Second Annual
Integrating Quality Symposium:
Linking Clinical and Educational Excellence

Education Building, Lecture Hall 1222
March 6, 2012

Agenda

7:30
Poster Viewing and Continental Breakfast

8:30
Welcome and Introductions
Frederick J. Meyers, MD, Executive Associate Dean, School of Medicine

9:00
Keynote
Measuring Patient Outcomes for Performance and Learning
Brent James, MD, M.Stat, Chief Quality Officer, Intermountain Healthcare, Executive Director, Institute for Healthcare Delivery Research

9:45
Collaborative Quality Improvement
Ulfat Shaikh, MD, MPH, Director of Quality Healthcare Integration, UC Davis Schools of Health

10:15
Implementation of a Transformational Program to Integrate Quality and Safety Initiatives with Graduate Medical Education
Ann Madden Rice, CEO, UC Davis Medical Center, and Wendy Nugent, MSN, Medical Education Quality Improvement Coordinator

10:30
Break

10:45
Addressing Medication Errors in a Just Culture
Jennifer Mattice, RN and Amy Doroy, RN, BSN

11:00
Integrating Quality and Clinical Excellence: The Development of a Real-Time Intra-operative Surgical Skills Grading Scale
Thomas Powers, MD

11:15
Improving Weekend Discharge Process for Patients Being Discharged on Oral Anticoagulation Therapy
S. Mayberg, PA-C, F. Tanner-Corbett, PA-C, S. Ganga, RN, F. Kromah, MD
J. Sullivan, MD, J.N. Young, MD

11:30
Association Between Surgical and Patient Characteristics and the Outcome of Patient Time in the Post Anesthesia Care Unit
Lawrence Ong, MD, Charandip Sandhu, MD, Harmeet Bhullar, MD, Rostam Bakhtari, MD, Matthew Stanich, MD
11:45  **Children’s Asthma Care; Implementing Epic EMR Tools to Achieve 100% Adherence with Discharge Planning** - **Contact Kristy Trouchon for more information**
Nicole Chao, MD, Pamela Mooney, RN, MSN

12:00-1:15  Lunch and Poster Viewing on First and Second Floors

1:20  **Keynote**

*Achieving Clinical Integration: An Emerging Core Competency for American Healthcare*
Kenneth W. Kizer, MD, MPH, Distinguished Professor, University of California Davis, School of Medicine and Betty Irene Moore School of Nursing and Director, Institute for Population Health Improvement, UC Davis Health System

2:00  **Department of Physical Medicine and Rehabilitation: Medication Reconciliation Quality Improvement Project**
Jeremy Wren, DO, Ryan Hoke, MD

2:15  **Teaching Internal Medicine Interns Lean Principles While Improving the Process of Obtaining Outside Medical Records**
Craig Keenan, MD, Raminder Gill, MD

2:30  **Identification of Stroke Risk Among Members of the Sacramento-Area Hmong Community and Outreach Programs for Primary Stroke Prevention**
James Ha, MD

2:45  Break

3:00  **Assessing the Quality of Diabetes Care at Paul Hom Asian Clinic (PHAC)**
Simon Wu, MS2

3:15  **Primary Care Physician Perspectives on Access to Mental Health Notes**
Jessica Ferranti, MD, Kristina Antonson, MD, Emily Porch, MD, Emily Dahod, MD, Rodney Yarnel, MD, Matthew Soulier, MD, Adnan Pakyurek, MD

3:30  **Building Strong Teams: Effects of a Medical Student/Nurse Shadowing Experience**
Amy Doroy, RN, BSN, Jann Murray-Garcia, MD, MPH, Tonya Fancher, MD, MPH, FACP

3:45  **Improving Compliance with National Guidelines for Epilepsy Management in Outpatient Clinic**
Sasha Duffy, MD

4:00  Wrap-up

Final Draft Agenda – March 5, 2012 - KB
Welcome

- Second annual symposium
- Very proud of UC Davis Health System and YOU!
- Leading national efforts
- Importance of linking education with clinical projects
- Interprofessional teams
Welcome

- 2 keynote speakers
- 13 podium presentations
- 56 poster presentations
- Residents, School of Nursing, School of Medicine, Informatics and Public Health students, faculty, fellows, nurses, CSU Sacramento students, pharmacy... more?

Symposium Committee

- Interprofessional
- Breadth of expertise
- What do we do?
  - Encourage and invite participation
  - Review all abstracts
  - Planning
  - Outcomes
Committee Co-Chairs

- Ulfat Shaikh, M.D., M.P.H., Associate Professor, Pediatrics, and Director, Healthcare Quality Integration
- Frederick J. Meyers, M.D., M.A.C.P., Executive Associate Dean, School of Medicine

Committee Members

- John Drummer, Academic Coordinator, Office of Health Education
- Roy Rai, M.B.A., Chief Administrative Officer, Office of Health Education
- Wendy Nugent, M.S.N., Medical Education Quality Improvement Coordinator, Graduate Medical Education
Committee Members

- Allan Siefkin, M.D., Chief Medical Officer, UC Davis Medical Center

- Jacqueline Stocking, R.N., M.S.N., M.B.A., Director, Quality and Safety, Patient Care Services, UC Davis Medical Center

- Deborah Ward, Ph.D., R.N., Associate Dean, Betty Irene Moore School of Nursing

Symposium coordinators

- Deb Patterson, Manager, Student Life, Office of Medical Education

- Kristy Bird Trouchon, Executive Analyst, School of Medicine
How it all works

- 2 rooms – broadcast from this room
- Q & A times follow podium presentations
- If people in the broadcast room have a question, let your room monitor know

How it all works

- Bathrooms are just outside the doors
- Please turn devices off or put them on mute
How it all works

- Agenda
- We must all keep on time
- Break mid-morning
- Lunch only for those who RSVP’d in advance

How it all works

- Your feedback is very important to us
- Two short surveys – one for presenters and one for attendees
- Surveys will be emailed today or tomorrow
- Please make sure the registration table has your email address
Poster presentations

- Poster presenters on 1\textsuperscript{st} and 2\textsuperscript{nd} floors during lunch hour
- Each poster represents good research and a lot of hard work
- Encourage you to see as many posters as you can and ask questions

So what does this all mean?
## Educational Competencies vs Quality of Care – IOM Definitions

<table>
<thead>
<tr>
<th>Educational Competencies</th>
<th>Quality of Care – IOM Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>Pt-Family Centered Care</td>
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<tr>
<td>Communication</td>
<td>Effective Care</td>
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<td>Case Management</td>
<td>Efficient Care</td>
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<td>Systems Based Practice</td>
<td>Safe Care</td>
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<td>Practice Based Learning</td>
<td>Timely Care</td>
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<tr>
<td>and Improvement</td>
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<td>Professionalism</td>
<td>Equitable Care</td>
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<tr>
<td>Clinical Translational</td>
<td>(Population Health)</td>
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<tr>
<td>Research</td>
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### Competencies

- Institutional and programmatic resources must be aligned with education and quality programs
Competencies of a health-care organization

- **Knowledge:**
  - Range of expertise
  - Dissemination of new knowledge

- **Patient care:**
  - Are standards of competency maintained?

