Curricular Blueprint

Residency Curriculum in Quality Improvement and Patient Safety

Department of Medicine
University of California, San Francisco
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UCSF Quality Improvement and Patient Safety Curriculum

I. Rationale for Teaching QI and PS
II. Global Goals and Objectives
III. Core Concepts and Tools
IV. Mapping to ACGME Milestones
V. Overview - Organization and Delivery
VI. Detailed Description by Program
VII. Next Steps
I. Rationale for Teaching Quality Improvement and Patient Safety to Residents

• Patients *expect* physicians to provide safe, effective, and high value care

• Regulatory agencies (ACGME, Residency Review Committees) are *demanding* that residency programs integrate safety and quality training into the curriculum

• Residents are *interested* in learning and acquiring tools to provide high quality, cost effective care that will be necessary to their future practice
II. Goals and Objectives of the UCSF Residency Program’s Quality and Safety Curriculum

• Prepare physicians to be *stewards* of safe, high quality, high value, patient centered care

• Teach key *principles* of quality improvement, patient safety, and systems innovation to all residents in our training programs

• Develop a *culture* of safety and quality that trainees will carry with them throughout their career

• Cultivate future *leaders* in healthcare quality and systems innovation
III. Core Concepts and Tools Necessary to the Practice of Safe, High Quality, Patient Centered Medicine

- Error & Systems Analysis
- Effective Handoffs
- Patient Satisfaction
- Models for Quality Improvement
- Safe Discharge Planning
- Leadership
- Patient Panel Management
- High Value Healthcare
- Healthcare Policy
## UCSF Quality Improvement and Patient Safety Curriculum

### IV. Mapping ACGME Milestones to UCSF Curriculum

<table>
<thead>
<tr>
<th>Core Competency</th>
<th>ACGME Milestone</th>
<th>UCSF</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Practice-Based Learning</strong></td>
<td>Improve the quality of care for a panel of patients</td>
<td>Patient Panel Management QI</td>
</tr>
<tr>
<td>Learn and Improve via Audit of Performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Systems-Based Practice</strong></td>
<td>Work effectively within</td>
<td>Effective Handoffs Safe Discharge Planning</td>
</tr>
<tr>
<td>Work effectively with other care providers and settings</td>
<td>• Multiple health delivery systems • An inter-professional team</td>
<td></td>
</tr>
<tr>
<td>Improve health care delivery</td>
<td>Recognize system error and advocate for system improvement</td>
<td>Error &amp; Systems Analysis</td>
</tr>
<tr>
<td>Cost-effective care for patients and populations</td>
<td>Identify forces that impact the cost of healthcare, advocate for and practice cost-effective care</td>
<td>High Value Healthcare</td>
</tr>
<tr>
<td><strong>Interpersonal and Communication Skills</strong></td>
<td>Transitions of care</td>
<td>Effective Handoffs Safe Discharge Planning</td>
</tr>
</tbody>
</table>
I. Rationale for Teaching QI and PS
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VII. Next Steps
Background: Residency Program Sites

UCSF medicine residents spend 3 years rotating through the inpatient medical service and outpatient clinics at four geographically separate sites.

Inpatient + outpatient

UCSF Medical Center
Tertiary Care
University Medical Center

San Francisco Veteran’s Affairs Medical Center
Federal government facility for US Veterans

San Francisco General Hospital
City & County Hospital

Primarily Outpatient

UCSF Mount Zion Hospital
Outpatient General Medicine Clinics
The Residency Quality Improvement and Patient Safety Curriculum is organized across all four sites and addresses both inpatient and outpatient training.

The curriculum is longitudinal and strives to develop resident competencies in QI and PS skills over three years of training. All residents are expected to develop a set of core competencies, while more advanced training is available for those with interest.

Education takes place through a series of:
- Core Didactic Lessons
- Case Based Discussions
- QI and PS Rotations
- Longitudinal QI projects
- Electives and pathways for those with deeper interests
Background: Quality & Safety Curriculum Overview

- The curriculum is broadly divided into 4 primary themes:
  - Inpatient QI + PS Training
  - Ambulatory QI + PS Training
  - Care Transitions
  - Electives in Advanced QI and Health Systems

Inpatient QI + PS

- Focused on improving care in *hospitalized patients*
- Conducted during residents inpatient training months

Ambulatory QI + PS

- Focused on improving care in *ambulatory patients*
- Conducted during residents ambulatory training months

Care Transitions

- Focused on maintaining patient safety during *transitions* between inpatient providers and on discharge from the hospital

Electives in Advanced QI + PS

- Opportunities for those with a special interest in QI and PS to gain *advanced experience* through training and projects
The key elements of the UCSF quality improvement and patient safety curriculum are shown below. Further detail is shown on the following slides.
The inpatient curriculum focuses on teaching methods to deliver high value and safe patient care while understanding the potential harms and costs of inpatient medical care.

### PQJ Rotation (Procedures, Quality, Jeopardy)
- Foundational 2 week rotation all interns.
- Interns learn core QI and PS concepts through:
  - 6 core didactic sessions
  - 2 projects – a patient safety case review; cost analysis of a medical case
  - Readings and online web modules

### Cost of Care Conferences
- Monthly case based conference for all residents.
- We review management of a medical case treated at UCSF and discuss evidence based guidelines and the hospital charges associated with care.
Inpatient QI Training Details (2)

QI Case Conference and Inpatient M&M Conference
• After completing a structured case review of a medical error, adverse event, or near miss, an intern presents the case to an audience of residents during a lunch conference.
• All residents have an opportunity to discuss the case, learn key concepts in patient safety and reflect on their own practice.

Housestaff Incentive Program
• A financial incentive program developed by the medical center to incentivize all staff to participate in improvement of key quality metrics.
• We have developed our own improvement goals, including improving communication with PCPs and timely completion of discharge summaries
• Residents continuously monitor, evaluate, and make adjustments to improve performance.

