improving PA process.

**Pre-intervention Process Map**

**Post-Intervention Process Map**

**Lessons Learned**
Provider knowledge of the PA process improved.

The process was changed as the responsibility for the PAs shifted from residents to preceptors.

Since preceptors did each day’s PAs, the PAs were no longer placed in provider boxes. Residents only received three PAs in their boxes in the month that they gathered PA data.

Anecdotally, PA turnaround time seemed to improve, but it was unclear if this improved patient satisfaction.

Anecdotally, provider satisfaction seemed to improve.

**Next Steps**
Medication delays due to need for prior authorization remain a systems issue.

Goal is now to reduce the number of prior authorization requests by aligning prescribing patterns with Medi-Cal managed care formulary.

Plan to disseminate information regarding common formulary medications to providers.
Optimizing the Kidney Transplant Referral Process in CKD Clinic
Joseph B Lockridge, Kathryn Fontwit, Sam James
Division of Nephrology, UCSF and SFCH

The Problem
In patients with End Stage Renal Disease, the longer it takes to initiate a
workup for transplant, the greater the risk for post-transplant morbidity,
mortality, and graft failure (Transplantation 2002;74:1377). We seek to reduce
the wait time for transplant by improving the the transplant referral process at
SFGH CKD clinic.

Results / Progress to Date

<table>
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<tr>
<th>SFGH CKD Clinic</th>
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<tr>
<td>Total Patients: 124</td>
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<tr>
<td>Referred: 73</td>
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<tr>
<td>Not Referred: 7</td>
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<tr>
<td>Inappropriate Transplant Candidates: 44</td>
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CKD Patients Referred for Transplant

- Inappropriate (35%)
- Referred (59%)
- Not Referred (6%)

Contraindications to Transplant
- Medical Comorbidities
- Psychiatric Disease
- Poor adherence to medical follow-up and treatment plans
- Funding

Lessons Learned
- Overall, referral process quantity is acceptable (91%) - BUT
- Is the quality of the referral process acceptable?
- Future measurements should include:
  - Time to Transplant Referral
  - Documentation of Transplant discussion in A/P of Clinic Note

Next Steps

ACTION PLAN:
- Assess both metrics listed above via chart review
- Establish interventions:
  - Create Dictation template to include “Transplant Status” in each Clinic Note A/P
  - Conduct Fellows Workshop to educate incomers on importance of documentation, follow-up of transplant status
  - Update Patient Roster to reflect Transplant Status
  - Utilize Social Worker to assess initial screening for transplant referral
  - Re-Assess Metrics at 6 months post-intervention

Project Goal(s)
- Assess the percentage of appropriate referrals completed in clinic (complete)
- Educate Renal Fellows on the role of the primary Nephrologist in the care of advanced kidney disease (next 2 months)
- Enhance frequency and quality of discussions regarding transplant as an option for renal replacement therapy via documentation (next 8 months)

Project Plan
- Chart review of 124 Clinic Patients
- Determine referral eligibility of each patient – if eligible, are they referred? If not, why not?
- Implement a spreadsheet available in clinic to track the transplant status of each patient
- Determine if we are adequately documenting our discussions regarding transplant in clinic notes
- Develop a dictation template to include “Transplant Status” in the Assessment/Plan of each patient’s clinic note
- Provide workshop for incoming fellows on how to optimize the primary nephrologist’s role in the care of CKD

UCSF Department of Medicine
Assessing and improving internal medicine residents’ education in women’s health
Palav Babaria, MD; Beth Harleman, MD; Sara Teasdale, MD; Bev Bagdor, NP; Claire Horton, MD Horton and Sara Teasdale

The Problem
- The Institute of Medicine recently released revised recommendations for preventative health care services for women, including providing contraception counseling for reproductive-age women; screening and counseling for IPV/DV; and annual well-woman preventive care visit annually.
- Internal medicine physicians are often responsible for delivering many of these services, yet prior studies have documented that they often do not receive adequate training in women’s health issues, and do not feel comfortable caring for reproductive-aged or pregnant women.

Project Goal(s)
- To assess the quality of UCSF internal medicine residents’ education in women’s health and their level of comfort performing these services.
- To pilot a clinical experience for UCSF medicine residents to work in an NP-led women’s health clinic embedded in a primary care clinic.

Project Plan
- 41 question survey was developed based on 3 of 8 IOM guidelines relevant to Internal medicine (IM) practice: well woman exams (PAP smears and breast exams), contraception counseling, and IPV screening.
- Offered to all 175 internal medicine residents (post-graduate year 1-3) at an urban university based internal medicine residency program. Descriptive statistics were run with Stata 12 to describe the study sample.

Results / Progress to Date

<table>
<thead>
<tr>
<th>Residents Perceptions on Adequacy of Training, Average Scores</th>
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<td>Statistically sig difference (P &lt; 0.05)</td>
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<tr>
<th>Residents Comfort Level with Providing Preventive Health Services</th>
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<tr>
<td>Statistically sig difference (P &lt; 0.05)</td>
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Results
- Overall, residents feel their training is adequate (score of greater than or equal to 3) in PAP smears and how to screen for IPV.
- Residents disagree that training has been adequate in breast exams, contraception counseling and prescribing, and intervention in IPV cases.
- Male residents are less likely than female residents to feel that doing pap smears and breast exams are important skills for internists.
- There is no difference in perceptions on adequacy of training or average comfort level between primary care and categorical track residents.
- To improve knowledge and clinical skills, eight residents participated in an NP-led women’s health clinic for an average of 1-2 sessions.
- Surveys of participating residents indicated that the clinical experience was worthwhile (average of 4/5 rating).
- Interviews were conducted with 2 residents to assess ways to improve the experience.

Next Steps
- A more thorough evaluation of the NP-led clinical experience is planned.
- Based on qualitative information from resident interviews, an enhanced version of the clinical experience will be organized this fall, including clinic talks and targeted readings.

UCSF Department of Medicine
The Problem
The SFGH General Medicine Clinic has had standing orders for medical assistants to perform health care maintenance in place for several years. However, the clinic lacks a standardized approach to ensuring these standing orders are completed. This lack of a system or process map results in duplication of effort, variability between staff members, and may lead to delays in screening for patients.

Project Goal(s)
To improve colon cancer screening rates using FIT from 52% to 55% and pneumonia vaccination rates from 81% to 85% by creating and implementing a standardized health care maintenance checklist by June 2012.

Project Plan
1. Conducted analysis of baseline rates of colon cancer screening and pneumonia vaccination
2. Conducted focus group with residents and MEAs to discuss project
3. Created checklist of health care maintenance items
4. Reviewed checklist with MEAs and residents
5. Made changes to checklist based on feedback
6. Trialed checklist in clinic
7. Gathered feedback of MEAs/residents who participated in trial
8. Made changes to checklist based on feedback
9. Completed second trial run of checklist in clinic

Results / Progress to Date

Lessons Learned
1. Involving the MEAs in the project from the beginning was very important as they are a crucial part of ensuring health care maintenance is up to date for our patients
2. Understaffing (i.e. inadequate MEA to provider ratio) makes flexibility key in terms of who is responsible for completing items on the checklist
3. There is a need to clarify the way health maintenance screens are coded in the electronic record (i.e. “pending” vs. “complete” is confusing to MAs)
4. MA’s experience several barriers to performing standing orders, including lack of time and understaffing.

Next Steps
After the first checklist trial, we have identified portions that need to be changed. After making these changes, all Monday resident providers will start using the checklist. After XX months of using the checklist, we will analyze our FIT and pneumovax rates to see if we have achieved our initial goals.

Based on the success of the checklist in the Monday clinic, we may consider expanding its use to all clinic days and providers.

Clinic leadership will continue to advocate for adequate MA staffing in clinic to perform these important team tasks.

UCSF Department of Medicine
Cost-Effectiveness Analysis of GeneXpert MTB/RIF in an Urban Public Hospital
A. Millman¹, D. Dowdy², R. Brownell³, A. Chattamanchi³, and J.L. Davis³
¹. UCSF Internal Medicine, ². Johns Hopkins Bloomberg School of Public Health, ³. UCSF Division of Pulmonary and Critical Care

The Problem
• GeneXpert MTB/RIF is a novel molecular diagnostic test with high accuracy for evaluating infectious TB suspects
• Currently 3 negative AFB smears are needed to “rule out” infectious TB
• This approach is costly and consumes hospital resources

Project Goal(s)
• Determine if GeneXpert MTB/RIF is cost-effective for TB “rule out”
• Conduct a prospective diagnostic accuracy study with GeneXpert
• Create a clinical algorithm for hospital wide implementation of GeneXpert in infectious TB evaluation

Project Plan
• Incremental Cost-Effectiveness Analysis comparing triage smear microscopy vs. triage GeneXpert analysis for TB “rule out”
• Perform meta-analysis to evaluate GeneXpert sensitivity/specificity
• Review 212 TB “rule out” cases to determine LOS based on ICD 9 code and time of admission
• Obtain accurate cost measures through direct observation

Results / Progress to Date

<table>
<thead>
<tr>
<th></th>
<th>GeneXpert</th>
<th>Smear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity</td>
<td>89.6%</td>
<td>98.5%</td>
</tr>
<tr>
<td>Specificity</td>
<td>98.5%</td>
<td>99%</td>
</tr>
<tr>
<td>LOS (+/- rule out)</td>
<td>0.2 days/5.8 days</td>
<td>1.5 days/5.8 days</td>
</tr>
<tr>
<td>LOS isolation</td>
<td>0.2 days</td>
<td>1.5 days</td>
</tr>
</tbody>
</table>

Table 1. Key estimations

<table>
<thead>
<tr>
<th></th>
<th>GeneXpert</th>
<th>Smear</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost per hospitalization</td>
<td>$15620</td>
<td>$1790</td>
<td>$2270</td>
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<tr>
<td>Resp Iso LOS</td>
<td>0.5 days</td>
<td>1.9 days</td>
<td>1.4 days</td>
</tr>
<tr>
<td>Total LOS</td>
<td>6 days</td>
<td>6.2 days</td>
<td>0.2 days</td>
</tr>
</tbody>
</table>

Table 2. Results. GeneXpert compares favorably to smear

Lessons Learned
• Healthcare costs are not transparent and information is not always easily accessible
• Clearly defining goals with all stakeholders is critical for smooth project implementation

Next Steps
• Conduct a prospective accuracy study with GeneXpert at our project site
• Partner with infection control to develop a new clinical decision making algorithm
• Petition hospital administration for full funding support for GeneXpert related laboratory services
Keeping patients at the center of the patient-centered medical home (PCMH)
Tamika Smith, MD; Reena Gupta, MD, DGM SFGH; Laura Huaman, Stanford University premedical student

The Problem
The PCMH is hard to define as it exists in many different forms. This can be confusing to both healthcare workers and patients. For the patient, this has important implications:
• Confusion can lead to fear and distrust: Is this a modern version of the failed managed care initiative?
• Active patient engagement is a core tenet of the PCMH, not only in the context of personal health, but in the process of continuous QI.