Competencies of a health-care organization

- **Problem-Based Learning Initiative (PBLI) and Systems-Based Practice (SBP)**
  - Are goals established and measured?
  - Are deficiencies acted upon?
  - Are resources allocated?
  - Are systems developed that support care: teams, eHR, work hours
Competencies of a health-care organization

- **Professionalism**
  - Are the needs of patients and region served?
  - Is everyone treated with respect and compassion?
  - Are professionalism, civility, non-harassment and principles of community upheld and enforced?

An example we can do together:
### Linking education, quality and organizational resources

<table>
<thead>
<tr>
<th>Clinical Goal</th>
<th>Core Education Competencies</th>
</tr>
</thead>
</table>
| Palliative Care- End Of Life (EOL) | • Pain assessment  
• Opioid Pharmacology  
• Family conference  
• Foresee prognosis (triggers) and foretell (communication) |

### Palliative Care and End of Life (EOL) care

- Pain assessment
- Opioid Pharmacology
- Lead a family conference
- Foresee and foretell prognosis

<table>
<thead>
<tr>
<th>Quality Outcome</th>
<th>Organization Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain scores</td>
<td>PC consult service</td>
</tr>
<tr>
<td>Hospice LOS</td>
<td>IDT</td>
</tr>
<tr>
<td>360 degree evaluation: Patient/Family/Staff</td>
<td>CLAS</td>
</tr>
<tr>
<td>Site of death</td>
<td>Interpreting services</td>
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</tbody>
</table>
**Triple Aim: We’re plugged in**

- Better health-care quality
- Reduce costs
- Improve population/public health

**Integrating Quality Milestones at UC Davis Health System**

- Dr. Shaikh - director in 2010
- Created network – all 5 University of California medical centers
- Support from UCOP Center for Health Quality and Innovation
Integrating Quality Milestones

- March 2011 – first Symposium at UC Davis Health System
- UC Davis Quality Improvement (QI) Student Interest Group created
  - Connects with Institute for Healthcare Improvement’s Open School for Health Professions

Integrating Quality Milestones

- Medical Student Orientation – focus on systems that provide patient-centered care
- School of Medicine and Betty Irene Moore School of Nursing faculty developed interprofessional study model in health-care quality improvement
Integrating Quality Milestones

- Graduate Medical Education program engages residents

- Led by Ann Madden Rice, CEO, UC Davis Medical Center, and Wendy Nugent, M.S.N., Medical Education Quality Improvement Coordinator

Continuing Health Education also!

- UC Davis Health System achieved 100% compliance with VAP across all 7 ICUs (see poster)
  - Interdisciplinary team used Lean Six Sigma performance methods
  - 4 of 7 units decreased to zero zone at end of 2011
Scholars are the most enduring form of technology and information transfer

Keynote speakers

- Dr. Brent James – a.m. speaker
- Dr. Kenneth Kizer – p.m. speaker
Dr. Kenneth Kizer, M.D., M.P.H.

- Speaking after lunch
- Director, Institute for Population Health Improvement, and Distinguished Professor, School of Medicine and Betty Irene Moore School of Nursing

Dr. Kenneth Kizer

- One of the ‘100 Most Powerful People in Healthcare’
- Previous professional experience: Undersecretary of Health, U.S. Department of Veterans Affairs
- Founder, National Quality Forum
Dr. Brent James, M.D., M.Stat.

- Chief Quality Officer and Executive Director, Institute for Healthcare Delivery Research, Intermountain Healthcare

Dr. Brent James

- Known internationally for his work in clinical quality improvement, patient safety, and the infrastructure that underlies successful improvement efforts
Dr. Brent James

- Featured in the NY Times Magazine Article, “Making Health Care Better”
  - Nov. 3, 2009
  - “If health care is going to change, Dr. Brent James’ ideas will change it.”

Dr. Brent James

- Welcome!
Implementation of a Transformational Program to Integrate Quality and Safety Initiatives with Graduate Medical Education

March 6, 2012

Ann Madden Rice
Chief Executive Officer
UC Davis Medical Center

and

Wendy Nugent
Medical Education
Quality Improvement Coordinator
UC Davis Medical Center
Integrating Quality & Safety Initiatives with Graduate Medical Education

- **Contextual origin:**
  - Genesis to address ACGME, TJC, & quality patient care requirements
  - Program to transform how quality education is integrated into GME
  - Engage all 23 Residency Programs in IQ initiatives through experiential learning
  - Produce quality-focused outstanding clinicians now and in the future

- **Development**
  - Focus on immediate needs and goals that could be accomplished by June 2012
  - Development basic framework for the pilot program

- **Implementation and support**
  - Define position expectations
  - Designate a quality improvement coordinator for graduate medical education
Integrating Quality & Safety Initiatives with Graduate Medical Education

- **Guiding principles to transform culture from:**
  - Association of American Medical Colleges (AAMC)
    - TEAMS model = Team training, Education, Analysis, Methods, Safety and quality principles
  - Lean Six Sigma
    - Use of Plan-Do-Check-Act (PDSA), templates & required metrics & analysis of outcomes
  - The Joint Commission: leaders provide opportunities for all to participate in quality & safety initiatives.

Integrating Quality & Safety Initiatives with Graduate Medical Education

- **Beginnings and determining approach:**
  - Integrating quality initiative that was a choice of the residents in each residency program with guidance from the Residency Program Training Directors.
  - Required to submit abstract on IQ initiative for: “Integrating Quality: Linking Clinical and Education Excellence,” March 6, 2012, Education Building
Integrating Quality & Safety Initiatives with Graduate Medical Education

- **Framework and guidelines:**
  - Developed templates and charters based on LEAN principles for standardized development and documentation for integrating quality initiatives
  - Met individually with all 23 residency training program directors
  - Developed timelines and deadlines

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- **Template and charter elements:**
  - Identification & justification for project
  - Leader(s):
    - Residency Training Program Director
    - Resident champion(s)
  - Problem(s) or concern(s)
Integrating Quality & Safety Initiatives with Graduate Medical Education

- *Template and charter elements, con’t:*
  - Objective(s)
  - Identification & justification for project
  - Definition & scoping
  - Metrics
  - Goals & benefits

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Integrated Quality & Safety Initiatives with Graduate Medical Education

- **Status:**
  - Integrating quality initiatives & abstract submitted to symposium committee by all 23 programs, & some multiple abstracts
  - Looking at lessons learned, future plans, & expanding experiential learning for all student learners for life-long learning
  - Increased collaboration throughout the Health System with resident-generated integrating quality initiatives as culture changes
Questions?
Integrating Quality Symposium

Addressing Medication Errors in a Just Culture

Jennifer Noble Mattice, RN, BSN
Amy Doroy, RN, BSN

NRS 206 Community Connections

• Project to address patient safety related to medication errors utilizing the principles of a Just Culture

• Root Cause Analysis

• PDSA Cycle (Plan-Do-Study-Act)
P is for PLAN

• Attend Just Culture Training

• Review the incident reports

• Observe staff work flow patterns

• Report our findings

D is for DO

Just Culture
• Created by David Marx
  – Whack A Mole

• Safety-supportive System

• Shared Accountability
  – Administration
  – Staff
  – Visitors
Just Culture

- Create a Learning Culture
- Create an Open and Fair Culture
- Design Safe Systems
- Manage Behavioral Choices