Inpatient Dashboards (in development)
• Continuous feedback of relevant patient care metrics to housestaff in a specific, timely, and actionable way.
• Aims to mirror increasing efforts to provide physicians with performance data at a national level
• Possible metrics: patient satisfaction, length of stay, utilization of labs and radiology.
The ambulatory curriculum focuses on teaching methods to heighten awareness of patient safety issues in the outpatient setting, and provides residents with a hands-on experience to engage in a quality improvement project in their clinic.

### Clinic Specific Curricula
- Educational sessions are clinic based, and are tailored to the needs of each clinic site (SFGH, VAMC and Mount Zion)
- All sites include didactic sessions covering core topics in ambulatory patient safety, error analysis, and QI Improvement tools
- Residents at each site have an opportunity to develop and conduct their own QI longitudinal projects. Approximately 2-5 projects/clinic site.

### Ambulatory QI M&M
- Developed this year, the Ambulatory M&M is a bimonthly case based conference to discuss medical errors and adverse events in the SFGH GMC.
Given the association of errors and adverse events associated with transitions in care, a renewed emphasis has been placed on educating trainees on safe and effective handoffs of care. This curriculum focuses on improving handoffs both between providers in the inpatient setting and improving communication and coordination of an entire discharge plan to the ambulatory setting.

### Effective Signout
- Starting early in orientation, interns are given a model for effective signout communication.
- During noon conference sessions and morning report, they are given an opportunity to practice these skills, to evaluate their piers, and to reflect on their own performance.

### Safe Discharge
- Through a series of noon conference sessions and morning reports, all residents are given a toolkit to address the principles of safe discharge.
- Interns are extensively evaluated on their discharge communication (EPA).
Advanced QI & Health Systems Training Details

Three structured options are available for residents wishing to pursue more advanced training in quality improvement, patient safety and systems redesign.

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electives in Advanced QI / Health Systems</td>
<td>QI Elective</td>
<td>HSL Pathway</td>
</tr>
<tr>
<td>Quality and Safety Innovations Challenge</td>
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</tbody>
</table>

### QI Elective
- Available for senior residents, this one month elective provides one on one mentorship to deepen the experience with QI projects. Residents build their QI and PS skills through:
  - Additional readings and online web materials
  - Participation in several ongoing QI projects in the medical center
  - Participation in QI or PS committee activities in the department or med center
  - Development of their own QI project based on interest

### The Quality and Safety Innovations Challenge (QSIC)
- Encourages active trainee participation in QI/PS projects by providing ongoing mentorship for project development and a forum for projects and posters to be presented at the end of the year.
HSL Pathway

- A two year longitudinal curriculum designed to help residents build skills in leadership, health policy analysis, and health systems redesign.

- As part of this pathway, during their ambulatory months, residents engage in:
  - Discussions with invited speakers from the realms of health policy, health administration, academia, and the private sectors
  - Weekly discussions of current literature in the policy and QI arenas
  - Intensive didactics in leadership, healthcare policy, and systems redesign
  - Yearly group project focusing on an important policy or systems redesign issue. Past projects include:
    - An analysis of prolonged Emergency Room admitting time with a presentation to the senior leadership of the UCSF Medical Center
    - Development of a model to increase efficiency and decrease costs of ambulatory care in high cost centers. Results were presented to the board of directors for a major group of healthcare purchasers
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VI. Detailed Description by Program

A. Curriculum by training site
B. Curriculum by year
C. Procedures, Quality, Jeopardy Rotation
D. Inpatient QI M&M Conferences
E. Cost Awareness
F. Housestaff Incentive Program
G. Ambulatory QI/PS
H. Transitions: Signout
I. Transitions: Discharge
The UCSF Chief Resident for QI/PS implements the Quality Improvement and Patient Safety curriculum at 3 training sites.

<table>
<thead>
<tr>
<th>CR Time</th>
<th>UCSF Medical Center Parnassus/MTZ</th>
<th>San Francisco Veteran’s Affairs Medical Center</th>
<th>San Francisco General Hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>40%</strong></td>
<td><strong>40%</strong></td>
<td><strong>20%</strong></td>
</tr>
<tr>
<td>Inpatient Activities</td>
<td>• PQJ Rotation (21/67)</td>
<td>• Inpatient QI M&amp;M (10)</td>
<td>• Inpatient QI M&amp;M (9)</td>
</tr>
<tr>
<td></td>
<td>• PQJ Conference (12)</td>
<td>• EDPACT Activities (22/48 conferences)</td>
<td>• Ambulatory QI M&amp;M (5)</td>
</tr>
<tr>
<td></td>
<td>• Cost Awareness (11)</td>
<td>• GMC QI/PS Sessions (8)</td>
<td>•</td>
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<tr>
<td></td>
<td>• Housestaff Incentive</td>
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<tr>
<td></td>
<td>• QI Elective (5 months)</td>
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<tr>
<td></td>
<td>• HSL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outpatient Activities</td>
<td>• EDPACT Activities (22/48 conferences)</td>
<td>• Ambulatory QI M&amp;M (5)</td>
<td>• Ambulatory Half Day (2)</td>
</tr>
<tr>
<td>Tri Hospital Activities</td>
<td>• Discharge Curriculum (7 at each site)</td>
<td>• GMC QI/PS Sessions (8)</td>
<td>•</td>
</tr>
<tr>
<td></td>
<td>• Signout Curriculum (7 at each site)</td>
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</tbody>
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### QI/PS Educational Curriculum – INTERNS (First Year)

#### Inpatient QI/PS

<table>
<thead>
<tr>
<th>Program/Conference</th>
<th>Participants/Site</th>
<th>Time Frame</th>
<th>Didactic</th>
<th>Experiential</th>
<th>Mandatory</th>
</tr>
</thead>
<tbody>
<tr>
<td>PQJ Rotation</td>
<td>All IM Interns</td>
<td>One Month</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
</tr>
<tr>
<td>Cost of Care</td>
<td>While at Moffitt</td>
<td>Monthly, year long</td>
<td>✔️</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Conferences</td>
<td>While at Moffitt</td>
<td>Monthly, year long</td>
<td>✔️</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housestaff Incentive</td>
<td>While on Moffitt Wards</td>
<td>Year Long</td>
<td>✔️</td>
<td></td>
<td>✔️</td>
</tr>
<tr>
<td>Inpatient Dashboards</td>
<td>While on Moffitt Wards</td>
<td>Year Long</td>
<td>✔️</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient Safety M&amp;M</td>
<td>All Interns, All Sites</td>
<td>Monthly, Year Long</td>
<td>✔️</td>
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</tbody>
</table>