Project Goal(s)
Improve patient awareness and understanding of the patient-centered medical home as the General Medicine Clinic (GMC) at SFGH begins the transformation effort toward becoming a PCMH.

Project Plan
Plan: Research effective methods of patient communication and education, specifically as applied to explaining the PCMH concept: internet search, speaking to thought leaders and clinic leaders.
Do: Creation of a patient flyer entitled “Introducing your medical home and your care team.”
Study:
Waiting room survey (N = 16): Assessed a patient’s baseline understanding of the PCMH. The patients then read the flyer and answered questions about its usefulness in regards to explaining the PCMH concept.

Results / Progress to Date

![Have you heard of the PCMH?](image)

![Has your understanding of the PCMH increased after reading the flyer?](image)

Patient quotes

“It’s everyone’s home, each one has his own responsibilities.”

“It is the team: it is my doctor, my receptionist, my nurse. They are all my medical home.”

Lessons Learned
• We originally wanted to personalize the flyer with the photo and name of the members of each patients’ care team, but given the large number of providers and patients, (and diverse languages spoken), this was not feasible.
• The care team concept appears to be more relevant to the patient than the broader medical home concept. The care team is one of the major differentiating elements between the PCMH and current primary care practice.
• Some patients are concerned about the ability to provide same-provider continuity when there is high turnover and part-time clinicians in the academic primary care clinic.

Next Steps
• Use the feedback from the waiting room survey to refine the flyer, focusing on how the patient experience will be improved by having a care team.
  • Explain that the care team will be a means of providing continuity given the realities of provider and staff availability.
• Develop other media for communicating PCMH concepts to patients, including informational literature, videos, web-based resources, and dialogues (examples: focus groups, patient advisory boards).

UCSF Department of Medicine
Reducing delays in administering rheumatology medications in the SFGH infusion clinic
Gabby Schmajuk (Rheumatology, SFVA), Maribel Amodo (Nursing, SFGH), Ditas Hernandez (Nursing, SFGH), Jinoos Yazdany (Rheumatology, SFGH)

The Problem
Rheumatology patients can experience long delays between the ordering of a medication and its administration by the SFGH infusion clinic.
Motivating anecdote: In Summer 2011, a critically ill dermatomyositis patient waited over 1 week for a methotrexate because of infusion because of delays in obtaining PPD results (an unnecessary test).

Project Goal(s)
1. Describe the magnitude of the problem with delays
2. Identify key issues causing delays
3. Define improvement goal (e.g., 80% of patients should have < 7 days between order written and medication administered)
4. PDSA cycles to reduce delays

Project Plan
1. Create a process flow map of steps leading to med infusion
2. Review charts of rheumatology patients to define magnitude of delays and identify key issues causing delays using an abstraction sheet
3. Define achievable process improvement goal
4. Brainstorm possible interventions
5. Measure delays after intervention is implemented (e.g., Outcome = percent of patients with < 7 days between order written and med administered)

Results / Progress to Date
On suggestion of nursing staff, paper chart area organized to house all rheumatology charts together
Safety checklists found to be roughly organized by date; difficult to find for specific patients, and not linked to orders

Lessons Learned
1. Process improvement is slow.
2. Process improvement requires buy-in from all stakeholders (especially front-line stakeholders)

Next Steps
1. Describe magnitude of problem.
2. Plan to redesign and test medication order stamp to include safety items.

UCSF Department of Medicine
# Resident Staffed Urgent Care Clinic - A Pilot at SFGH’s General Medicine Clinic

Matthew Roosevelt MD; Claire Horton MD; Reena Gupta MD
Department of General Internal Medicine at UCSF

## The Problem
Access to urgent care for common medical problems remains an important challenge to be addressed for our patients at the General Medicine Clinic (GMC) as San Francisco General Hospital (SFGH). Simultaneously, many residents feel that their regularly scheduled continuity clinic is not an adequate educational setting to gain the necessary experience and education about managing such complaints.

## Project Goal(s)
**Education:** Pilot a clinical training experience dedicated to providing exposure to management of common acute medical complaints in the ambulatory setting.

**Patient Care:** Explore one way through which we could provide more access to address our patients’ urgent medical needs.

## Project Plan
- Pilot a resident-staffed, urgent care clinic at the SFGH GMC
- Study the educational value of such a clinic in terms of:
  - Participate of 2 Internal Medicine Residents Participated in 7 afternoon sessions each.
  - Education:
    - Both residents agreed that having a dedicated urgent care (ie not mixed with continuity clinic) is a valuable training opportunity for residents.
    - 1 resident was neutral on the GMC urgent care experience while the other agreed it was a worthwhile training experience. The resident who was neutral was already participating in another urgent care clinic at a different site.
    - Overall, both residents were neutral on whether they had an improved approach to evaluating, diagnosing and treating acute medical problems as a result of this clinical experience.
    - Both agreed or strongly agreed that having a GMC Urgent Care resident could be a good way to off-load urgent care patients from residents in continuity clinic.
  - What Residents Liked about the Urgent Care Clinic:
    - "Bread and Butter Urgent Care Cases" *Good for patients who may have otherwise not gotten care*
    - "Enjoyed time for panel management"
  - What Residents Would Improve:
    - "Had to sacrifice about 50% of my urgent care clinic to schedule continuity patients I otherwise couldn’t schedule!"
    - "Would enjoy more of a structured education towards common urgent care problems"
- Patient Care:
  - Clinic Structure: 4 urgent care slots with 1 overbook slot to be used for residents own patients.
  - Clinic Time Use:
    - 65% seeing patients and discussing with attendings
    - 10% reading/learning about issues related to cases
    - 10% writing notes/communicating with other providers
    - 25%-40% seeing your own continuity patients
    - 15% Personal Panel Management
- Data Still Being Collected:
  - Total number of urgent care patients seen by residents across the 14 sessions.
  - Break down of cases by age, gender and chief complaint.
  - Resident assessment of educational value by case

## Results / Progress to Date

## Lessons Learned
- Residents seem to prefer a focused urgent care training experience over seeing urgent care cases during their regular continuity clinic
- Improvements for future urgent care training clinics should include:
  1) A structured approach to teaching
  2) Protected time just dedicated to urgent care cases
- Having an urgent care clinic at a resident’s regular continuity site offers much needed panel management time for primary care patients
- A dedicated urgent care resident could off-load other residents scheduled for regular continuity clinic. This would allow those other residents protected time to focus on their own patient panel
- The “just right” number of urgent care slots is 4-5. Whether or not this is sufficient to make a meaningful impact in patient demand for urgent care is yet to be seen

## Next Steps
**Education:** Investigate ways to improve the direct teaching on urgent care cases:
1) Identify a dedicated "Urgent Care Attending" for each session
2) Provide this attending a structured approach for teaching about the management of common urgent complaints
3) Consider developing an on-line urgent care curriculum for residents to augment their clinical experiences in urgent care clinic
4) Work with clinic staff (schedulers, clerks etc) to help ensure “true urgent care” cases are being scheduled in the resident urgent care slots
- Compare GMC’s urgent care case demographics (age, gender, chief complaint) to other existing urgent care training sites to further evaluate the educational opportunity provided at GMC
- Work with clinic staff and the greater residency program to provide more regular continuity slots for residents so that they will not need to use urgent care slots for continuity clinic follow-up

**Patient Care:**
- Investigate the clinical impact this clinic could make by comparing the “supply” of patient slots (4-5afternoon) provided by our resident urgent care clinic to the existing “supply and demand” data currently being collected for GMC
Increasing the Treatment of Alcohol Dependence in the Inpatient Hospital Setting
Through Implementation of a Discharge Planning Tool

Jennie Wei, MD, MPH, Department of Medicine, San Francisco General Hospital (SFGH), Triveni Defries, MPH, University of California, San Francisco School of Medicine, Will Huen, MD, MS, MPH, Associate Chief Medical Officer, Division of Hospital Medicine, SFGH, Jacqueline Tulsy, MD, Professor of Medicine, Positive Health Program, SFGH

The Problem

Alcohol related complications are one of the top three reasons for 30 day readmission to San Francisco General Hospital (SFGH). At SFGH in 2010-11, 25% of medicine patients had a documented alcohol related illness, and 19% of them were readmitted within 30 days. Although there are national hospital-based improvement initiatives aimed at providing standardized, comprehensive, evidence-based care for the other top two reasons for readmission, heart failure and pneumonia, no such initiative exists around alcohol-related admissions. No research has been done on a coordinated plan of care upon discharge for patients admitted with alcohol related complications. This transition from inpatient to outpatient is a critical and frequently missed opportunity for patients to be screened for alcohol dependence, started on pharmacotherapy and linked to counseling. Naltrexone (an opioid antagonist) has been FDA approved for the treatment of alcohol dependence since 1994, and there has been considerable data to date to support its safety and efficacy. Despite this data, naltrexone has been rarely used, if at all, to treat patients with alcohol dependence at SFGH.