S is for STUDY

- Human Error
- Risky Behavior
- Reckless Behavior
Results  N=50

Documented Medication Related Incident Reports

- Human Error: 28
- Risky Behavior: 21
- Reckless Behavior: 1

A is for ACT

- Report back to our preceptor
- Report back to QI
  - Detailed description of findings
  - Identified areas of risk
  - Provided recommendations
  - Included exemplary contributions
PDSA Model

- Plan
- Do
- Study
- Act

Summary

First, Do No Harm
To Err Is Human
Building a Safer Health System
QUESTIONS...
Integrating Quality and Clinical Excellence: The development of a Real-Time Intraoperative Surgical Skills Grading Scale

Thomas W. Powers, MD
Resident, Orthopedic Surgery

Rolando Figueroa Roberto, MD
Associate Clinical Professor
Residency Director,
UC Davis Department of Orthopedics

3/5/2012

Acknowledgments

• OMEGA and AOA
• Co-authors:
  – Jacob Gire, BS, UCD SOM MS2
  – Blythe Durbin-Johnson MPH,
    UC Davis School of Public Health and Clinical Translational Science Center
  – Margaret MacNitt, BS
    UC Davis Residency Program Coordinator

3/5/2012
Disclosures:

• No relevant financial relationships exist related to this research project

Background

• Evolution of surgical education from:
  – “See one, do one, teach one”

• Demonstration of surgical proficiency during residency
  – Documentation of case volume

• External agency interest in “Core Competencies”
What are the Six Core Competencies & Do They apply to training of a Surgeon

- Interpersonal & Communication Skills
- Medical Knowledge
- Patient Care
- Practice Based Learning & Improvement
- System Based Practice
- Professionalism

Why is there no Measure for Surgical Proficiency?

The Core Competencies were developed by non surgical educators

Surgeons have not critically evaluated teaching methods used to teach surgical skills

We strive to integrate and adapt to ACGME recommendations
Can we measure resident acquisition of surgical skills?

- If we would like to assess residency acquisition of surgical skills we need to have measures of performance.
- Existing tools have been applied in General Surgery, OB/Gyn, Orthopedics in Britain and Canada.

What we have done

- Operative competencies linked to departmental intranet (Web based)
- Intranet site has list of recommended cases for operative competency
Intranet site has list of procedures for operative competency grading

### Operative Competencies in Orthopedics

<table>
<thead>
<tr>
<th>Hand Rotation</th>
<th>Spine Rotation</th>
<th>Trauma Rotation</th>
<th>Foot Rotation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Trigger finger release</td>
<td>1. Intervertebral disk herniation</td>
<td>1. Distal radius</td>
<td>1. Simple ankle amputation</td>
</tr>
<tr>
<td>2. Carpal tunnel release</td>
<td>2. Lumbar herniation</td>
<td>2. Ankle</td>
<td>2. Tibial posterior tibial tendon</td>
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<tr>
<td>5. Common extensor</td>
<td>5. Total Knee</td>
<td>5. TKA</td>
<td>5. Steps for primary ankle fusion</td>
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<thead>
<tr>
<th>Joint Rotation</th>
<th>Pedis Rotation</th>
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<tbody>
<tr>
<td>Knee Arthroscopy</td>
<td>Knee Arthroscopy</td>
</tr>
<tr>
<td>Primary Total Knee</td>
<td>Primary Total Knee</td>
</tr>
<tr>
<td>Cerebral Preservation Surgery on the Knee</td>
<td>Cerebral Preservation Surgery on the Knee</td>
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### Operative Competencies in Orthopedics

#### KAISER ROTATION
1. Reduction and percutaneous screw fixation for femoral neck fracture
2. Femoral osteosynthetic nail for intertrochanteric or proximal femur fracture
3. Closed reduction and percutaneous screw fixation for femoral neck fracture
4. Total knee replacement
5. Bilateral radius fracture ORIF
6. Both bone forearm fracture ORIF
7. Others high volume Kaiser procedures

#### PG3 COMPETENCIES
1. ORIF Bil/Tibial
2. ORIF Distal Radius
3. ORIF Ulna/Clearence
4. IMN Tibia
5. IMN Femur
6. Arthroscopy Knee (Bilateral/Medial/Lateral/Chondroplasty)
7. Arthroscopy Shoulder (Arthroscopic subacromial decompression/rotator cuff tear)
8. Elbow Arthroscopy
9. Distal Radius Fractures
10. TKA

#### EMERGENCY ROOM COMPETENCIES
1. Distal radius reduction, malrotation block
2. Ankle Reduction, -hip Ankle block
3. Short Leg Spent
4. Digital Block
5. Subclavicular (Knee, Elbow, Ankle, Wrist)
6. Skelatal or Skin traction
7. Long Leg Spent
8. Hip Reduction
9. Shoulder Reduction
10. BBFA Reduction

Kaiser Operative Site Case List for Competency Grading
**Global Rating Scale of Operative Performance**

Evaluator: __________________ Date: __________________

Resident: __________________ PGY: ____________

Operative Procedure: __________________ CPT Codes: __________________

<table>
<thead>
<tr>
<th>1. Knowledge of patient’s history and indications for surgery:</th>
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<tr>
<td><strong>Not yet proficient:</strong> no knowledge of history or indications for surgery.</td>
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<tr>
<th>2. Time and motion:</th>
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<tr>
<td><strong>Not yet proficient:</strong> inefficient time/motion and many unnecessary moves.</td>
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<tr>
<th>3. Instrument handling:</th>
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<tr>
<td><strong>Not yet proficient:</strong> repeatedly makes tentative or awkward moves with instruments/appropriate use of instruments.</td>
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<th>4. Knowledge of instrument:</th>
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<tr>
<td><strong>Not yet proficient:</strong> frequently asked for wrong instrument or used inappropriate instruments.</td>
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<th>5. Flow of operation:</th>
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<td><strong>Not yet proficient:</strong> frequently stopped operation and unsure of next move.</td>
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<th>6. Use of assistants:</th>
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<td><strong>Not yet proficient:</strong> consistently placed assistants poorly or failed to use assistants.</td>
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<th>7. Knowledge of specific procedure:</th>
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<tr>
<td><strong>Not yet proficient:</strong> deficient knowledge, needed specific instructions at most steps.</td>
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Assessment of faculty as educators

- Residents should also assess attending ability to serve as surgical educator
The ORR at the University of Alberta allows residents to provide feedback on the teaching and personality style of their operative mentors.

Please answer the following questions by indicating whether you:

- SA – strongly agree
- A – agree
- U – unsure
- D – disagree
- SD – strongly disagree

1. My preceptor has a pleasant personality.
2. I get along well with my preceptor.
3. My preceptor is enthusiastic about teaching.
4. My preceptor has a genuine interest in my progress.
5. I understand what my preceptor is trying to teach me.
6. My preceptor’s surgical skills are very good.
7. My preceptor gives me time to practice my surgical skills in the operating room.
8. My preceptor immediately takes the instruments away when I do not perform well.
9. Before the operation, my preceptor discusses the surgical technique planned.
10. Before the operation my preceptor discusses what part of the procedure I will perform.
11. My preceptor expects my surgical skills to be as good as his/her.