#### Ambulatory QI/PS

<table>
<thead>
<tr>
<th>Program/Conference</th>
<th>Participants/Site</th>
<th>Time Frame</th>
<th>Didactic</th>
<th>Experiential</th>
<th>Mandatory</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFGH GEMS</td>
<td>SF Clinic Interns</td>
<td>Year Long</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
</tr>
<tr>
<td>SFGH Ambulatory QI M&amp;M</td>
<td>SF Clinic Interns</td>
<td>Bi-Monthly, year long</td>
<td>✔️</td>
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#### Care Transitions

<table>
<thead>
<tr>
<th>Program/Conference</th>
<th>Participants/Site</th>
<th>Time Frame</th>
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<th>Experiential</th>
<th>Mandatory</th>
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</thead>
<tbody>
<tr>
<td>Effective Sign out</td>
<td>All Interns, All Sites</td>
<td>Summer/Fall</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Safe Discharge +EPA</td>
<td>All Interns, All Sites</td>
<td>Summer/Fall</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
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#### Electives in Advanced QI / Health Systems

<table>
<thead>
<tr>
<th>Program/Conference</th>
<th>Participants/Site</th>
<th>Time Frame</th>
<th>Didactic</th>
<th>Experiential</th>
<th>Mandatory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality and Safety Innovations Challenge</td>
<td>All Interns, All Sites</td>
<td>Year Long</td>
<td>✔️</td>
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</tbody>
</table>

#### Legend

- **Ambulatory**
- **Moffitt**
- **All Sites**
### Inpatient QI/PS

<table>
<thead>
<tr>
<th>Activity</th>
<th>Participants/Site</th>
<th>Time Frame</th>
<th>Didactic</th>
<th>Experiential</th>
<th>Mandatory</th>
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</thead>
<tbody>
<tr>
<td>Cost of Care Conferences</td>
<td>While at Moffitt</td>
<td>Monthly, year long</td>
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<tr>
<td>QI Case Conferences</td>
<td>While at Moffitt</td>
<td>Monthly, year long</td>
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<tr>
<td>Housestaff Incentive</td>
<td>While on Moffitt Wards</td>
<td>Year Long</td>
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<tr>
<td>Inpatient Dashboards</td>
<td>While on Moffitt Wards</td>
<td>Year Long</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Patient Safety M&amp;M</td>
<td>All Residents, All Sites</td>
<td>Monthly, Year Long</td>
<td></td>
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</tbody>
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### Ambulatory QI/PS

<table>
<thead>
<tr>
<th>Activity</th>
<th>Participants/Site</th>
<th>Time Frame</th>
<th>Didactic</th>
<th>Experiential</th>
<th>Mandatory</th>
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</thead>
<tbody>
<tr>
<td>Ambulatory ½ Day</td>
<td>All Residents</td>
<td>One Session - Fall</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinic QI Project</td>
<td>All Residents</td>
<td>Year Long</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SFGH Ambulatory QI M&amp;M</td>
<td>SF Clinic Residents</td>
<td>Bi-Monthly, year long</td>
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</table>

### Care Transitions

<table>
<thead>
<tr>
<th>Activity</th>
<th>Participants/Site</th>
<th>Time Frame</th>
<th>Didactic</th>
<th>Experiential</th>
<th>Mandatory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safe Discharge</td>
<td>All Residents, All Sites</td>
<td>Summer/Fall</td>
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</table>

### Electives in Advanced QI / Health Systems

<table>
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<tr>
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<th>Time Frame</th>
<th>Didactic</th>
<th>Experiential</th>
<th>Mandatory</th>
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</thead>
<tbody>
<tr>
<td>HSL Pathway</td>
<td>Self Selected</td>
<td>2 year course</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QI Elective</td>
<td>Self Selected</td>
<td>One Month</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QSIC</td>
<td>All Interns, All Sites</td>
<td>Year Long</td>
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**Legend**

- Ambulatory
- Moffitt
- All Sites
In total, 185 hours of QI/PS didactic sessions were programmed and delivered during the 2011-2012 academic year.

### UCSF Quality Improvement and Patient Safety Curriculum

**PQJ Curriculum (year round)** (months start on 22nd)

<table>
<thead>
<tr>
<th>Session</th>
<th>Frequency</th>
<th>Location</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Intro to Patient Safety</td>
<td>Monthly</td>
<td>Moffitt AM</td>
<td>Tue 7/3 Thu 7/28</td>
</tr>
<tr>
<td>2. Intro to Cost Awareness</td>
<td>Monthly</td>
<td>Moffitt AM</td>
<td>Tue 8/2 Tue 8/30</td>
</tr>
<tr>
<td>3. Review of Cost Awareness Case</td>
<td>Monthly</td>
<td>Moffitt AM</td>
<td>Tue 9/6 Tue 10/11</td>
</tr>
<tr>
<td>4. Intro to Quality Improvement</td>
<td>Monthly</td>
<td>Moffitt AM</td>
<td>Thu 7/7 Thu 8/9</td>
</tr>
<tr>
<td>5. Intro to Change Management</td>
<td>Monthly</td>
<td>Moffitt AM</td>
<td>Mon 7/11 Mon 7/18</td>
</tr>
<tr>
<td>6. Intro to Patient Satisfaction</td>
<td>Monthly</td>
<td>Moffitt AM</td>
<td>Mon 7/18 Thu 8/18</td>
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</tbody>
</table>