Project Goals

- To assess the barriers in initiating treatment for alcohol dependence on the inpatient service
- To develop an alcohol dependence treatment bundle that includes: 1. Screening for alcohol dependence, 2. Assessment of naltrexone eligibility, 3. Medication prescription, and 4. Referral to outpatient counseling
- To design a discharge planning tool for residents to use to implement the alcohol dependence treatment bundle
- To evaluate the early impact of the March 2012 implementation of this discharge protocol

Results / Progress to Date

![Figure A: Barriers to Treatment](Image)

![Figure B: Discharge Planning Tool](Image)

![Figure C: Pre-Intervention June 2011 Chart Review](Image)

![Figure D: Post-Intervention March 2012 Chart Review](Image)

Lessons Learned

- **The Problem:** Of all patients admitted to the medicine service at SFGH, 25% have alcohol related illnesses, and 19% of them are readmitted within 30 days.
- **The Quality Gap:** Naltrexone has been shown to be the most effective medication to treat alcohol dependence. Although some patients are ineligible for naltrexone because of opioid use (~30%) or severe liver dysfunction (~10%), over 50% of patients are eligible for naltrexone, yet NONE of them were prescribed this medication in June 2011.
- **Process Measure:** Through the use of a discharge planning tool, rates of prescription for naltrexone increased from 0% to 52%.
- **Outcome Measure:** After implementation of a discharge planning tool that reinforced the alcohol dependence treatment bundle, 30 day readmission rates decreased from 27% to 13%.
- **Conclusion:** With a discharge planning tool, residents are able to screen for alcohol dependence, assess naltrexone eligibility, prescribe medication and refer for outpatient management during an inpatient hospitalization.

Next Steps

- Expand the discharge planning tool to services outside of medicine, including the cardiology service and faculty inpatient service
- Establish quality metrics for alcohol related admissions, similar to designated quality metrics for other top reasons for 30 day readmission to SFGH
- Collaborate with Bridge Clinic, SFGH’s discharge clinic, to assist with alcohol dependence treatment follow up and medication refill
- Link this inpatient effort to the established ambulatory training initiatives to improve education around treatment of alcohol dependence on the outpatient side.

Acknowledgements

UCSF Internal Medicine Residents, Katie Luttrell, MSW, Jenee Bryant, MSW, Amy Logan, Pharm.D., David Hersh, MD, Former Director of the Treatment Access Program, Mia Lozada, MD, Chief Resident in Internal Medicine at SFGH

UCSF Department of Medicine
**BACKGROUND**

- Patients struggle with managing medications after discharge.
- It is estimated that 40% of discharge medications go unfilled.
- For institutions without an in-house pharmacy, improving access to discharge medications is challenging.

**OBJECTIVES**

Improve access to medications at discharge via faxing for immediate pick-up or delivery to the bedside.

**INNOVATION**

- Follow up phone calls from January 2011 to June 2011 were audited to determine the number of patients who had not filled new medications within 72 hrs of discharge (Figure 1).
- Nurses and residents were trained to identify patients that would benefit from discharge medication delivery.
- The patients targeted were elderly, had limited mobility, had an urgent need for the prescription (antibiotics or insulin) or a history of poor medication adherence.
- Rates of delivery and medication pick-up were tracked by the Local Pharmacy.

**EVALUATION**

- From September to December 2011, approximately 44 patients on the unit received discharge medications though the Brown Bag Meds Program, 16 (36%) with delivery and 26 (64%) for pick up.
- No additional FTE or resources were needed for implementation.
- The biggest use was among uninsured and under insured patients who often had no co-pay for medications.
- Given these results and the adoption of new EMR with the capability to fax medications, the program was transitioned to one geared to providing meds for under insured patients.
- We applied for and were granted $1300 funds per quarter to cover med costs for uninsured patients.

**LESSONS LEARNED**

- A significant subset of high risk patients identified often did not have insurance or funds for medication co-pays.
- A multi-disciplinary effort is required to identify and appropriately refer high risk patients to the program.
- The project revealed an unanticipated need: funds and a process to provide uninsured, vulnerable patients with medications.
Cultivate more cost-effective physician ordering behaviors

- Highlight current clinical guidelines
- Improve associated physician attitudes
- Promote cost awareness

We created a longitudinal curriculum, as well as case-based conferences to be a well-liked format for residents and medical students.

**Background**
- Approximately $700B of annual healthcare spending is wasted with physicians directly influencing 87% of this expenditure.
- Medical training has emphasized quality improvement but few programs are addressing the ACGME requirement that:

> "Residents are expected to... incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care as appropriate." – ACGME

**Goals**
- Promote cost awareness
- Improve associated physician attitudes
- Highlight current clinical guidelines
- Cultivate more cost-effective physician ordering behaviors

**Description**
- We selected 12 “core topics” of commonly encountered clinical scenarios with frequent practice and resource-utilization variability
- We created a longitudinal curriculum, as well as a monthly case-based conference for medical students, residents, and attendings

**VALUE** = Quality / Cost

**Results**
- During a pilot study in the 2011-12 academic year, we received 151 evaluations from eight conferences
- Overall, respondents reported that the conferences were:
  - Highly relevant to their clinical practices (mean of 4.51 +/- 0.63 on a 5-point Likert scale)
  - Likely to change their ordering behaviors (mean of 4.24 +/- 0.72)

**Conclusions**
- A resident-led educational innovation involving a monthly PGY1 curriculum, with active preparation of a facilitated, case-based conference emphasizing evidence-based and cost-effective medical practices, can be:
  - Well-received, highly relevant and likely to change ordering behaviors of a diverse internal medicine audience
  - The time and resources required to implement this curriculum are relatively minimal, making this paradigm sustainable and adaptable to other institutions

**References**
4. Show me the money: Implementation of a unique cost awareness curriculum for medical residents
Christopher Moriates, MD; Krishan Soni, MD MBA; Andrew Lai, MD MPH

UCSF Department of Medicine
Engaging Patients and Care-Partners in Re-Designing Their Hospital Experience
Naama Neeman, MSc, Katie Quinn, MPH, Marwa Shoeb, MD, Susan Alves-Rankin, RN, MS, and Diane Sliwka, MD

The Problem
- Targeting improvement in patient satisfaction is challenging as providers often lack the patient and family perspective.
- Multiple studies show that clinician perceptions of patients’ priorities do not match actual patient priorities with regard to patient centered care.
- Patient satisfaction surveys are limited in providing specific information to drive improvement.
- More detail about the most salient areas and specific ideas for improvement can better be obtained from patient and care-partners focus groups or individual interviews.

Project Goals
- To gain more in-depth insight into patient and care-partners desires and expectations on the inpatient medicine service at Parnassus, and to build on that knowledge to implement selected patient driven initiatives.

Project Plan
- A facilitated focus group was conducted with patients and care-partners to learn about their views of an ideal hospital experience, solicit ideas to better meet their needs and hopes, as well as rank those ideas and vote on the most powerful interventions for improving the patient experience.
- Participants were recruited based on their providers’ recommendations. Inclusion criteria included: high English language proficiency; physical and cognitive ability to participate; proximity of residency to the hospital; and length of stay of 2 days or more within the past year.
- Eligible care-partners were individuals who identified themselves (or were identified by patients) as the primary family/friend support person during the hospitalization.

Results / Progress to Date
- 15 Patients and care-partners participated in the focus group.
- 23 suggestions for improvement interventions were identified.
- Improvement suggestions were subsequently grouped in the following 9 categories: Nursing; Service; Courtesy/Respect; Consistency; Patient Placement; Communication; Resource Availability; Environment; and Care-partner Support.
- Table 1 highlights the top-priority improvement suggestions, as determined by a facilitated voting process.

<table>
<thead>
<tr>
<th>Category</th>
<th>Improvement Suggestions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Care-partner Support</td>
<td>Improve care-partner comfort (e.g. better sleep arrangements &amp; hospitality), and address care-partner emotional needs</td>
</tr>
<tr>
<td>Communication</td>
<td>Better explain the roles on the provider team (e.g. who is the point person &amp; who is responsible for what)</td>
</tr>
<tr>
<td></td>
<td>Improve communication both within the primary team and across teams (specialties, inpatient/outpatient, etc.)</td>
</tr>
<tr>
<td></td>
<td>Improve communication with patients during transitions of care, inpatient stay (e.g. explain timeframes and treatment plans), discharge, and post-discharge follow-up</td>
</tr>
<tr>
<td></td>
<td>Improve communication with care-partners (e.g. contact the primary care-taker with any meaningful updates of illness, balance between patient and their families needs)</td>
</tr>
</tbody>
</table>

Lessons Learned
- In-depth conversations with patients and care-partners can provide meaningful insights into areas of best practices vs. those in need of improvement.
- Patient and care-partners participation in focus group discussions can be tremendously effective in identifying and prioritizing quality of care improvement interventions.
- Based on feedback we received during and after the focus group session, reaching out to patients and their families and soliciting their thoughts and suggestions for improvements makes them feel important and heard, and hence has a value in itself.
- Providers should be encouraged to conduct similar conversations with patients and care-partners during their hospital stay.
- Maintaining open-communication and constantly soliciting feedback from patients and families while admitted, could be a cost-effective way to engage patients in their care and improve their satisfaction.