3/5/2012

Fundamental questions are provided regarding the structure of our operative teaching curriculum:

12. My preceptor gives me feedback on my performance.
13. My preceptor’s criticism is constructive.
14. The operations performed on this rotation are too complex for my level.
15. The elective operating room list has the right mix of cases to suit my training.
16. There are too many cases on the elective list to give me the opportunity to operate.
17. I get enough opportunity to assist.
18. There are enough operating room days per week for me to gain the appropriate experience.
19. More senior residents or fellows take away my opportunities to operate.
20. The number of emergency procedures is sufficient for me to gain the right operative experience.
21. The variety of emergency cases gives me the appropriate exposure.
22. My preceptor is in too much of a rush during emergency cases to let me operate.
23. I miss out on operative experience because of restrictions on working hours.
24. I have the opportunity to develop the skills required at my stage.
25. The atmosphere in the operating room is pleasant.

3/5/2012

Do residency duty hours affect your residents acquisition of operative experience?
Questions are posed which expose system issues that may affect resident performance and the capacity to perform operations.

26. In the operating room, I don't like being corrected in front of medical students, nurses and residents.
27. The nursing staff dislike when I operate as the operation takes longer.
28. The anesthetists put pressure on my preceptor to operate him/herself to reduce anesthetic time.
29. The staff in the operating room are friendly.
30. I feel discriminated against in the operating room because of my sex.
31. I feel discriminated against in the operating room because of my race.
32. I feel part of a team in the operating room.
33. I am too busy doing other work to go to the operating room.
34. I am often too tired to get the most out of teaching in the operating room.
35. I am so stressed in the operating room that I do not learn as much as I could.
36. I am asked to perform operations alone that I do not feel competent at.
37. When I am in the operating room, there is nobody to cover the ward.
38. I get paged during operations.
39. The level of supervision in the operating room is adequate for my level.
40. The operative cases are too long.

Early Results

Each resident was assigned 5 faculty members to grade

For purposes of resident anonymity, residents were de-identified (assigned code, same has been done to protect faculty privacy)

Responses to negative questions were reversed so that a score of 5 corresponded to a positive (eg. I feel discriminated against because of my sex)

Q37 No one to cover the ward when I am in the OR
Q38: I get paged during operations

Target score >4.
OREEM has been administered as pre intervention measure of OR environment and faculty eval as teachers

Department of Orthopaedics

Individual Data

Preliminary Intraoperative Skill Assessment Scores

Skill Evaluated

3/5/2012
Where does this fit in?

• Can we propose minimal expectations for Board Certification in General Orthopedics?
• Can we shorten residencies?
• Can we move to proficiency based training?
Mean Intraoperative Skills Assessment Score by Post-Grad Year

3/5/2012

Percentage of Residents receiving Satisfactory Grading by Post-Grad Year

3/5/2012
Next Steps

• Establishment of requirement for all core surgical skills to be graded prior to completion of residency program
• Feedback to individual faculty regarding participation in grading and negative OREEM subscore grades and negative narrative commentary

What is holding us up?

• Culture shift/inertia: What another compliance form? Faculty and residents
Improving Weekend Discharge Process for Patients Being Discharged on Oral Anticoagulation Therapy

S. Mayberg, PA-C, F. Tanner-Corbett, PA-C, S. Ganga, RN, F. Kromah, MD, J. Sullivan, MD, J.N. Young, MD

Background

- The Joint Commission of Accreditation of Healthcare Organizations (JCAHO) has identified anticoagulation therapy as one of the national patient safety initiatives
- Use of standardized protocols when prescribing and administering anticoagulation therapy
- Calls for education of patient, staff and trainees related to anticoagulation therapy
Goals

- We set out to improve weekend discharge processes related to patients being discharged on oral anticoagulation therapy with warfarin.
- This quality improvement project was focused on inpatient discharges in cardiac surgery patients.

Assessment

- Discharging patients on oral anticoagulation therapy includes many steps:
  - Failure to complete each of these steps can result in incorrect dosing of oral anticoagulant, improper patient education, incorrect follow up date, or failure to notify the follow-up clinic.

- Discharges were being completed by trainees with limited experience and no formal training in regards to the steps required to discharge patients on oral anticoagulation therapy.
Intervention

• Developed a check-list of each step required in the discharge process
• Distributed a card-sized laminated “badge-buddy” to each resident on our team
• Implemented a 5-minute power point educational session detailing each of the steps involved in discharging a patient on oral anticoagulation therapy
• Developed a patient-education “Smart-phrase” in EMR which was to be included in the anticoagulation discharge process

Discharge Check List

• Anticoagulation clinic referral ordered
• Anticoagulation pharmacist consulted #762-CLOT
• Coumadin Rx done for 2mg tablets, quantity of 60
• Pill divider ordered
• Patient education video ordered (code #128)
• Dot phrase (.ctsdischargecoumadin) added to discharge instructions and completed
Methods

• Chart review of patients discharged on weekend day with oral anticoagulation therapy with coumadin before and after intervention

• Evaluated 6 parameters
  – Anticoagulation clinic referral ordered
  – Anticoagulation pharmacist consulted
  – Coumadin Rx done for 2mg tablets, quantity of 60
  – Pill divider ordered
  – Patient education video ordered
  – Dot phrase added to discharge instructions

Results

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>PRE-INTERVENTION (n=15)</th>
<th>POST-INTERVENTION (n=12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticoagulation clinic referral</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>Contacted Pharmacist</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>2 mg pills #60</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>Pill Cutter</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>Video</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>Dot Phrase</td>
<td>11</td>
<td>12</td>
</tr>
</tbody>
</table>
Resident Education

- Resident self-evaluation of understanding of process after power-point educational session

Resident Self Evaluation Tool

**COUMADIN DISCHARGE EDUCATION RESIDENT SURVEY**

Date of Interview:

Training level:

For each item identified below, circle the number to the right that best fits your judgment of its quality. Use the scale above to select the quality number.