**Regular QI Conference Schedule (year round)**

<table>
<thead>
<tr>
<th>Conference</th>
<th>Frequency</th>
<th>Location</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>PQJ Conference</td>
<td>Monthly</td>
<td>Moffitt</td>
<td>Last week of intern</td>
</tr>
<tr>
<td>PQJ Cost Awareness Conference</td>
<td>Monthly</td>
<td>Moffitt</td>
<td>Last week of intern</td>
</tr>
<tr>
<td>Monthly Tri-Hosp QI M&amp;M</td>
<td>Monthly</td>
<td>SFGH WEDNESDAY</td>
<td>Wed 7/6 Wed 8/10</td>
</tr>
<tr>
<td>Monthly Tri-Hosp QI M&amp;M</td>
<td>Monthly</td>
<td>SFGH WEDNESDAY</td>
<td>Wed 7/6 Wed 8/10</td>
</tr>
<tr>
<td>Bi-Monthly SFGH Outpatient QI M&amp;M</td>
<td>Monthly</td>
<td>SFGH FRIDAY</td>
<td>Fri 9/1 Fri 9/6</td>
</tr>
<tr>
<td>Ambulatory QI Half Day</td>
<td>Monthly</td>
<td>Zion</td>
<td>Fri 9/23 Fri 10/14</td>
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**Short Series QI Conferences (occur in Fall only)**

<table>
<thead>
<tr>
<th>Conference Series</th>
<th>Frequency</th>
<th>Location</th>
<th>Timing</th>
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</thead>
<tbody>
<tr>
<td>Signout Curriculum Noon Conf</td>
<td>Monthly x2</td>
<td>Moffitt Aug-Oct</td>
<td>Mon 8/8 Fri 8/12</td>
</tr>
<tr>
<td>Signout Curriculum Noon Conf</td>
<td>Monthly x2</td>
<td>SFGH Aug-Oct</td>
<td>Mon 8/8 Fri 8/12</td>
</tr>
<tr>
<td>Discharge Curriculum Noon Conf</td>
<td>Monthly x2</td>
<td>Sept-Oct</td>
<td>Thu 9/1 Mon 10/7</td>
</tr>
<tr>
<td>Discharge Curriculum Noon Conf</td>
<td>Monthly x2</td>
<td>Sept-Oct</td>
<td>Wed 9/21 Mon 10/7</td>
</tr>
<tr>
<td>Discharge Curriculum Intern Report</td>
<td>Once</td>
<td>3 SITES July</td>
<td>Thu 7/28 Mon 8/18</td>
</tr>
<tr>
<td>Ambulatory QI Half Day</td>
<td>Twice</td>
<td>Zion</td>
<td>Fri 9/23 Fri 10/14</td>
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**VAMC EDFACT Conferences (Occur during PI Blocks - Nov, Dec, Mar, Apr)**

<table>
<thead>
<tr>
<th>Session</th>
<th>Frequency</th>
<th>Location</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Intro to PI Curriculum</td>
<td>1x per group</td>
<td>EDFACT Nov-Dec</td>
<td>Tue 3/6 Thu 3/8</td>
</tr>
<tr>
<td>2. Practice Data: QI Priorities</td>
<td>1x per group</td>
<td>EDFACT Nov-Dec</td>
<td>Tue 3/11 Thu 3/13</td>
</tr>
<tr>
<td>3. Systems Approach to Change</td>
<td>1x per group</td>
<td>EDFACT Nov-Dec</td>
<td>Tue 11/15 Thu 11/17</td>
</tr>
<tr>
<td>4. PDSA Cycle and Tools</td>
<td>1x per group</td>
<td>EDFACT Nov-Dec</td>
<td>Mon 12/10 Thu 12/10</td>
</tr>
<tr>
<td>5. Plan and Implement Project</td>
<td>1x per group</td>
<td>EDFACT Nov-Dec</td>
<td>Tue 11/8 Thu 11/10</td>
</tr>
<tr>
<td>6. PS 1: Root Cause Analysis</td>
<td>1x per group</td>
<td>EDFACT Nov-Dec</td>
<td>Tue 11/15 Thu 11/17</td>
</tr>
<tr>
<td>7. PS 2: Failure Modes Effects Analy</td>
<td>1x per group EDFACT Nov-Dec</td>
<td>Wed 11/16 Fri 11/18</td>
<td></td>
</tr>
<tr>
<td>8. Patient Safety Journal Club #1</td>
<td>1x per group</td>
<td>EDFACT Mar-Apr</td>
<td>Wed 3/21 Thu 3/15</td>
</tr>
<tr>
<td>9. Trainee Led RCA #1</td>
<td>1x per group</td>
<td>EDFACT Mar-Apr</td>
<td>Fri 3/16 Fri 3/19</td>
</tr>
<tr>
<td>10. Panel Management Session</td>
<td>1x per group</td>
<td>EDFACT Mar-Apr</td>
<td>Thu 3/20 Thu 3/24</td>
</tr>
<tr>
<td>11. QI Work in Progress</td>
<td>1x per group</td>
<td>EDFACT Mar-Apr</td>
<td>Thu 3/6 Thu 3/12</td>
</tr>
<tr>
<td>QI Work in Progress #2</td>
<td>1x per group</td>
<td>EDFACT Mar-Apr</td>
<td>Thu 3/6 Thu 3/12</td>
</tr>
</tbody>
</table>

**SGFH GMC Clinic Conferences (Jan-April)**

<table>
<thead>
<tr>
<th>Session</th>
<th>Frequency</th>
<th>Location</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. AIM Statements and PDSA</td>
<td>1x per group</td>
<td>GMC Jan-Feb</td>
<td>Mon 1/10 Mon 1/16</td>
</tr>
<tr>
<td>2. Measuring for QI</td>
<td>1x per group</td>
<td>GMC Feb-Mar</td>
<td>Mon 2/27 Mon 2/28</td>
</tr>
<tr>
<td>3. Ambulatory Safety and Tools</td>
<td>1x per group</td>
<td>GMC Mar-Jun</td>
<td>Mon 3/26 Mon 3/29</td>
</tr>
<tr>
<td>4. Analysis of Project to date</td>
<td>1x per group</td>
<td>GMC Apr-Jun</td>
<td>Mon 4/23 Mon 4/26</td>
</tr>
</tbody>
</table>
Procedures, Quality, and Jeopardy Rotation
The Intern Procedure, Quality, and Jeopardy (PQJ) rotation forms the foundation of QI/PS teaching in the residency program.