Next Steps
- We will hold a focus group session with Division of Hospital Medicine physicians and nurses. This group will review and brainstorm the list of suggested interventions generated by patients and care-partners and rank them based on feasibility.
- Based on feedback from both groups we will implement selected interventions and continuously evaluate their impact on the patient experience.

Special thanks to: Zac Martin, Jason Phillips, and Ellen Conant for their logistical support in planning and carrying out this project.

UCSF Department of Medicine
Improving Advance Care Planning Documentation Through A Resident-Led Incentive Program

Elizabeth Le, MD, Joshua Lakin, MD, Ari Hoffman, MD, Jeffrey Dixson, MD, Ajay Dharia, MD, YinChong Mak, MD, Kara Bischoff, MD, Aparna Goel, MD, Krishan Soni, MD, Michelle Mourad, MD, Sumant Ranji, MD & Harry Hollander, MD.
Department of Medicine, University of California, San Francisco

**Background**

- Advance Care Planning (ACP) is often completed by outpatient providers, however inpatient hospitalization presents a unique opportunity to elicit and document ACP.
- Literature indicates that the presence of ACP documentation aligns care with patient wishes and may reduce unwanted procedures or interventions.
- Pilot surveys at our institution show a wide variation in content and documentation of inpatient ACP discussions, with conversations recorded in H&P’s, discharge summaries, event notes and progress notes.
- Fragmented documentation practices make it difficult to locate and communicate inpatient discussions of ACP goals to outpatient and emergency room (ER) providers.

**Project Goals**

- Engage house-staff in quality improvement (QI) by collectively leading a medical center sponsored financial incentive program.
- Increase rates of ACP documentation for patients admitted to the medicine service.
- Standardize the location of ACP documentation in order to make this information easily accessible to inpatient, outpatient, and ER providers.
- Educate house-staff about key aspects of ACP conversations and documentation.

**Interventions**

- Designed a template within the electronic discharge summary to standardize the location of ACP documentation.
- Provided performance data to housestaff on a bi-weekly basis.
- Offered housestaff a $400 incentive for completion of the ACP template for at least 75% medical patient admissions.

**Project Plan**

**Results To-Date**

Completion of the ACP Template: Poor initial rates of documentation rose rapidly after several key interventions: simplification of the discharge template, individualized real-time feedback to housestaff and a campaign to recruit the participation of all team members, including attendings.

The Purple line represents percent of ACP templates completed within 48 hours of discharge. The red line represents the 75% goal set for the incentive program.

**Conclusions**

- A resident-led QI program to improve rates of ACP documentation on the inpatient medicine service led to significantly higher rates of standardized, easily accessible documentation.
- Timely individualized feedback can motivate changes in house-staff behavior.
- In designing programs for house-staff participation in quality improvement, it is important to consider education to align goals, optimal methods for feedback, and incentives to promote desired change.

**Future Directions**

- Survey house-staff, outpatient, and ER providers to assess the impact of standardized ACP documentation on patient outcomes.
- Consider expansion of documentation with the integration of Physician’s Orders For Life Sustaining Treatment (POLST) forms into the medical record.
- Collaborate with the Palliative Care service to enhance education about ACP documentation.
- Strategize ways to ensure continued high performance by house-staff after completion of the incentive program with this academic year.
- Incorporate key aspects of the ACP template into the new EMR system (EPIC) to encourage continuity in practices.
“PACD” Notes: Pilot of a Documentation Checklist to Promote Patient Safety
Chelsea Bowman1 MS4, Naama Neeman2 MSc, Niraj L. Sehgal2 MD, MPH
1School of Medicine 2Department of Medicine

The Problem

- Adequate documentation is frequently used as a measurement for quality of care, yet medical students receive little formal education on documentation and no audit and feedback regarding their clinical notes.

Project Goal

- **Goal**: Improve 3rd year medical student (MS3) documentation of patient safety practices.
- **SMART Objective**: attain 80% documentation of a patient safety documentation checklist components during MS3’s Internal Medicine core clerkship.

Project Plan

- A patient safety documentation checklist was developed based on literature review and feedback from local experts
- Checklist and education session piloted at UCSF Medical Center with MS3 on Internal Medicine core clerkship
- Admission and 1st progress notes reviewed pre- and post-intervention. Pre- and post-documentation compared using McNemars test

Results

- 15 MS3 participated in this pilot over 2 clerkship blocks
- 172 notes reviewed (81 notes pre-intervention and 91 notes post-intervention)
- Improvements were noted in all checklist components
- Post-intervention 5 of 7 checklist components had >80% documentation
- Results were similar for admission and progress notes

Lessons Learned

- Using a patient safety documentation checklist is a simple intervention that, coupled with appropriate education, can lead to significant documentation improvements for MS3.
- Providing audit and feedback on documentation of patient safety measures is important as well. However, with current technology gaps, it requires significant resources and time.
- Similar programs can be expanded to additional clerkships and clinical training sites, and provide a structure for adding patient safety education to the medical student curriculum.

Next Steps

- Expand checklist and education training session to additional clinical training sites and clerkships
- Consider adding forcing functions to medical student note templates to improve documentation
- Identify resources to improve data collection enhancing audit and feedback abilities for future QI projects

UCSF Department of Medicine
“Special Wednesday”: Building an Interdisciplinary Care Team to Better Address Chronic Diseases at the Mount Zion General Medicine Practice

M Bul-Duy, MD1; K Soni MD, MBA2; R Ramanan, MD, MPH3; Lisa Kroon, PharmD, CDE3; R Pierce, MD4

1 Internal Medicine Residency Program, UCSF; 2Division of General Internal Medicine, UCSF; 3Dept of Clinical Pharmacy, UCSF; 4Division of General Internal Medicine, SF VA Medical Center

The Problem

“Special Wednesday” is a monthly interdisciplinary chronic disease management clinic staffed by primary care residents, nurse practitioners, and pharmacy students at the UCSF Mount Zion General Medicine Practice. While the clinic is intended to manage chronic diseases, patients are often treated for acute issues. The clinic structure also results in parallel work by providers rather than true team based, interdisciplinary care.

Project Goal

The goal of this project is to ensure that at least 75% of patients evaluated at Special Wednesday should be seen for chronic disease management (CDM) by June 2012.

Lessons Learned

- Assess stakeholders’ interests & concerns early in the project (e.g. AAs did not know what “Special Wednesday” was)
- Micro-level culture change:
  - Residents utilize clinic to see medically/socially complex patients, given longer appointment times
  - Residents co-visits with Pharm/NP students to better “share the care” in team-based manner
- Macro-level culture change: residents pro-actively considering referral of patients to Special Wednesday clinic

Next Steps

- Consider automated scheduling of patients into Special Wed clinics so residents need not spend time scheduling patients
- Consider creating disease-specific Special Wed clinics

Project Plan / Timeline

<table>
<thead>
<tr>
<th>Jul ’11</th>
<th>Aug ’11</th>
<th>Sept ’11</th>
<th>Oct ’11</th>
<th>Nov ’11</th>
<th>Dec ’11</th>
<th>Jan ’12</th>
<th>Feb ’12</th>
<th>Mar ’12</th>
<th>Apr ’12</th>
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EVALUATION: Monitor percentage of patients seen for CDM in the Special Wed clinic over time (compare with baseline Jul-Sept ’11)

Results / Progress to Date

Figure 1: Reasons why patients were not being seen for CDM

Figure 2: Percentage of patients seen for CDM in Special Wednesday Clinic (July 2011 – March 2012)

- Literature review of teamwork & CDM in resident clinics.
- Chart review prior Special Wed clinics (Jul-Sept ’11) via Apex.
- Define clinic processes and stakeholders.
- 10 min presentation about Special Wed clinic for residents, nursing and administrative staff
- Email residents reminders: schedule patients
- ApEx “DOT” phrase re: Special Wed scheduling: “Patient will be scheduled on [DATE] for Special Wednesday Clinic to see [PROVIDER] for [REASON].”
- Focus group for AAs: do AAs know how to schedule referrals?
- Obtain buy-in & feedback from Pharm, NP students
- Reinforced CDM scheduling during UCPC didactics & team meetings, set aside time to schedule Special Wed patients
- Collaborate w/ DIIM Qi Champion to use Special Wed as part of LDL project, targeting interns w/ small panels
- Developed efficient team huddle prior to Special Wed clinic so highest-risk patients get co-visits with NP/Pharmacy students
Assessing Student Perceptions of Safety Culture During Internal Medicine and Surgery Clerkships

Chelsea Bowman1 MS4, Naama Neeman2 MSc, Niraj L. Sehgal2 MD, MPH
1University of California, San Francisco School of Medicine 2University of California, San Francisco Department of Medicine

Background

- A positive safety culture is essential to patient safety.
- Validated assessment tools can identify areas for improvement and highlight differences between clinical settings.
- Few studies have assessed medical student perceptions of safety and none have identified how those perceptions may differ for particular clerkships.
- Students provide a unique perspective to learn about safety across different settings due to the nature of their rotating clinical experiences.