<table>
<thead>
<tr>
<th>The following questions will be used to help improve the session you just attended</th>
<th>Poor</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Rate the usefulness of this session</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. Rate the overall quality of the information provided</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. Rate the organization of the information provided</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4. Rate your understanding of the discharge process before the session</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5. Rate your understanding of the discharge process after the session</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Please return your survey to Melissa Garcia in the CT Surgery division office Cypress 2132.
Results

![Resident Self-Assessment of Understanding of Anticoagulation Discharge Process]

<table>
<thead>
<tr>
<th></th>
<th>Pre-Intervention</th>
<th>Post-Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series1</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>

Conclusion

- Complicated discharge processes can lead to patient safety concerns related to incorrect or incomplete discharge orders
- Simplifying these processes and implementing a formal educational session is one method to improve patient safety
- A brief educational session is effective in improving resident understanding of complicated discharge processes
- This can be applied to other complicated discharge processes
Association between surgical and patient characteristics and the outcome of patient time in the post anesthesia care unit

March 6, 2012

Rostam Bakhtari, MD
Harmeet Bhullar, MD
Lawrence Ong, MD, MEng
Matthew Stanich, MD, MPH

Background

• Post-anesthesia care unit (PACU) monitoring reduces morbidity and is the standard of care for postsurgical patients
• PACUs contribute to health care expense by providing continuous evaluation and specialized care
• Despite this standard of care and expense, few studies describe outcomes of patient time spent in the PACU before discharge
Purpose

• To describe the relationship between surgical and patient characteristics and the outcome of patient time in the PACU in order to:
  – Serve as a pilot study for future projects that expand qualitative and quantitative analysis
  – Optimize patient care in the PACU
    • Improve and maintain patient safety
    • Working efficiently

Methods

• Random sampling (N=100) of 4,827 patients transferred from UC Davis pavilion operating rooms to the pavilion PACU between July 1, 2011 and September 28, 2011.
• Cross sectional analysis of the following variables: age, gender, body mass index, initial body temperature in PACU, surgical time, PACU time (measured from arrival until discharge), location of transfer, and admitting service.
• Exclusion criteria: patients transferred to the intensive care unit or those who had missing data.
• Data were analyzed using SPSS (Version 20, IBM Corporation). P < 0.05 was considered statistically significant.
Table 1: Characteristics of a random sample of patients (N=100) transferred from the pavilion operating rooms to the post anesthesia care unit between July 1, 2011 and September 28, 2011.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n (%)</th>
<th>Mean (95% CI)*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (years)</strong></td>
<td></td>
<td>53.4 [49.7 – 57.1]</td>
</tr>
<tr>
<td>&lt; 65</td>
<td>70 (70)</td>
<td></td>
</tr>
<tr>
<td>≥ 65</td>
<td>30 (30)</td>
<td></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>41 (41)</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>59 (59)</td>
<td></td>
</tr>
<tr>
<td><strong>Body mass index</strong></td>
<td></td>
<td>29.0 [27.6 – 30.3]</td>
</tr>
<tr>
<td>&lt; 25</td>
<td>29 (29)</td>
<td></td>
</tr>
<tr>
<td>25 – 29.9</td>
<td>31 (31)</td>
<td></td>
</tr>
<tr>
<td>≥ 30</td>
<td>40 (40)</td>
<td></td>
</tr>
<tr>
<td><strong>Temperature (°C)</strong></td>
<td></td>
<td>36.4 [36.3 – 36.5]</td>
</tr>
<tr>
<td>&lt; 36</td>
<td>4 (4)</td>
<td></td>
</tr>
<tr>
<td>≥ 36</td>
<td>96 (96)</td>
<td></td>
</tr>
<tr>
<td><strong>Surgical Time (minutes)</strong></td>
<td></td>
<td>182.0 [112.4 – 251.5]</td>
</tr>
<tr>
<td>&lt; 60</td>
<td>25 (25)</td>
<td></td>
</tr>
<tr>
<td>60 – 119</td>
<td>29 (29)</td>
<td></td>
</tr>
<tr>
<td>≥ 120</td>
<td>46 (46)</td>
<td></td>
</tr>
<tr>
<td><strong>PACU Time (minutes)</strong></td>
<td></td>
<td>148.8 [125.7 – 161.0]</td>
</tr>
<tr>
<td>&lt; 120</td>
<td>52 (52)</td>
<td></td>
</tr>
<tr>
<td>≥ 120</td>
<td>48 (48)</td>
<td></td>
</tr>
<tr>
<td><strong>Discharged</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home</td>
<td>38 (38)</td>
<td></td>
</tr>
<tr>
<td>Floor</td>
<td>62 (62)</td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Characteristics of a random sample of patients (N=100) transferred from the pavilion operating rooms to the post anesthesia care unit between July 1, 2011 and September 28, 2011.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service</strong></td>
<td></td>
</tr>
<tr>
<td>Orthopedics</td>
<td>15 (15)</td>
</tr>
<tr>
<td>Oncology</td>
<td>4 (4)</td>
</tr>
<tr>
<td>Gynecology</td>
<td>18 (18)</td>
</tr>
<tr>
<td>Cardiothoracic</td>
<td>2 (2)</td>
</tr>
<tr>
<td>Plastics</td>
<td>7 (7)</td>
</tr>
<tr>
<td>Urology</td>
<td>8 (8)</td>
</tr>
<tr>
<td>Radiology</td>
<td>2 (2)</td>
</tr>
<tr>
<td>Neurosurgery</td>
<td>8 (8)</td>
</tr>
<tr>
<td>Gastrointestinal</td>
<td>7 (7)</td>
</tr>
<tr>
<td>Trauma</td>
<td>4 (4)</td>
</tr>
<tr>
<td>Transplant</td>
<td>7 (7)</td>
</tr>
<tr>
<td>ENT</td>
<td>4 (4)</td>
</tr>
<tr>
<td>Orthopedic Trauma</td>
<td>9 (9)</td>
</tr>
<tr>
<td>Pediatric</td>
<td>1 (1)</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>3 (3)</td>
</tr>
<tr>
<td>Vascular</td>
<td>1 (1)</td>
</tr>
</tbody>
</table>
Table 2: Patient time spent in post anesthesia care unit before discharge or transfer to hospital floor by patient characteristics between July 1, 2011 and September 28, 2011 (N=100)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>PACU Time (minutes)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt; 120 (n=52)</td>
<td>≥ 120 (n=48)</td>
</tr>
<tr>
<td>Age (years)</td>
<td>49.83</td>
<td>57.31</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>20</td>
<td>21</td>
</tr>
<tr>
<td>Female</td>
<td>32</td>
<td>27</td>
</tr>
<tr>
<td>Body Mass Index&lt;sup&gt;3&lt;/sup&gt;</td>
<td>29.1</td>
<td>28.8</td>
</tr>
<tr>
<td>Temperature (°C)</td>
<td>36.5</td>
<td>36.4</td>
</tr>
<tr>
<td>Surgical Time (minutes)</td>
<td>109.1</td>
<td>156.8</td>
</tr>
<tr>
<td>Transferred</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home</td>
<td>23</td>
<td>15</td>
</tr>
<tr>
<td>Floor</td>
<td>29</td>
<td>33</td>
</tr>
</tbody>
</table>

<sup>1</sup> Analysis of variance  
<sup>2</sup> Chi Square  
<sup>3</sup> Body mass index = mass (kg) / height (m<sup>2</sup>)  
P < 0.05 considered significant  
Continuous variable values are shown as mean