**Six Core Didactic Sessions (Topics Covered):**

- **Session 1:** *Fundamentals of Patient Safety and Systems Analysis*
  - Introduction to error analysis
  - Latent/active errors/adverse events/near misses
  - Systems redesign
- **Session 2/3:** *Value and Quality in Healthcare*
- **Session 4:** *Quality 101: Defining and Measuring Quality*
  - Introduction to IHI Model for Improvement
- **Session 5:** *Improving Healthcare Quality - Change Management*
- **Session 6:** *Patient Centered Care (Satisfaction)*

**Two One-Week Long Projects:**

I. Patient Safety Case Review  
II. Cost Awareness – Case Analysis
PQJ: Evaluation
Interns complete a brief survey of QI/PS knowledge, attitudes and skills before and after the rotation.

Areas Tested:
- Basic concepts in Patient Safety
- Medical Errors
- Adverse Events
- QI Methodology
- Writing SMART Statements
- Using Measurement
- Studying Processes
- Making Changes
- Using PDSA

Analysis Ongoing
Inpatient QI M&M Conferences
The QI M&M is a monthly noon conference at each site dedicated to addressing medical errors and adverse events

**Goal:** To provide a safe environment to discuss cases from the inpatient medical service which highlight issues in patient care related to systems of care, care processes, care transitions, professionalism, and inter-professional communication.

**Specific Objectives:**
- Understanding and analyzing errors and adverse events
- Identifying systems failures and opportunities to improve systems
- Embracing a multidisciplinary approach as the standard
- Integrating lessons into a culture of quality and safety
The QI M&M Conferences were successfully conducted across all three inpatient sites.

• This year, **31 conferences** were held across the sites
  • Moffitt: 12 conferences
  • SFGH: 9 conferences
  • VAMC: 10 conferences

• **Example topics covered** to date:
  • Errors in communication with consults
  • Failure of communication among team members (handoffs)
  • Adverse events associated with hospital discharge
  • Errors regarding triage to proper level of care
  • Medication errors on discharge
  • Medication errors during procedures

• **Evaluation to date**: None
Cost Awareness Curriculum
Specific objectives for PGY1 residents
In the PGY1 year, receive an in depth cost awareness curriculum during the Procedures, Quality, Jeopardy (PQJ) rotation.

At the end of this curriculum, interns should be able to:

1. Understand evidence based guidelines
2. List the approximate costs of different tests at our university hospital
3. Recognize cost-inefficient medical practices
4. Reflect on their own ordering practices
5. Critique current cost-inefficient medical practices at our hospital
Process: How the curriculum is delivered
The cost awareness curriculum is delivered longitudinally through a monthly series of didactic and experiential learning sessions.

<table>
<thead>
<tr>
<th>Delivery</th>
<th>Core Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>• We selected 12 “core topics” of commonly encountered clinical scenarios with frequent practice and resource-utilization variability</td>
<td>1. Upper GI Bleed</td>
</tr>
<tr>
<td>• We created a longitudinal curriculum with two key components:</td>
<td>2. Acute Kidney Injury</td>
</tr>
<tr>
<td>• <strong>Experiential</strong>: Interns review a medical case, including guidelines and cost associated with the workup during a dedicated QI rotation</td>
<td>3. Chest Pain</td>
</tr>
<tr>
<td>• <strong>Didactic</strong>: A monthly case-based conference consolidating the findings from the case review is presented for medical students, residents, and attendings</td>
<td>4. Syncope</td>
</tr>
<tr>
<td></td>
<td>5. Pulmonary Embolism</td>
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<tr>
<td></td>
<td>6. Low Back Pain</td>
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<tr>
<td></td>
<td>7. Pre-Operative Testing</td>
</tr>
<tr>
<td></td>
<td>8. Cellulitis</td>
</tr>
<tr>
<td></td>
<td>9. Headaches</td>
</tr>
<tr>
<td></td>
<td>10. Altered Mental Status</td>
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<tr>
<td></td>
<td>11. Anemia</td>
</tr>
<tr>
<td></td>
<td>12. Urinary Tract Infection</td>
</tr>
</tbody>
</table>
### UCSF Cost Effective Care Curriculum: What’s the Process?

#### Process: How the curriculum is delivered

The central experience for PGY1’s is a structured case review.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
<th>Time/Learners</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Introduction</strong></td>
<td>Small group session: Principles of cost awareness introduced in a case based learning conference.</td>
<td>• 60 minutes • 5-6 PGY1s</td>
</tr>
<tr>
<td>“Core” topic and case assigned</td>
<td>Group Project: A case demonstrating a common medical workup is assigned to the interns. Interns work in small groups review literature and apply evidence based guidelines to understand clinical and cost effective approaches to management.</td>
<td>• 2-3 hours independently over 1 week • 5-6 PGY1s</td>
</tr>
<tr>
<td>Interns divide into two groups</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guideline Review</td>
<td>Case Analysis</td>
<td>Dissemination: Learnings and best practices from the project are consolidated and shared at an interactive lunch conference with ALL residents each month.</td>
</tr>
<tr>
<td>• Review literature Find evidence based best-practice guidelines • Suggest cost effective workups</td>
<td>• Review recent case from our intuition • Analyze hospital bill, and clinical chart to evaluate care provided</td>
<td>• 60 minutes • Medical Students • Residents (all levels) • Faculty</td>
</tr>
<tr>
<td>Case review debrief</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case based noon conference for ALL residents</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Evaluation: How did learners perceive the curriculum?
Pilot data indicates that residents find this curriculum highly relevant to their clinical practice, and likely to change behavior.