Methods

Survey Development
- We modified the Agency of Healthcare Research and Quality (AHRQ) Hospital Survey on Patient Safety Culture to target medical student experiences
- Survey responses were recorded on a 5-point Likert Scale
- Survey was electronically distributed and collected via online survey tool

Participants
- Registered 4th year medical students (MS4s) at UCSF
- Participants were randomized and responded to survey questions based on either their Internal Medicine (IM) or Surgery clerkship experience

Analysis
- Corrected means for questions and domains were compared between the groups using Log-Rank test

Results

- 121 of 170 MS4s (71%) completed the survey, 61 IM and 60 surgery surveys completed

Table 1: Safety culture domain mean scores, (1=worst, 5=best)

<table>
<thead>
<tr>
<th>Domain</th>
<th>Overall</th>
<th>IM</th>
<th>Surgery</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Perception of Safety</td>
<td>3.38</td>
<td>3.36</td>
<td>3.41</td>
<td>0.82</td>
</tr>
<tr>
<td>Teamwork within units</td>
<td>3.99</td>
<td>4.37</td>
<td>3.61</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Organizational Learning</td>
<td>3.85</td>
<td>3.96</td>
<td>3.73</td>
<td>0.08</td>
</tr>
<tr>
<td>Event Disclosure to Patients</td>
<td>3.84</td>
<td>3.88</td>
<td>3.79</td>
<td>0.52</td>
</tr>
<tr>
<td>Feedback about Error</td>
<td>3.57</td>
<td>3.53</td>
<td>3.61</td>
<td>0.68</td>
</tr>
<tr>
<td>Staffing</td>
<td>3.50</td>
<td>3.65</td>
<td>3.32</td>
<td>0.08</td>
</tr>
<tr>
<td>Supervision of Trainees</td>
<td>3.39</td>
<td>3.48</td>
<td>3.30</td>
<td>0.12</td>
</tr>
<tr>
<td>Physician to Physician Handoffs</td>
<td>3.34</td>
<td>3.14</td>
<td>3.56</td>
<td>0.01</td>
</tr>
<tr>
<td>Non-punitive Response to Error</td>
<td>2.75</td>
<td>2.63</td>
<td>2.86</td>
<td>0.31</td>
</tr>
<tr>
<td>Communication Openness</td>
<td>2.55</td>
<td>2.63</td>
<td>2.46</td>
<td>0.30</td>
</tr>
</tbody>
</table>

Figure 1: Differences between IM and Surgery clerkships by question

Conclusions

- Communication openness was identified as a barrier to student engagement in patient safety; fear that errors will be held against them may reduce participation in error disclosure.
- Students highlighted differences in patient safety culture on their IM and surgery clerkship experiences primarily in the domains of Teamwork and Physician to Physician Handoffs.
- Safety culture survey assessments may help clerkship directors and clinical service chiefs improve student engagement in patient safety.

Acknowledgments: This project was conducted under the auspices of the Pathway to Discovery in Health & Society, School of Medicine, University of California, San Francisco. The project was supported by the National Center for Advancing Translational Sciences, National Institutes of Health, through UCSF-CTSI Grant Number UL1 RR024131. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the NIH.

*P-Values <0.05
The Impact of a Radiology Utilization Campaign on Test Ordering Practices
Naama Neeman, MSc, Katie Quinn, MPH, Sumant R. Ranji, MD, Michelle Mourad, MD, Krishan Soni, MD, MBA, Niraj L. Sehgal, MD, MPH

Background
- Unnecessary diagnostic tests contribute to wasteful spending without improving patient outcomes.
- Poor understanding of test ordering behaviors may further contribute to current practice patterns.
- Engaging providers and influencing their practice behaviors offers an important potential for aligning and integrating value-based initiatives with an educational strategy.

Purpose
- To evaluate the impact of an educational awareness campaign focused on the cost and utilization of radiology tests on test ordering practices

Methods
- We launched an educational campaign to raise awareness about radiology cost and utilization using complementary strategies. Educational interventions (e.g., emails, flyers, wall posters) targeted trainees and attendings on our academic teaching service.
- Posters were placed in areas with the most physician traffic, including charting rooms and locations for teaching rounds. A "radiology utilization" curriculum and facilitation guide was developed and provided to all attendings to lead educational discussions during teaching rounds.
- The facilitator guide instructed attendings to engage their teams and reflect upon the local data for radiology utilization, discuss the impact of unnecessary radiology test ordering on cost and patient care, and share strategies on improving the appropriateness of test ordering practices.

Results
- During the first 2 months of our intervention, 5 of 6 radiology tests were ordered less frequently. Additionally, trainees reported better knowledge of the cost of radiology tests and were more likely to take these into consideration. We are continuing to track this data moving forward along with other administrative data to monitor for unintended consequences (length of stay and readmission rates).

<table>
<thead>
<tr>
<th>Housestaff Knowledge and Attitudes Regarding the Cost of Radiology Tests*</th>
<th>Pre-Intervention</th>
<th>Post-Intervention</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>I know the cost of radiology tests I order</td>
<td>2.56</td>
<td>3.26</td>
<td>27.32%**</td>
</tr>
<tr>
<td>I want to receive information on the cost of radiology tests</td>
<td>4.13</td>
<td>4.15</td>
<td>0.46%</td>
</tr>
<tr>
<td>I take the cost of radiology tests into consideration when ordering them</td>
<td>3.28</td>
<td>3.74</td>
<td>13.81%**</td>
</tr>
<tr>
<td>The cost of radiology tests should be an important consideration when ordering them</td>
<td>3.59</td>
<td>3.74</td>
<td>4.05%</td>
</tr>
</tbody>
</table>

*Mean Score (Scale 1-5); **P-Value < 0.05

Conclusions
- Educating provider teams about the cost and utilization of radiology tests can lead to changes in test-ordering behaviors. Our intervention was easy to implement and required no sophisticated equipment or resource investment.
- The ability to provide feedback to providers and teams could potentially advance these efforts to achieve more cost-effective care.
- The same principles could be applied to broaden efforts that generate true value for hospitalized patients.
A peer-evaluation program to improve the quality of fellow-written inpatient consultation notes
Delphine S. Tuot, MDCM, MAS1; Naama Neeman, MSc2; Krishan Soni, MD, MBA2; Andrew Auerbach, MD, MPH2; Niraj L. Sehgal, MD, MPH2

1 UCSF Division of Nephrology; 2 UCSF Division of Hospital Medicine

The Problem
• Poor information exchange during inpatient consultations between primary teams and consulting teams can result in delayed diagnoses, inadequate follow up, or duplication of services
• Subspecialty trainees do not receive formal instruction in how to provide an effective consultation
• Consultation notes are variable in quality and often do not meet the needs of the referring provider or the patient

Project Goals and Objectives
Goal: Improve quality of initial inpatient, fellow-written consult notes
Objectives:
• Enhance an existing peer evaluation program (Figure 1) that uses the “Quality of Consultation Assessment Tool” (QCAT), by moving more timely data and increasing visibility among fellowship directors

Project Plan
✓ Recruit divisional QCAT champions, responsible for increasing fellows’ participation and presenting results & areas for improvements to their peers
✓ Host a kick-off event for QCAT champions to officially recognize their work and brainstorm ways to increase their colleagues’ participation
✓ Ask fellows to evaluate fewer notes at more regular intervals (i.e. monthly instead of quarterly), thereby providing more frequent feedback to fellows and fellowship directors

Results / Progress to Date
• Fellow participation increased from 27% in 2010-2011, to 54%-63% in the most recent 2 quarters of 2011-2012 (Figure 2)
• No improvements were observed in “Education” and “Communication” quality scores (Figure 2)

Lessons Learned
• Early “champion” engagement is key for promoting cultural change, as reflected in increased fellow participation in the program this year
• Focus group discussions and individual conversations with fellows suggest that this peer evaluation system provides valuable feedback about consultation quality to trainees, while encouraging them to participate in self-directed learning and satisfying a core ACGME training competency
• To attain the program’s objectives, additional cultural and structural changes are needed. These may include:
  ✓ Cultural: revising means of communication with fellows to include more dedicated in-person discussions, rather than relying exclusively on emails to discuss quality metrics
  ✓ Structural: revising the electronic consultation note template to highlight the importance of communication and education rather than relying on fellows to do this themselves

Next Steps
• We will further enhance this program in the following ways:
  ✓ Partner with fellowship administrators to increase trainee participation in the peer evaluation program
  ✓ Generate face-to-face discussions with fellows about note quality and note components
  ✓ Take advantage of the electronic medical record change at UCSF to customize consultation templates to emphasize “high quality” fields, including those pertaining to “Education” and “Communication”

Special thanks to: Leanna Zaporozhets, Zac Martin, the 2011-2012 QCAT divisional champions, RedCAP, and the UCSF KL2 program.
The Necessity

ACOGE: July 2011

The Objective

To create a curriculum with didactics, repetition, and real time audits, targeted towards improving the consistency and quality of intern signout.

The Intervention

Intern orientation sessions & special noon conferences dedicated to didactics on strategies for written and verbal signout

Incorporated repetition & real time feedback
Utilized a peer-administered audit tool
Based on an approach to teaching and evaluating written signout entitled “UPDATED” (from colleagues in Chicago)

Curriculum Foci

• Opportunity for medical errors when interprofessional communication is poor
• Importance of MD to MD signout
• Techniques for high quality and consistent written and verbal signout
• Opportunities for practice/repetition of techniques and feedback on written/verbal signout.

Reflective Critique

• It is critical to assess that safe signouts are ongoing
• Improvements to the curriculum and approach to signout will be made based on workshop feedback, as well as real-time quality assessment by signout users.

UCSF Division of Hospital Medicine
High Users: Characteristics of a Frequently Admitted Patient Population
Katie Quinn MPH, Maria Novelero MPA, Maria Raven MD, MPH, Michelle Mourad MD, Ryan Greysen MD, Marwa Showeb MD, Michael Hwa MD

BACKGROUND
- Patients frequently admitted to the hospital use a disproportionate amount of healthcare resources.
- Descriptions of these patients (clinical, social, quality of care) may aid in developing strategies for reducing future readmissions.

OBJECTIVE
To better characterize frequently readmitted patients on the inpatient medical service through analysis of administrative data and detailed chart review.

METHODS
- Identified a population of 43 patients with ≥6 admissions in the FY 2011, 29 living patients with an admission in the last 6 months.
- Obtained demographic, clinical, and social data from chart review and administrative database.
- Looked at process measures associated with discharge quality through chart review.
- Obtained length of stay, ED visits, and ICD-9 codes from claims data.
- Where possible, we compared measures to our overall inpatient medical population.