Table 3: Binary logistic regression analysis showing odds of patients spending 120 minutes or more in the post anesthesia care unit before discharge or transfer to the floor between July 1, 2011 and September 28, 2011 (N=100)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>N</th>
<th>Odds Ratio (95% CI)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 65</td>
<td>70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥ 65</td>
<td>30</td>
<td>1.48 (0.56 – 3.89)</td>
<td>0.427</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>41</td>
<td>1.28 (0.52 – 3.16)</td>
<td>0.595</td>
</tr>
<tr>
<td>Body Mass Index&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 25</td>
<td>29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 – 29.9</td>
<td>31</td>
<td>1.80 (0.55 – 5.94)</td>
<td>0.335</td>
</tr>
<tr>
<td>≥ 30</td>
<td>40</td>
<td>1.20 (0.41 – 3.53)</td>
<td>0.737</td>
</tr>
<tr>
<td>Temperature (°C)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥ 36</td>
<td>96</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 36</td>
<td>4</td>
<td>3.5 (0.27 – 44.60)</td>
<td>0.335</td>
</tr>
<tr>
<td>Surgical Time (minutes)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 60</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60 – 119</td>
<td>29</td>
<td>4.25 (1.16 – 15.55)</td>
<td>0.029</td>
</tr>
<tr>
<td>≥ 120</td>
<td>46</td>
<td>6.35 (1.86 – 21.73)</td>
<td>0.003</td>
</tr>
<tr>
<td>Transferred</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home</td>
<td>38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Floor</td>
<td>62</td>
<td>1.22 (0.46 – 3.25)</td>
<td>0.586</td>
</tr>
</tbody>
</table>

<sup>1</sup> Body mass index = mass (kg) / height (m<sup>2</sup>)  
P < 0.05 considered significant
Limitations

• Limited sample size
• Cross sectional analysis
• Other variables not analyzed
  – ASA status / comorbidity
  – Type of surgery
  – Type of anesthetic
  – Time of PACU admission versus staffing
• External validity
  – ICU patients and other operative sites excluded
  – Large tertiary hospital

Conclusion

• Patient time in the PACU is significantly associated with length of surgical time
• Patients with increased surgical times tend to spend more time in the PACU
• Future studies
  – Population based approach
  – Consolidate and expand covariates
  – Target specific strata of patients
UC Davis Health System
Physical Medicine & Rehabilitation:
Medication Reconciliation
Quality Improvement Project

Residents
Jeremy Wren, DO
Ryan Hoke, MD

Program Director
Carol Vandenakker, MD

Introduction

• Medication errors cause significant morbidity and mortality
• Costs the health care system millions of dollars each year in potentially preventable costs
• Accurate & consistent medication reconciliation is a key component for quality and continuity in patient care
  • Decrease medication errors
  • Decrease chance for adverse drug events
Outline

• Problem
  • Inconsistent performance of medication reconciliation by residents during outpatient clinic visits.
  • Neglecting to reconcile home medications is a potential safety concern
• Goals
  • Increase consistency of medication reconciliation by residents
  • Improve documentation of this action
  • Implement a patient-clinician partnership for intervention & improvement
• Context
  • PM&R outpatient clinics (ACC, Spine Center, and J Street Sports Medicine Clinic)

Problem Analysis

• How did we quantify problem?
  • EMR analysis requested to demonstrate current compliance rates
• How did we assess cause of problem?
  • Discussion held at quarterly PM&R CQI meeting and at multiple resident meetings with the program director
Methods

• Data collection
  • Retrospective data obtained from patient encounters for each current resident (8) in the department of PM&R
  • Request submitted to UCD EMR dept. Report assessed whether the 'Mark as Reviewed' button was clicked within the 'Review Home Medications' section of the rounding navigator.
  • 6 encounters reviewed for 8 residents = 48 (9 encounters excluded for 2 residents) \( \Rightarrow \) 39 total encounters included
  • This data was then analyzed according to the performing resident as well as analysis of the entire collection of these patient encounters to ascertain an overall compliance rate.

Pre-Intervention Data

• Wide variance in compliance
  • 0% - 100% compliance
• Medications were reviewed in 23 of 39 encounters
• Compliance rate of 59%
Identified Intervention #1

- Discussion with residents/faculty regarding potential system changes
  - Concerted effort for compliance and encouragement for the entire department to maintain consistency with the medication reconciliation process
  - Ownership encouraged

Identified Intervention #2

- Provide Printed medication reconciliation sheet to ALL patients prior to clinic encounter

How

- **Nursing/MA staff**: Print medication reconciliation sheet provided to each patient at clinic check-in
  - Encouraged sheet be filled out prior to physician encounter
- **Patient**: reviewed med reconciliation sheet and updated with corrections
- **Resident**: Discussed with patient as indicated, updated EMR and clicked ‘review home medications’ tab
Identified Intervention #3

- Changed refreshable link within clinic progress note template
  - Dotphrase changed to ‘actmed’
  - Only imports those medications marked as ‘taking’ during the medication reconciliation review
  - Med list remains blank within the progress note until medications are reviewed and note is refreshed
- Previous dotphrase would import all outpatient medications active within EMR whether reviewed or not
- Improves resident compliance and accuracy of documentation

Results

- Timeline: 6 wks
- Analysis was performed on the same clinics as previously analyzed
  - EMR analysis requested to demonstrate current compliance rates
- Due to resident rotation schedule and short time frame for analysis, data was limited to evaluation of only 26 encounters for 3 of the 8 residents
- Medication reconciliation was performed in 25 of 26 patient encounters
- After intervention the compliance rate improved from 59% to 96%.
Limitations

- Not all residents (3 of 8) were analyzed in post-intervention analysis
  - Pre-intervention compliance for these 3 residents was 50% (9 of 18)
  - Unclear if these results can be extrapolated to the entire group of residents.
- This study was an assessment of short term compliance with the goal of consistent medication reconciliation.
  - Analysis further out from implementation (~6 months) may provide a more accurate assessment of efficacy.

System Analysis

- Could this be a system level change to encourage greater compliance?
- What systems have others enacted which may be of utility?
    - 104 pt’s at Mayo primary care clinics
    - Phase 1 - standard care
    - Phase 2 - Mailed reminder letters before appointment for pt to bring medication bottles and/or updated lists
    - Results - Avg # of discrepancies per pt decreased > 50%, from 5.24 (phase 1) to 2.41 (phase 2)
    - Prospective analysis from 2005-2007 at Dana-Farber Cancer Institute (Boston)
    - Provided printed med list to pt prior to clinic to review. Pt returned to clinic with updated list. EMR was updated.
    - Results - At baseline 81% med lists had errors. With intervention 90% were corrected vs. 2% of patients who received “usual” care
Conclusions

- System interventions appear effective in improving the resident physicians compliance and accuracy in performing medication reconciliation in the outpatient setting.
- Incorporating ‘actmeds’ into progress note templates improves sustainability.
- Resident awareness of CQI project may have influenced post-intervention outcomes. Cannot differentiate which intervention contributed most.
- Multifaceted approach to improve clinical practice interventions to make the process more efficient and cues to remind providers that this was an important and necessary portion of the clinic visit.
- Our limited data is in line with improvements seen in larger samples sizes.
Teaching Internal Medicine Interns Lean Principles While Improving the Process of Obtaining Outside Medical Records

Integrating Quality Symposium
March 6, 2012

Craig Keenan, MD FACP
Raminder Gill, MD
Internal Medicine Intern Class
Department of Medicine

Outline

- Educational component
- Project development
- Project implementation and results
- Final thoughts
Intern Education

- Monthly Ambulatory block - 5-6 interns/month
- 2 hour seminar covering basics of quality assurance and quality improvement
  - What is quality?
  - Types of quality measures
  - How are they defined and by whom?
  - Limitations on measures
  - What are they used for?
  - Where are they reported? Examples shown...