- To date, we have received **151 evaluations from eight conferences**

- Overall, respondents reported that the conferences were:
  - **Highly relevant to their clinical practices**
    (mean 4.51 +/- 0.63 on a 5-point Likert scale)
  - **Likely to change their ordering behaviors**
    (mean 4.24 +/- 0.72)
This project was successfully received by residents, and has been shown in abstract format at multiple conferences.

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, Sumant Ranji, MD

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

- Case-based conferences have been shown to be a well-liked format for residents and medical students

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

Activity
- Introduction
- “Core” Topic and Case Assignment
- Interns Divide into Two Groups

Guideline Review
- Review literature
- Independent-based, best practice guidelines
- Cost-effective workshops

Case Analysis
- Review recent case
- From our institutions
- Analyze historical ill
- and clinical chart to provide

Case-Based Debrief for All Residents
- Group Project: A case demonstrating a common problem assigned to interns. Interns work in small groups, review literature, and apply medicine-based guidelines to understand clinical and cost-effective approaches to management.
- **Case-Based Debrief**: Learning and best practices from the project are consolidated and shared at a noon conference with all residents each week.

Small group session: Principles of cost awareness introduced in a noon debriefing conference.
- 40 minutes
- All learners

Discussion:
- Conferences and best practices from the project are consolidated and shared at a noon debriefing conference with all residents each week.
- 40 minutes
- Medical learners
- Residents (all levels)
- Faculty

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 faciliated, 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
Housestaff Incentive Program
The Medical Center Housestaff Incentive Program (HIP) for all residents included 3 goals for the 2011-2012 academic year.

- **Patient Satisfaction**
- **Hand Hygiene**
- **Lab Utilization**

### Patient Satisfaction
For the period of July 2011-June 2012, on the patient satisfaction survey likelihood of recommending question, maintain an annual average mean score of 90.7.

### Patient Safety and Quality
For the period of July 2011-June 2012, achieve 65% hand hygiene compliance for at least six of twelve months.

### Lab Utilization
By June 2012 residents will decrease by 5% the aggregated utilization of common laboratory tests (defined as tests/inpatient day). Common tests will include, CBC, CBC with differential, electrolytes (Na, K, Cl, CO2, HCO3, Mg, Ca, Phos), BUN, Cr, AST, ALT, total bilirubin, alkaline phosphatase and albumin.
Additionally, the Department of Medicine sponsored its own Incentive Program in 2011-2012 for Medicine Residents.

**GOAL:** To improve documentation of Advance Care Planning wishes in the Discharge Summary to greater than 75% for all patients admitted to the medical service.
This project has been very successful (goal met), and has been shown in abstract format at multiple conferences.

Housestaff Incentive Program

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 important 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

Background

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.
Ambulatory QI
• EDPACT learners include second year medicine residents and NP Students
• The curriculum is divided into 6 core themes, each taught over the course of one month while residents are on block.
• Two blocks are dedicated to Performance Improvement (PI)
• During the PI Modules, residents and NPs have didactic sessions and work on clinic QI projects.
• QI/PS Didactics include:
  • Intro to Root Cause Analysis, FMEA, IHI Model for Improvement, QI Measurement Tools, Process Mapping
VAMC EDPACT
QI/PS Didactic Sessions

Eleven 90-minute didactic sessions were held during the 2 performance improvement blocks

Block 1
(1) Intro to the Performance Improvement Curriculum
(4) PDSA Cycle and Tools
(6) Patient Safety: Root Cause Analysis

Block 2
(2) Practice Data: QI Priorities
(5) Plans to Implement QI Projects
(7) Patient Safety: Failure Modes & Effects Analysis
(8) Patient Safety Journal Club
(10) Panel Management Session
(11) QI Works in Progress

QI Patient Safety
6 Clinic Based QI Projects were completed over a six month period (Nov-May):

**Medical Practice Clinic:**
- Improve medication refill process in clinic
- Improving surveillance rates of HA1c among diabetics
- Improve coordination of a 48 hour post discharge phone call
- Improve rate of LDL checked annually in diabetic patients

**Community Based Outpatient Clinics:**
- Improve HCV primary care measures
- Improve healthcare maintenance compliance
Ambulatory QI: VAMC Projects

VAMC EDPACT QI Projects (1 of 6)

Improving the Medication Renewal Process at the San Francisco Veterans Affairs Medical Center
Sierra Carter1, Rajesh Jaganath2, James Thomas3, Adam Siegel2, Tyson Turner2, Tacara Soones2, Sonia Garg2, Lucas Zier2, Peter Sottile3, Louise Wu1, Lynne O’Brien3, Denise Davis3 and Maya Dulay3
Department of Internal Medicine, SFVAMC1; Department of Internal Medicine, University of California, San Francisco2

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 are 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
![Graph showing time from request to order placement before and after implementation.]

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.
VAMC EDPACT QI Projects (2 of 6)

Increasing Surveillance of Glycemic Control Among Hard-to-Reach Diabetics

Ari Hoffman\textsuperscript{2}, Ateeq Patel\textsuperscript{2}, David Lange\textsuperscript{2}, Morgan Fitzpatrick\textsuperscript{3}, Robert Wirka\textsuperscript{2}, Sunita Puri\textsuperscript{2}, Susan Janson\textsuperscript{2} and Maya Dula\textsuperscript{\textsuperscript{1}}

Special acknowledgement to SFVA staff: Yusuf Lee, Lynne Palaad, RN and the entire Medical Support Assistant staff
Department of Internal Medicine, SFVAMC\textsuperscript{3}; Department of Internal Medicine, UCSF; Department of Nursing, UCSP\textsuperscript{3}

**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 team’s 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.
Ambulatory QI: VAMC Projects

VAMC EDPACT QI Projects (3 of 6)

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 Dharva 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 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
VAMC EDPACT
QI Projects (4 of 6)

Improving Rates of Annual LDL Checks in Patients with Diabetes
Nicole Chua, Aferdita Saphillari, 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.
• Further research still needed to determine effects of pay-for-performance on patient outcomes.