RESULTS
- Claims data revealed that in FY 2011, the patients had 372 ED visits and were admitted 61% of the time.
- These patients also had a shorter LOS and lower case mix index.

<table>
<thead>
<tr>
<th></th>
<th>All Med Pts</th>
<th>High User</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average LOS</td>
<td>6.4 (1-980)</td>
<td>5.2 (1-69)</td>
<td>0.62</td>
</tr>
<tr>
<td>CMI</td>
<td>1.47 (0.41-18.7)</td>
<td>1.1 (0.4-5.0)</td>
<td>0.0003</td>
</tr>
</tbody>
</table>

- The top 5 principal diagnoses were sickle cell pain crisis, pneumonia, COPD, renal failure and persistent vomiting, which differed from our general population.

CONCLUSIONS
- High users suffer from advanced disease, challenging symptom control, chronic pain and psychosocial issues.
- Most are connected to the health system but may not be using available services effectively or in a coordinated manner.
- This population may require multiple points of contact for possible interventions or individualized care plans at the patient level.
Increasing Readmissions Awareness: Do you know your patient was readmitted?

Katie Quinn MPH, Maureen Carroll RN, Meher Singh LCSW, Michelle Mourad MD, Stephanie Rennke MD

**BACKGROUND**
- Patients with a prior hospitalization in the last six months are at increased risk of future readmissions
- If providers are aware of readmissions, they can more effectively focus on known strategies to prevent readmissions
- Quantify baseline provider awareness of readmitted patients
- Test strategies to increase awareness of readmissions
- Determine the resulting effect on the discharge process and outcome measures

**OBJECTIVES**
- Identified patients readmitted to the hospital within 30 days
- Implemented a 2-phase initiative to increase awareness of readmissions
  1. Discharge Coordinator places a large orange sticker on readmitted patients’ paper charts
  2. Send email to current and past medicine teams highlighting readmitted patients and suggesting changes in practice
- Audited teams to measure proportion aware of readmitted patients
- Measured other process measures thought to impact readmissions

**INNOVATION**
- Implemented a 2-phase initiative to increase awareness of readmissions
  - Discharge Coordinator places a large orange sticker on readmitted patients’ paper charts
  - Send email to current and past medicine teams highlighting readmitted patients and suggesting changes in practice
- Audited teams to measure proportion aware of readmitted patients
- Measured other process measures thought to impact readmissions

**METHODS**
- Determined the resulting effect on the discharge process and outcome measures

**RESULTS**
- Process and outcome measures improved during project
- Implementation of chart reminders significantly increased readmission awareness (52% vs. 72%, p = 0.036)

**EVALUATION**
- At baseline, approximately half of providers knew which patients were readmitted within 30 days
- Implementation of chart reminders significantly increased readmission awareness (52% vs. 72%, p = 0.036)
- Email notifications about readmitted patients has not had a significant impact on readmission awareness.
- Process and outcome measures improved during project
  - PCP communication (baseline 20% to 80%)
  - Timely follow up increased (baseline 40% to 83%)
  - Readmission rates fell (baseline 15% to 12%)

**LESSONS LEARNED**
- Visual reminders may have increased provider awareness of readmissions.
- Email notifications generated discussion between teams about readmitted patients.
- Interventions may be linked to improvement in process and outcome measures, but multiple confounders
- Next steps include
  - Measuring the impact of a learning module for hospitalists to use with trainees
  - Additional audits after increased volume of readmission emails to measure awareness
Use of a Hepatitis C Template to Improve Adherence to Recommended Guidelines
Praveen Panguri, Elizabeth Stewart, Amy Ng, Downtown VA clinic

The Problem
The VA is the largest single provider of HCV care in the U.S. with the prevalence of HCV amongst veterans twice the rate of the general population. The DTC has a particularly high concentration of patients with HCV and offers the newest treatments available but many HCV patients are not properly screened, vaccinated and worked up for potential treatment. A preliminary chart review of DTC providers (National VA Database thru July 2011, N=153) showed that ~85% of HCV patients were appropriately screened and vaccinated, falling below the prevention target of 100% vaccination rates for HAV, HBV.

Project Goal(s)
This QI project seeks to improve management of HCV patient care through the creation of a template that standardizes systematic screening, vaccination and referral. This project tested if the availability of a HCV template increases provider adherence to HCV guidelines. During the 2 month period this template was trialed, we assessed if immunity rates for Hep A and B had increased to our aim of > 95%. Feedback from providers about the usefulness and feasibility of using this template was also solicited via survey.

Project Plan
- Develop a Hep C Template in collaboration with Liver Clinic that prompts providers to adhere to VA recommendations for HCV patients
- Trial the first version of the HCV template with 3 providers (practice partners) and revise the HCV template based on successive assessments
- Other DTC providers will trial the updated template and complete a brief survey of their experience
- Review charts of providers who used the template to determine if rates of Hep A/B vaccinations increased in this group

Results / Progress to Date
N=24 Trainees= 9, Staff= 15.

The 3 respondents to our survey were either neutral or not confident in effectively managing HCV care and expressed mixed satisfaction with current systems for management. There was agreement that the template could improve care and providers were willing to use the template again. No suggestions for improvement were offered.

The HCV template
Hep C current risk factors:
Genotype: [HCV GENOTYPE;1;1Y]
Most recent viral load: [HCV VIRAL LOAD;2;99Y]
Hx Bx?:
Hx bx:
HIV status: [HIV 1 ANTIBODY;1;99Y]
Hep A/R testing/vaccine date: [HEP A ABS TOTAL;10;99Y]
[Hep B PROFILE;1;99Y] [HEP B COREABL;1;99Y] [HEP B SURFAB;1;99Y]
[IMMUNIZATIONS (PCE) 10Y] [remove or change to fluxax only?]
If cirrhotic, y/s and AFP q 6 mos:
AFP [AFP;1;99Y]
Abd US [IMAGING REPORTS (6M)]
Liver clinic referral: DTC or Fort Miley
Actively drinking: Yes/No
Receiving ETOH treatment: Yes/No

Lessons Learned
Despite having a high number of HCV patients at DTC, on any given day we might just see 1 or 2 so it took a while to get the numbers up. Some of the other providers began adding the HCV template to a prior note as an addendum but then we ran into trouble with the vaccines/labs been ordered but not actually completed at the time of data collection. Also, it would be helpful to have more space to free text/explain why something remained incomplete despite the template being used.

Next Steps
We would like to make our template available to providers outside of the DTC with the goal of improving delivery of HCV care in the primary care setting. In this new era of HCV treatment, a bigger picture goal is to increase HCV awareness in patients and providers in order to have more patients sent to liver clinic to have their HCV treated.

UCSF Department of Medicine
Improving Rates of Annual LDL Checks in Patients with Diabetes
Nicole Chua, Aferdita Spahillari, Alvin Rajkomar, Aparna Goel, Rebecca Shunk, Maya Dulay
Centers of Excellence in Primary Care Education, San Francisco Veterans Affairs Medical Center, San Francisco, CA

Aim
• Improve annual LDL measurement in diabetic patients to 95% among the resident and nurse practitioner student patient panels in Medical Practice Clinic by June 2012.
• This project also aimed to demonstrate how to use panel management tools to improve all performance measures in Primary Care.

Background
• No current procedure in place for panel management in SFVA Medical Practice Clinic.
• Literature shows that an increasing number of reimbursement companies use a pay-for-performance method.1
• Further research still needed to determine effects of pay-for-performance on patient outcomes.2

PDSA Cycles
Cycle #1 - Data Collection from 8 trainee panels
Cycle #2 - Test Team-Based Intervention on Small Sample
Cycle #3 - Educate Medical Practice Trainees on Process
Cycle #4 (future) - Integrate Material into New Trainee Orientation

Progress to Date
Baseline data from sample population:
• Diabetic patients meeting annual LDL measure = 83.5% (76/91)

Reasons for no annual lipid panel per chart review:
Provider forgot = 2
Ordered, not drawn = 4
Loss to follow up = 9

Interventions used a team based approach:
• Providers identified why lab not done.
• Medical support assistant called patients to schedule appointments.
• RN and LVN obtained co-managed data and notified patients of need to go to lab.

Outcomes
Interventions focused on the “Loss to follow up” group:
• Removed from panels = 4
• Re-engaged in care = 2
• Co-managed data obtained = 3

After interventions, 81 out of 87 diabetic patients now meeting annual LDL measure = 93%

Lessons Learned
• Team approach to panel management allows work to be distributed making process more sustainable.
• In addition to population care, panel management involves identifying when patients are no longer considered part of a provider’s panel.

Work in Progress
• Currently educating all trainees on process of panel management as developed during this project for real-time use.
• Baseline data obtained for each trainee before training sessions.

Next Steps
• Obtain post data at the end of June to evaluate for improvements in meeting annual LDL measurement.
• Integrate training into new trainee orientation to sustain process.
• If successful, share information with attendings and other providers in Medical Practice to incorporate into their own practice.

Acknowledgements: Sherisse Cabaic, RN, Adrienne Navarro, LVN, Carlos Herrera

**Improving the Medication Renewal Process at the San Francisco Veterans Affairs Medical Center**

Sierra Carter1, Rajesh Jaganath2, James Thomas3, Adam Siegel1, Tyson Turner2, Tacara Soones3, Sonia Garg2, Lucas Zier4, Peter Sottile2, Louise Wu3, Lynne O’Brien1, Denise Davis1 and Maya Duly4

Department of Internal Medicine, SFVAMC; Department of Internal Medicine, University of California, San Francisco2

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**The Problem**

Medication renewal, the process by which a patient receives a currently prescribed medication when no refills remain, is an important process. Renewals that require primary care provider (PCP) input, estimated to compose 22% of all renewal requests in our clinic, are particularly challenging and often lead to delays in prescription renewal. Delays in prescription renewal, in turn, lead to healthcare provider dissatisfaction as well as patient non-adherence, a factor which contributes to worsening health outcomes.