Intern Education: Quality Improvement Methods

- “Every system is perfectly designed to achieve the results that it achieves.”
- You see a problem, you want to fix it. Now what.
- Cover PDSA methodology (old school....)
Intern Education: Quality Improvement Methods

- Lean methodology (new school....)
  - Lean principles
  - Waste

Lean principles

1. Specify value from the customer’s perspective (patient)
2. Identify the value stream for each product and remove the waste
3. Make value flow without interruptions from beginning to end
4. Let the customer pull value from the process
5. Pursue perfection – continuous improvement
**Lean principles**

1. Specify value from the customer’s perspective (patient)
   - What do we want to achieve for the patient?
2. Identify the value stream for each product and remove the waste
   - Make a flow diagram of current practice -- every step
3. Make value flow without interruptions from beginning to end
   - Remove wasteful steps and make the new flow diagram
4. Let the customer pull value from the process
   - See how the patients do with the new flow
5. Pursue perfection – continuous improvement
   - Assess the new flow, redesign it until best outcome with least waste.

**Lean Waste**

Lean focuses on the elimination of waste in a process.

- **Overproduction**
  Producing too much, or producing too soon
- **Transportation**
  Any nonessential transport is waste
- **Inventory**
  Any more than the minimum to get the job done
- **Waiting**
  Waiting for an appointment, for signatures, for a printer that has a long queue
- **Motion**
  Any motion that does not add value e.g. re-entering same information more than once
- **Intelect**
  Any failure to fully utilize the time and talents of people
- **Rework**
  Correcting any errors or doing completion steps not done before
- **Processing**
  Over-processing, unnecessary steps, signatures, reviews
Intern Education: Applying lean principles

- Done during the final 20 minutes of seminar:
  - Interns pick a problem
  - Flow out process as a group
  - Identify waste
  - Determine cause of waste
  - Redesign the flow

Intern Education: Applying lean principles

- After all interns completed seminar
- December - large group of interns selected a single daily, real-world problem to develop as a lean project
- Getting outside records when on inpatient services
  - Done very frequently
  - Very inefficient
  - Everyone does differently
  - Time-consuming
Lean Project: Outside Records

- January - session 1, all interns
  - Created flow diagram of current process.
  - Identified waste, discussed root causes

Lean Project: Outside Records

- January - session 2, all interns
  - Created new flow diagram with elimination of waste
Lean Project: Outside Records

- Key interventions
  - Contact info for 20 commonly used hospitals
  - Info on CareEverywhere for Sutter records
  - Centralized location
  - New fax machine for resident workroom
  - Records release forms put in room
  - New Fax coversheet to streamline request
  - Request/receipt log with contact info
  - Repository for records once received
Lean Project: Outside Records

- Data Collection (January)
  - Developed brief survey for interns
  - Collected baseline satisfaction with process and average time needed to request records
- Implementation began Feb 6th
- Reassess via survey out Feb 26th

Lean Project: Outside Records

1. How easy do you find the process involved to get outside records
   - Extremely easy
   - Very easy
   - Moderately easy
   - Slightly easy
   - Not at all easy
Results

Results: How much time on average do you spend doing the work to get the records?
Conclusions

- Residents are knowledgeable, invested, and very willing to participate in quality improvement projects.
- Using residents fits in with lean principles of getting line workers to devise the process improvements.
- Lean principles and processes are “easy” to teach and implement with residents where time is a limiting factor.

Conclusions

- New lean process may make getting outside records easier and more efficient for busy interns.
  - Caveat - response rate 61% on follow up, and only 3 interns have used the new system.
- If we were truly lean, physicians would not be responsible for this.
Next Steps

- Continue gathering follow-up data to complete the project

- Incorporate feedback from follow-up survey to further improve the process
  - Apply process to getting outpatient records

- Develop our next lean project!
Identification of Risk of Stroke Among Members of the Sacramento-area Hmong Community and Development of Outreach Programs for Stroke Prevention

James Ha, M.D.
PGYIII Department of Neurology
March 6, 2012

Integrating Quality: Linking Clinical and Educational Excellence Symposium

OUTLINE

- Introduction
  - Hmong People
  - Context/Problem
- Personal Experiences
- Strategy for Change
- Conclusion
- Questions
Introduction

- The Hmong are an Asian ethnic group from the highland regions of China, Vietnam, Laos, and Thailand. Thousands of political refugees have fled to Western countries since the 1970s.

- Approximately 250,000 people of Hmong descent live in the United States, 90,000 in California, 27,000 in Sacramento according to recent US census data.

Description of Problem

- The UC Davis Stroke Team suspected an excess rate and severity of strokes, and the presence of uncontrolled risk factors among members of the Hmong Community.
  - There is no word for “stroke” in the Hmong language.
  - No published literature exists regarding this UCDMC “institutional memory” of Hmong stroke risk.
  - No known specific efforts in primary stroke prevention in the Hmong community were known to exist in the Sacramento area.
Personal Experience

- Analysis of a convenience sample of 10 patients personally treated over 1.5 years was completed.
  - All had either undiagnosed or uncontrolled risk factors
  - Severity of strokes was significant based on modified rankin score analysis, ICU days and mortality.
- Goal to complete a systematic review of all Hmong Stroke cases at UCDMC.

Table 1: Hmong patients with stroke personally seen over 1.5 years

<table>
<thead>
<tr>
<th>Pt</th>
<th>Age &amp; Sex</th>
<th>Stroke Type</th>
<th>Initial BP</th>
<th>Uncontrolled Risk Factor</th>
<th>MRI or CT # ICU Days</th>
<th>DISPO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>46 F</td>
<td>Hemorrhage</td>
<td>300/180</td>
<td>HTN</td>
<td></td>
<td>Home</td>
</tr>
<tr>
<td>2</td>
<td>47 M</td>
<td>Ischemic</td>
<td>107/56</td>
<td>Afib, A1C 9.7, LDL &gt; 80</td>
<td></td>
<td>Home, died 2 mo</td>
</tr>
<tr>
<td>3</td>
<td>49 M</td>
<td>Hemorrhage</td>
<td>240/101</td>
<td></td>
<td></td>
<td>Home</td>
</tr>
<tr>
<td>4</td>
<td>54 M</td>
<td>Ischemic</td>
<td>198/125</td>
<td>HTN, LDL 167</td>
<td></td>
<td>Home</td>
</tr>
<tr>
<td>5</td>
<td>59 F</td>
<td>Ischemic</td>
<td>139/90</td>
<td>LDL &gt; 90, A1C 6</td>
<td></td>
<td>Home</td>
</tr>
<tr>
<td>6</td>
<td>62 M</td>
<td>Ischemic</td>
<td>180/143</td>
<td>HTN</td>
<td></td>
<td>Died, comfort care</td>
</tr>
<tr>
<td>7</td>
<td>68 M</td>
<td>Hemorrhage</td>
<td>170/98</td>
<td></td>
<td></td>
<td>Home</td>
</tr>
<tr>
<td>8</td>
<td>70 F</td>
<td>Ischemic</td>
<td>165/102</td>
<td></td>
<td></td>
<td>Home</td>
</tr>
<tr>
<td>9</td>
<td>78 F</td>
<td>Hemorrhage</td>
<td>250/130</td>
<td></td>
<td></td>
<td>Home</td>
</tr>
<tr>
<td>10</td>
<td>92 F</td>
<td>Ischemic</td>
<td>139/75</td>
<td></td>
<td></td>
<td>Home</td>
</tr>
</tbody>
</table>
Pre and Post Stroke Modified Rankin Scores