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
- 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%

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.

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.

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.

Advisory Council: Shonnie Cahetic, RN, Adriana Navarro, LVN, Carlos Herrera
VAMC EDPACT QI Projects (5 of 6)

Use of a Hepatitis C Template to Improve Adherence to Recommended Guidelines
Praveen Panguluri, 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 VAMC 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 VAMC providers (National VA Database thru July 2011, N=220) showed that “86% 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 test 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:1,11]
  - Most recent viral load: [HCV VIRAL LOAD:2.99]
  - Hx Hx:
  - Hx?:
  - HIV status: [HIV 1 ANTIBODY:1.99] HAV A/B testing/vaccine date: [HAV A/B TOTAL:10,59]
  - IMMUNIZATIONS [PCE]: 30] [remove or change to flu react only]
  - If cirrhotic, u/s and AFP q 6 mos:
    - AFP [MP]:1599]
    - Abdominal [IMAGING REPORTS]: 65]
  - Liver clinic referral: DTC or Fort Miley

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.
Ambulatory QI: VAMC Projects

VAMC EDPACT QI Projects (6 of 6)

Improving Healthcare Maintenance (HCM): Implementation of an Enhanced HCM Template

Amber Briner, NP, Daniel Westerdahl MD, Jeffrey Dixson MD, Jesse Keller MD, James Andrews MD
San Francisco Veterans Administration and University of California EDPACT, San Bruno

Background

- 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

Baseline Data (extracted from CPRS Dashboard)

<table>
<thead>
<tr>
<th>Quality Measure</th>
<th>Actual %</th>
<th>Target %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes Mellitus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LDL measured annually</td>
<td>86</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>17.9</td>
<td>19</td>
</tr>
<tr>
<td>BP &lt; 140/90</td>
<td>83.2</td>
<td>78</td>
</tr>
<tr>
<td>Ischemic Heart Disease</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>

Project Goals

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

Results

<table>
<thead>
<tr>
<th>Activity</th>
<th>Average Response of Users</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 (e.g., 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 JoAnne Saw & Dr. Shalini Patel for their assistance with developing the project. A special thanks to Dr. Meg Pearson, Dr. Blina Lu, and the SFVA EDPACT-1P students for their assistance with piloting the template and providing feedback.
SFGH General Medicine Clinic (GMC)

The Primary Care (SFPC) Residents and the categorical GMC residents each receive a unique QI curriculum during their continuity clinic experience. All residents in the HEAAT pathway attend ambulatory Patient Safety M&M conferences on Friday mornings.

**SFPC Curriculum**

- **Didactics**: 9-10 half day sessions (Thursday Mornings) during block time
- **Project**: Required individual (or small group) QI project

**Categorical Curriculum**

- **Didactics**: Four 45 minute sessions dedicated to Patient Safety of QI during GEMS time (Monday and Tuesday)
- **Project**: Group clinic QI for all residents in a particular clinic day

**Ambulatory M&M Patient Safety Conferences**
SFGH General Medicine Clinic

**Categorical GEMS Curriculum:**
- Curriculum is taught during a 30 min didactic session each month.
- Residents have an additional 30 minute clinic slot every 2 weeks for panel management and admin time.

**GEMS Sessions Include:**
- Intro to GEMS & Huddle with primary preceptor
- Managing your Mailbox
- Managing your e-referral Worklist
- How to use QI data & Intro to the Firm QI Metrics Challenge
- Huddle with MEAs
- Chronic Pain Management
- Buprenorphine
- Panel Management
- Effective Note writing
- Working with RCNPs
- Remote Communication/ Telephone Visits
- Interpreters
SFGH General Medicine Clinic

Categorical QI Sessions:
- Four 45 min didactic sessions covering core QI topics taught monthly, January through April. Sessions also allow time for advancement of clinic-based QI projects.

QI Session Topics:

1. AIM statements and PDSA cycles
2. Measuring for QI
   - Review process, outcome, and balancing measures
3. Ambulatory safety and safety tools:
   - Introduction of RCA and fishbone
4. Analysis of project to date:
   - Revisit AIM statement, compare current metrics with baseline metrics, adjust project
SFGH Categorical Clinic Projects

Two QI projects were completed during the 2011-2012 academic year (1 of 2)

Improving Health Care Maintenance at SFGH Monday General Medicine Clinic
Mohammed Bailony, Gregory Burrell, Melissa Capule, Sarah Goglin, Khoa Lam, Cason Pierce, Mitchell Psotka, Leticia Rolon, Jennifer Ross, Mabel Toribio, Brandon Wiley, Claire Horton, General Medicine Clinic, San Francisco General Hospital

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.
7. Gathered feedback of MEAs/residents who participated in trial.
8. Made changes to checklist based on feedback.

Results / Progress to Date

- MEA checks yes/no for each NCM item on checklist prior to rooming patient.
- Resident completes completion of NCM screening.
- Health care maintenance completed.

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 MA’s).
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 12 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.
SFGH Categorical Clinic Projects
Two QI projects were completed during the 2011-2012 academic year (2 of 2)

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

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.

Post-Intervention Process Map

General Medicine Clinic, San Francisco General Hospital -- UCSF Department of Medicine
The ambulatory patient safety M&M is a bi-monthly 60-minute conference dedicated to reviewing cases in the General Medicine Clinic at SFGH.

**Goal:** To provide a safe environment to discuss cases which highlight issues in patient care related to ambulatory systems of care, care processes, care transitions, professionalism, and inter-professional communication.

**Specific Objectives:**
- Understanding and analyzing errors and adverse events
- Identifying systems failures and opportunities to improve systems
- Embracing a multidisciplinary approach as the standard
- Integrating lessons into a culture of quality and safety

**Five Conferences were held during the 2011-2012 academic year**
Signout
**Signout Curriculum**

**Objectives:** To create and deliver a brief curriculum with didactics, repetition, and real time feedback, targeted towards improving the consistency and quality of intern signout.