**Project Goal(s)**

The goal of this project was to decrease the time between request and order placement for medication renewals requiring PCP input from the current duration of 7.8 days and to improve provider satisfaction with the medication renewal process at the San Francisco Veterans Affairs Medical Center (SFVAMC).

**Project Plan**

In order to accomplish the above goals, the request form, an internal document which is passed between providers indicating the current status of a renewal request, was redesigned based upon clinical staff input. Staff was trained on the use of the new request form after the final document was approved. The document was implemented on February 14, 2012. Time (in days) between request and order placement for renewals requiring PCP input was determined for medications prior to (n=54) and after (n=13) implementation. Exclusion criteria were medications that were ultimately denied or that were refilled on a predetermined schedule. In addition, a survey was created to determine provider satisfaction using the new request form.

**Results / Progress to Date**

![Chart showing time from request to placement for pre-intervention and post-intervention periods.](chart)

**Lessons Learned**

The introduction of a renewal form designed and optimized for use in the SFVAMC clinic decreased time to medication ordering for renewals requiring PCP input as well as increased provider satisfaction.

While the design and implementation of a novel renewal form was associated with improved provider satisfaction and decreased time to medication ordering, patients were only notified about the status of their requests 13% of the time when PCP input was necessary for renewal.

The creation and implementation of a novel renewal form resulted in the production of increased amounts of accessible personal health information (PHI).

**Next Steps**

1. Determine patient satisfaction with the redesigned renewal process through the use of a mail-in survey.
2. Train clinical staff on the importance of communicating refill status to patients.
3. Determine the proportion of patients who are informed of the status of their medication renewal requests as well as patient satisfaction after implementation of #2 above.
4. Implement additional security measures to protect the increased amount of PHI which resulted from the interventions made to the medication renewal process.

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UCSF Department of Medicine and School of Nursing
**The Problem**

- **SFVA annual hemoglobin A1c% surveillance goal: 96%**
  - Current surveillance rate: 89%

**Total diabetics: 1,439**

- 415 diabetics with HgA1c >9 %
- 204 actual HbA1c% >9
- 215 assumed HbA1c% >9 as the clinic has no data within one year

**Project Goal(s)**

Improve clinical surveillance of glycemic control by 50% among our pilot group by

- Leveraging the VA electronic registry (Dashboard)
- Involving each team’s nurse and medical support assistant (MSA) to outreach to hard-to-reach patients.

**Project Plan**

Over the course of two PDSA cycles, the QI team:

(a) identified patients for whom we have no annual A1c% data using the diabetes registry
(b) identified barriers to annual glycemic control surveillance via chart biopsy
(c) identified a potentially high-leverage patient population
(d) designed a potentially sustainable pilot outreach project in which each teams’ RN ordered A1c% labs and the MSA conducted telephone and mail outreach in an effort to re-engage those patients in care.

**Results / Progress to Date**

**Reasons for annual A1c not being checked**

- Chart biopsy of 34 randomly selected patients
- 18/34 patients were seen in other SFVA departments (most frequently the E&A, social work and mental health).

**Targeted outreach of patients accessing care in non-primary settings care (n=18)**

- 50% (9/18) of pilot population got A1c% labs drawn and one patient died before implementation, due to a lag of 2 months from list generation to start date
- 2 more pts were discharged from pilot for administrative reasons (not assigned to MP)

Of the remaining seven patients:

- RN ordered A1c% labs for 100%
- MSA called 100% (see chart)

**Lessons Learned**

Dashboard, the SFVA’s diabetes registry, is a powerful and dynamic tool. Timely follow-up by teams is necessary so as to take full advantage of the data.

The fact that half of patients identified by our process got A1c% labs drawn without intervention supports our assumption that these patients are potentially a high-yield subset of the target patient population.

Continued data-integrity efforts are necessary to ensure accurate data (i.e. change of address, change of PCP outside of VA, death, etc.).

**Next Steps**

1. Assess success of pilot project in two weeks to determine if outreach successfully increased A1c% surveillance by 50% among our pilot group
2. Train each EdPACT/PACT team to integrate the process into panel management should it prove effective.
3. Consider second pilot project with larger N and potentially utilizing other reports in Dashboard that may provide better patient pool on which to draw.
4. Consider qualitative study with hard-to-reach patients via focus groups or qualitative surveys to more holistically understand patient-level barriers to surveillance.
A Trainee-Led Project to Improve Patient Care Coordination via a 48-hour Post-Discharge Phone Call
Jessie Coty NP Trainee, Sophie Nurani NP Trainee, Adam Buck MD, Sahael Stapleton MD, Ajay Dharia MD, Elizabeth Le MD, Tarini Anand MD, Sanket Dhruba MD, Ashley Hardin MD, Christopher Moriates, MD, Maya Dulay MD, Krishan Soni MD, Melissa Bachhuber MD
Medical Practice Clinic, San Francisco Veterans Affairs Medical Center

The Problem
• 25% of adult Medicaid patients were readmitted to the hospital within 30 days of being discharged, in 2011.
• 75% of these readmissions were considered avoidable. (AHRQ, 2011)
• Early readmissions are costly to patients and healthcare systems.
• The federal government has designated decreased readmission rates as a national goal, and may reduce reimbursements to hospitals with high readmission rates.
• The Veterans Affairs Medical Center in San Francisco (SFVAMC) recently implemented an evidence-based intervention consisting of phone calls to patients within 48 hours of their hospital discharge.
• However, with the current system only 42% of post discharge phone calls were successfully reaching patients.

Project Goals
• Increase the success rate of 48-hour post-discharge phone calls from 42% to at least greater than 60%.
• Create an educational card to be given to patients at discharge to emphasize the importance of the follow-up call and to promote their availability for this call.
• Design a process for discharging RNs to request and document updated patient contact information in the nursing discharge note.
• Ultimately, reduce hospital readmission rates for SFVAMC Medical Practice patients.

Project Plan
The proposed intervention will first be implemented in at least 3 general medicine hospital units by August 2012. The team driving the project includes medical residents, nurse practitioner trainees, and attending physicians at the SFVAMC Medical Practice.

The plan:
1. Develop a patient education card for the discharge nurse to hand out and inform the patient to expect this call
2. Revise the discharge note template with one additional question that asks for the correct contact number for this call
3. Conduct chart reviews to identify baseline 48-hour post-discharge call completion rates for participating units
4. Educate unit staff nurses on the project aim and intervention
5. Measure post-intervention completion rates of this 48-hour post-discharge phone call for involved units

Results / Progress to Date
• Project-driven chart review suggested that the rate of successful follow-up calls is actually higher than the 42% reported in SFVAMC performance data.
• Staff nurses cite “wrong number” or “no number” as the most common barriers to successful follow-up calls.
• General medicine nurses completing patient discharge have a perfect opportunity to collect current contact phone numbers from patients.

Figure 1: Success rate of follow-up calls for patients discharged from 3 general medicine units over 2 weeks in early 2012.

Lessons Learned
• Projects designed to improve patient outcomes benefit from involving both the inpatient and outpatient realms, as well as various disciplines
• The discharge process remains an important focus for interventions aimed at reducing early readmissions
• Ease of follow-up within integrated healthcare systems puts the VA and its patients at an advantage

Next Steps
• Present proposed intervention to hospital nursing administration
• Train nursing staff to get up-to-date contact information from patients
• Implement the intervention
• Measure change from baseline to post-intervention using rates of successful contact with patients after discharge

UCSF Department of Medicine
San Bruno VA Outpatient Clinic was not meeting goals related to healthcare maintenance for patients with diabetes and ischemic heart disease.

Many providers find health care maintenance time consuming and cumbersome.

Flowsheets (similar to HCM templates) improve diabetes care in the primary care setting.\(^1\)

**Recommendations from trainees:**
- Remove some immunization data (ex. Influenza)
- Include advance directive & colonoscopy data
- Enhance a DM-specific area with last retinal exam, microalbuminuria, foot exam

**Reasons cited for not using:**
- Template is too visually complex
- Data are not organized well
- Old system of charting is adequate

**Design an improved health care maintenance template to achieve:**
- LDL tested yearly in all patients with ischemic heart disease & diabetes
- HbA1c, microalbumin & renal function tested yearly in all diabetics

**Baseline Data (extracted from CPRS Dashboard)**

<table>
<thead>
<tr>
<th>Quality Measure</th>
<th>Actual %</th>
<th>Target %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Diabetes Mellitus</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LDL measured annually</td>
<td>88</td>
<td>96</td>
</tr>
<tr>
<td>LDL &lt;100</td>
<td>70.8</td>
<td>75</td>
</tr>
<tr>
<td>Renal Function Testing</td>
<td>81</td>
<td>92</td>
</tr>
<tr>
<td>Timely Retinal Exam</td>
<td>98.9</td>
<td>99</td>
</tr>
<tr>
<td>HbA1c &gt;9 (lower is better)</td>
<td>12.9</td>
<td>19</td>
</tr>
<tr>
<td>BP &lt;140/90</td>
<td>83.2</td>
<td>76</td>
</tr>
<tr>
<td><strong>Ischemic Heart Disease</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LDL measured annually</td>
<td>83.9</td>
<td>92</td>
</tr>
<tr>
<td>LDL &lt;100</td>
<td>67.7</td>
<td>69</td>
</tr>
<tr>
<td>BP &lt;140/90</td>
<td>76.1</td>
<td>72</td>
</tr>
</tbody>
</table>

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>

**Project Goals**

- Identified problem
- Developed improved HCM template
- Solicited feedback from trainees
- Roll out to clinic attendings
- Measure outcomes
- Disseminate and promote final template

**Results**

<table>
<thead>
<tr>
<th>Average Response of Users</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Decreased charting time?</td>
<td>4</td>
</tr>
<tr>
<td>Made data easier to find/view?</td>
<td>4</td>
</tr>
<tr>
<td>Will continue to use template?</td>
<td>3</td>
</tr>
<tr>
<td>Improved compliance with HCM goals?</td>
<td>4</td>
</tr>
<tr>
<td>Will suggest to others?</td>
<td>4</td>
</tr>
</tbody>
</table>

1-Strongly Disagree  2-Disagree  3-Neutral  4-Agree  5-Strongly Agree

**Lessons Learned**

**Recommendations from trainees:**
- Remove some immunization data (ex. Influenza)
- Include advance directive & colonoscopy data
- Enhance a DM-specific area with last retinal exam, microalbuminuria, foot exam

**Reasons cited for not using:**
- Template is too visually complex
- Data are not organized well
- Old system of charting is adequate

**Next Steps**

- Use present feedback to further improve HCM template
- Expand use of template to include clinic attendings
- Measure outcomes via dashboard using 3rd or 4th quarter data
- Share template with incoming trainees and other clinics

Reference


UCSF Department of Medicine & School of Nursing

The authors would like to acknowledge NP Jolanne Saxe & Dr. Shalini Patel for their assistance with developing the project. A special thanks to Dr. Meg Pearson, Dr. Bina Lu, and the SFVA EdPACT NP students for their assistance with piloting the template and providing feedback.
Driving Primary Care Innovation: Enhancing Capacity for Improvement in California’s Safety Net

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K Soni MD, MBA1, R Pierce, MD2; S Ranji, MD1

1Health Systems and Leadership Track, UCSF Medicine Residency Program, 2Quality and Safety Chief Resident, UCSF Medicine Residency Program, 3UCSF Department of Medicine

The Problem

- Demographic, economic, and technological trends demand transformative change in US healthcare delivery, including California’s Safety Net.
- Blue Shield of California Foundation (BSCF) invests $30.40 million/year through grants and targeted programs to strengthen California’s Safety Net.
- In 2011, the Foundation sponsored an Idea Fair and two requests for proposals (RFPs) to stimulate robust innovation in Safety Net ambulatory clinics.
- The scope and originality of subsequent proposals did not match BSCF’s expectations for innovation.

Project Goal

- Provide detailed analysis of barriers to designing and implementing innovation in ambulatory care delivery throughout California’s Safety Net.
- Recommend new ways for BSCF to leverage its resources over the next five years to drive innovation in care delivery and dissemination of effective strategies.

Project Plan

- We conducted an in-depth review of the RFP process, read the literature on innovation in healthcare, and studied a broad range of successful innovators.
- Structured interviews with 3 key stakeholder groups:
  1. Foundations dedicated to improving care delivery
  2. Thought leaders in healthcare system redesign
  3. Front line Safety Net leaders and providers

Results: Barriers and Recommendations

5 Domains influence capacity for change in California’s Safety Net clinics

1. Infrastructure (often inadequate)
2. Financing (often unstable or offers perverse incentives)
3. Culture (often insular and risk averse)
4. Leadership (often reactive and poorly resourced)
5. Communication (limited within and across organizations)

Capacity for change varies based on managing the domains

High Capacity Organizations

Add Capacity Organizations

Low Capacity Organizations

>4

1-3

0

Successful Management of Domains

Clinic experience 5 key domains

Capacity for change varies

Strategy must build capacity

Recommendations for Building Capacity

Stratify: Robustly stratify clinics by assessing their capacity for change, and tailor deployment of Foundation resources according to stratification.

- Delegation of champions, core team positions, support resources today

Diversify: Develop investments that bolster key resources outside the Safety Net, in order to bring new perspectives, ideas, and resources to the Safety Net.

- External innovation accelerators = practice facilitators = workplace designers

Integrate: Collaboratively combine resources, funding mechanisms, and, in some cases, clinics themselves.

- Some Foundation supports = multi-site grants = support high performing clinics

Lessons Learned

- Innovation in healthcare does not benefit from a concise, unifying definition shared by all stakeholders.

- Diversity of opinion causes lack of agreement about end goals and risks, resulting in failure to stimulate radical change.

- There is high variability in the capacity for innovation among ambulatory care clinics in the Safety Net.

- Building capacity for change, rather than a specific model, is integral to the future of primary care in California’s Safety Net.

Next Steps

- BSCF intends to revise its approach to fostering and funding innovation in 2012.

- The Foundation is currently using our analysis to guide a new strategic planning process, including novel strategies for targeting resource investment within and beyond the Safety Net.

UCSF Department of Medicine
A Brief Structured Peer-to-Peer Feedback Intervention to Improve the Quality of Resident Discharge Summaries

Krishan Soni MD, MBA  Mia Lozada, MD  Michelle Schneidermann, MD

Background

• High quality communication is required for safe hospital discharge and is accomplished primarily through the discharge summary.
• Clear, concise, and meaningful correspondence between providers is essential and yet, first year medical residents are generally charged with the responsibility of completing discharge summaries with little or no training.
• While prior studies have shown improvement in discharge summary quality after introducing a didactic curriculum with direct feedback, we are not aware of any curricula that take advantage of peer-to-peer feedback.

Objective

We ventured to strengthen the quality of discharge summary training for interns rotating through the Department of Medicine at the University of California, San Francisco by incorporating an element of structured peer-to-peer feedback regarding the content, readability, efficiency, and comprehensiveness of their own discharge summaries.

Description

Based on literature review and an internal needs assessment of challenges with discharge summaries, we developed a curriculum focused on discharge safety consisting of:

1. Didactic session illustrating the quality gaps in discharge summaries at our institution and best practices for improvement, followed by
2. Directed peer-to-peer feedback session for interns to evaluate their own discharge summaries. This was conducted in September 2011 at UCSF Medical Center, San Francisco General Hospital, and VAMC San Francisco.
   a) Interns completed a brief pre-test (Table 1) regarding their confidence with discharge summaries.
   b) Interns exchanged their own discharge summary with a partner and reviewed/evaluated them with a standardized rubric (Figure 1) focusing on 5 elements of the discharge summary.
   c) The larger group congregated and summarized the strengths and weaknesses (Table 2) of their own discharge summary and focused on areas for improvement in the future.
   d) Interns completed a brief post-test (Table 2) to assess the experience with the peer-to-peer feedback session.

Results / Progress to Date

![Discharge Summary Evaluation Tool](image1.jpg)

**Table 1: Discharge Summary Exercise - Pre-Test Questions and Results**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Mean</th>
<th>N=58</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have received prior instruction on discharge summary writing during residency</td>
<td>4.71</td>
<td>17%</td>
</tr>
<tr>
<td>I believe that interns should continue to build the primary responsibility for discharging patients</td>
<td>4.79</td>
<td>68%</td>
</tr>
<tr>
<td>I am satisfied with my discharge summary quality</td>
<td>4.79</td>
<td>72%</td>
</tr>
<tr>
<td>Discharge summaries solidifies understanding of a patient’s hospital course</td>
<td>4.79</td>
<td>68%</td>
</tr>
</tbody>
</table>

**Table 2: Discharge Summary Exercise - Post-Test Questions and Results**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Mean</th>
<th>N=58</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. It is useful to develop discharge summary skills</td>
<td>4.71</td>
<td>17%</td>
</tr>
<tr>
<td>2. I have completed a discharge summary during the training</td>
<td>4.79</td>
<td>68%</td>
</tr>
<tr>
<td>3. The didactic session should include the following</td>
<td>4.79</td>
<td>72%</td>
</tr>
<tr>
<td>The discharge summary was written in a comfortable way</td>
<td>4.79</td>
<td>68%</td>
</tr>
<tr>
<td>The discharge summary was formatted appropriately</td>
<td>4.79</td>
<td>68%</td>
</tr>
<tr>
<td>I wish I had this additional training earlier in internship</td>
<td>4.79</td>
<td>68%</td>
</tr>
</tbody>
</table>

**Table 3: Group Discussion Feedback Summary**

<table>
<thead>
<tr>
<th>Area of Improvement</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data of admission</td>
<td>4.71 (Strongly Agree)</td>
</tr>
<tr>
<td>Initial impression of patient</td>
<td>4.71 (Strongly Agree)</td>
</tr>
<tr>
<td>Discharge summary</td>
<td>4.71 (Strongly Agree)</td>
</tr>
<tr>
<td>Final history</td>
<td>4.71 (Strongly Agree)</td>
</tr>
</tbody>
</table>

Discussion

• We developed a unique educational innovation involving a peer-to-peer feedback session for PGY1 residents to assess the quality of their own discharge summaries.
• The peer-to-peer evaluation component was a powerful tool for allowing interns to identify their own strengths and weaknesses in their ability to write concise and accurate discharge summaries.
• Having residents provide feedback and teaching to their peers can be a high yield mechanism for promoting learning and retention compared to traditional didactic sessions.
• This peer-to-peer feedback session could easily be repeated in most academic clinical settings to improve the quality of discharge summaries written by residents.

Next Steps

This peer-to-peer feedback session is one component of a broader redesign of our educational program to improve residents’ skills and knowledge about discharging patients from the hospital. Throughout the course of this year, we are expanding our discharge curriculum to include:

- Didactic sessions on effective, safe, and high quality discharge planning
- Individualized feedback of post discharge quality metrics including:
  - Rate of POP follow up
  - Readmission rates
- Patient satisfaction with the discharge process
- Multisource evaluation of resident discharge planning by RNs, Social workers, Pharmacists and other providers involved in discharge
- Development of an “Entrustable Professional Activity (EPA)” as a novel evaluation tool to provide ongoing, real time, and substantive feedback to interns and residents about their skills in discharge planning.

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