**The curriculum emphasizes:**

1. The opportunity for medical errors when inter-professional communication is poor
2. The importance of MD to MD signout
3. Techniques for high quality and consistent written and verbal signout
4. Opportunities for practice/repetition of techniques and feedback on written/verbal signout

**Sessions & Timeline:**

```
<table>
<thead>
<tr>
<th>Session</th>
<th>Timeline</th>
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<tbody>
<tr>
<td>1st Rotation</td>
<td>(6/21-7/21)</td>
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<td>2nd Rotation</td>
<td>(7/22-8/21)</td>
</tr>
<tr>
<td>3rd Rotation</td>
<td>(8/22-9/21)</td>
</tr>
<tr>
<td>4th Rotation</td>
<td>(9/22-10/21)</td>
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<table>
<thead>
<tr>
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<th>Noon Conf</th>
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<tbody>
<tr>
<td>7/28</td>
<td>VA: 8/5</td>
</tr>
<tr>
<td></td>
<td>Moffitt: 8/8</td>
</tr>
<tr>
<td></td>
<td>SFGH: 8/12</td>
</tr>
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```
<table>
<thead>
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<tbody>
<tr>
<td>VA, SFGH,</td>
</tr>
<tr>
<td>Moffitt: TBS</td>
</tr>
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</table>
```

```
<table>
<thead>
<tr>
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<th>AUGUST</th>
<th>SEPTEMBER</th>
<th>OCTOBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intern</td>
<td>Noon Conf</td>
<td>Noon Conf</td>
<td></td>
</tr>
<tr>
<td>Orientation</td>
<td>Early Oct</td>
<td>Early Oct</td>
<td></td>
</tr>
<tr>
<td>(6/17)</td>
<td>VA, SFGH,</td>
<td>VA, SFGH,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Moffitt: TBS</td>
<td>Moffitt: TBS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TBS</td>
<td>TBS</td>
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</table>
Discharge
Discharge Curriculum

**Objectives:** To create and deliver a brief curriculum with didactics, repetition, and real time feedback, targeted towards improving the consistency and quality of discharge plans. This mini-course will lay the groundwork for the rollout of the Discharge Entrustable Professional Activity (EPA) in the fall of 2011.

**The curriculum emphasizes:**
1. The importance of discharge plans in providing safe patient care and reducing preventable readmissions
2. A framework for thinking about the entire discharge plan (using a simple checklist)
3. Techniques for high quality, timely, and consistent discharge summaries
4. The essential elements clear communication at discharge
5. Opportunities for practice/discussion of the elements of discharge planning
Discharge Curriculum Sessions & Timeline

Four sessions were held during the first 4 months of the academic year:

- **Intern Half Day:** 1 hour didactic session demonstrating good practices in writing discharge summaries.
- **Noon Conference:** 2 lunchtime sessions which briefly cover objectives 1-4 above.
- **Review of Discharge Summaries at Intern Report:** Interns were an opportunity to review and give feedback on the quality of their own discharge summaries.
Discharge Curriculum

The discharge intern report session was well received by the interns. The curriculum was presented in abstract form at multiple conferences and won a Cooke Award for Teaching at the UCSF Medical Education Day.

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.
- 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 existing peer-to-peer feedback program 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 1) 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

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

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have received prior instruction on discharge summary skills during residency</td>
<td>(1-5)</td>
<td>3.85</td>
</tr>
<tr>
<td>I believe that interns should continue to hold the primary responsibility for dictating discharge summaries</td>
<td>(1-5)</td>
<td>3.89</td>
</tr>
<tr>
<td>I am satisfied with my discharge summary quality</td>
<td>(1-5)</td>
<td>3.83</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
<th>MEAN</th>
<th>% N 4 or 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is useful to develop discharge summary skills</td>
<td>(1-5)</td>
<td>4.82</td>
<td>98%</td>
</tr>
<tr>
<td>All interns rotating on Medicine should receive this curriculum</td>
<td>(1-5)</td>
<td>4.75</td>
<td>95%</td>
</tr>
<tr>
<td>The peer-to-peer feedback portion of the training was executed in a comfortable manner</td>
<td>(1-5)</td>
<td>4.29</td>
<td>82%</td>
</tr>
<tr>
<td>The peer-to-peer feedback portion was helpful</td>
<td>(1-5)</td>
<td>4.24</td>
<td>85%</td>
</tr>
<tr>
<td>I would have had this additional teaching earlier in internship</td>
<td>(1-5)</td>
<td>3.85</td>
<td>65%</td>
</tr>
</tbody>
</table>

Table 3: Group Discussion Feedback Summary

Areas of Improvement:
- Communication
- Clear, concise, and meaningful correspondence
- Efficient and comprehensive summaries

Future Best Practices:
- Ongoing feedback and improvement
- Tailored feedback based on individual needs

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 on post-discharge quality metrics including:
  - Rates of POC 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 more ongoing, real-time, and substantive feedback to interns and residents about their skills in discharge planning.

Acknowledgments

Special thanks to Michelle Moore MD, Suzanne Tsai MD, and Brian Share MD for their assistance in providing feedback on various elements of the discharge planning curriculum, and to the UCSF intern/medicine chief residents cohort 2011-2012 and UCSF department of internal medicine for helping to facilitate the execution. This project is part of the Educational Innovation Project (EIP) at UCSF.
I. Rationale for Teaching QI and PS
II. Global Goals and Objectives
III. Core Concepts and Tools
IV. Mapping to ACGME Milestones
V. Overview - Organization and Delivery
VI. Detailed Description by Program
VII. Next Steps
Four potential areas to target for improvement in 2012-2013...

• **Outpatient QI**: Expand ambulatory QI/PS curriculum to include Mount Zion Medical Clinic

• **Patient Care Data**: Continue efforts to build systems for ongoing patient care data feedback to residents in the inpatient and outpatient settings

• **Integration**: Continue to improve integration of QI/PS teaching across all sites

• **Evaluation**: Develop a robust evaluation system to better understand strengths and weaknesses of curriculum