![Graph showing pre and post stroke modified Rankin scores](image)

**Strategy For Change**

- **Community Outreach Events**
  - Collaboration with the Hmong Woman’s Heritage Association of Sacramento
  - Health Fairs
  - Health classes in Hmong language
- **Stop Hmong Stroke Website**, [www.stophmongstroke.org](http://www.stophmongstroke.org)
- **Hmong Newspaper and Radio education**
Hmong Family Healthy Day
8/13/2011

Hmong Woman’s Heritage Association Mini-Health Fair
10/10/2011
Health Fair Outreach Findings

- **Blood Pressure Findings:**
  - 2 people > 230/120
  - 5 people > 170/100
  - Over 10 people > 150/90
- Referred to nearest ED, urgent care or primary doctor
  - Many lacked health insurance
  - Primary care physicians were established as possible
- 1 person found to have irregularly irregular heart beat
HTN/Stroke Workshop Findings

- Multiple reasons for medication non-compliance
  - Lack of health insurance/funds
  - Side effects and perception that medication is worse than disease
- Mistrust of Western Medicine
- Language barrier
- Use of practices such as blood letting

Conclusion/Summary

- Stroke is a devastating event in the lives of many members of the Hmong community
- There are preventable risk factors such as HTN, DM, dyslipidemia related to stroke in the Hmong population.
- Importance of communication, education and cultural awareness to address compliance, perception of western medicine, language barriers and access to care.
- Plan for future systematic review and analysis of Hmong stroke patients treated at UCDMC
SPECIAL THANKS TO:

- Hmong Woman’s Heritage Association
- Dr. Vicki Wheelock, MD
- Dr. Patricia Zrelak, PhD, CNRN
- Dr. Piero Verro, MD

Questions?

Thank you for your attention
ADDENDUM

MODIFIED RANKIN SCALE

- 0: No symptoms at all
- 1: No significant disability despite symptoms; able to carry out all usual duties and activities
- 2: Slight disability; unable to carry out all previous activities, but able to look after own affairs without assistance
- 3: Moderate disability; requiring some help, but able to attend to own bodily needs without assistance.
- 4: Moderately severe disability; unable to walk without assistance and unable to attend to own bodily needs without assistance.
- 5: Severe disability, bedridden, incontinent and requiring constant nursing care and attention
- 6: Dead
Assessing the Diabetes Care at Paul Hom Asian Clinic: A Quality Improvement Study

Simon Wu, B.A. and Tonya L. Fancher M.D., M.P.H.
UC Davis School of Medicine, Internal Medicine

Learners

• Paul Hom Asian Clinic’s (PHAC) medical volunteers, including:
  • 1 medical director
  • 12 first-year medical students
  • 11 undergraduate students
Medical student-run free clinics are widespread

Integral in the care of the poor and underserved

Currently, not much known about their quality of care
Methods

Retrospective chart review (N=49)  
Feb-May 2011

QI intervention: educating medical volunteers (6 months)  
Jun-Dec 2011

Prospective chart review (ongoing with N=32)  
Jan 2012 - present

Compare to 2009 national HMO performance

Date/value of most recent HbA1c

Date/value of recent LDL

Value of most recent blood pressure

Date of most recent retinopathy screening

Date of most recent microalbumin test

Date/result of most recent foot exam
Pre-Intervention
(10th and 90th percentiles shown for commercial care)

![Graph showing Pre-Intervention data with 10th and 90th percentiles for commercial care.]

Intervention Phase

- **Tailored** QI based on where PHAC trailed national data
- **Educated** learners about pre-intervention results and their significance
- **Reminded** learners how to do proper screening
Specific Aim

- Improve our performance to exceed national mean values in screening for:
  - Retinopathy
  - Nephropathy
  - Neuropathy

From Pre- to Post-Intervention
Post-Intervention (Preliminary)

Discussion

• Education-based QI can improve diabetes management at student-run clinics

• Lessons learned:
  • Present data and goals succinctly
  • Be persistent and proactive with team
Challenges and Plans

• Sustainability and volunteer turnover
• Health record sheet
• Undergrad committee

Thank you!
Primary Care Physician Perspectives on Access to Mental Health Notes

Antonson, K. MD, Dahod, E. MD, Porch, E. MD, Yarnal, R., MD, Ferranti, J. MD, Pakyurek, M., MD, Soulier, M. MD.
University of California Davis Medical Center

Privacy and Psychiatry Documentation

1996: Jaffee v Redmond: Federal Psychotherapist-Patient Privilege
Privacy and Psychiatry Documentation

2000: HIPAA Medical Privacy Rule

2008: UCDMC psychiatry notes are included in EMR but are “sensitive”
Privacy and Psychiatry Documentation

July 2011: UCDMC psychiatry notes become accessible

What are the concerns?

- Patients: privacy, stigma/discrimination
- Psychiatrists: privacy, physician-patient relationship
Studies on the validity of concerns after implementation of EHR

- Patient satisfaction remained unchanged (Stewart)
- Majority of psychiatrists felt that open communication was preserved (Salomon)
- No studies found regarding stigma, discrimination, or privacy breaches

What about the benefits of psychiatry notes in the EHR?

- Patients recognize a potential benefit to their health (Simon)
- Can enhance alliance and understanding of mental illness (Lewis)
- No studies found examining PCP perspectives
Methods

• A ten question Likert-scale survey was developed by a group of adult and child psychiatry residents and faculty.

• The survey was sent electronically to 100 physicians in the UCDMC primary care network.

• Thank you to Kurt Slapnik, MD for assisting with distribution of the surveys.

Results

Awareness that Psychiatric Records are now Accessible to Other Clinicians

- Yes: 86%
- No: 14%

N = 22
Results

Improves Understanding of Management of Mental Illness

- Agree: 72.8%
- Neutral: 13.0%
- Disagree: 13.6%

N = 22

Results

Feel More Comfortable Discussing Mental Health Issues with Patients

- Agree: 95.5%
- Neutral: 4.5%

N = 22
Results

More Likely to Monitor and Treat Potential Side Effects of Psychiatric Medications

- Agree 77.3%
- Neutral 18.2%
- Disagree 4.5%
N = 22

Results

More Likely to Consider a Psychosomatic Etiology for a Patient's Medical Complaint

- Agree 40.9%
- Neutral 50.1%
- Disagree 9.0%
N = 22
Results

Saves Time in Encounters with Challenging Patients

- Agree: 85.4%
- Neutral: 13.6%
- N = 22

Less Likely to Contact Treating Psychiatrist

- Agree: 27.3%
- Disagree: 27.2%
- Neutral: 45.5%
- N = 22
Conclusions

• Our data suggests that PCPs perceive that access to psychiatric records has:
  – improved our patient’s care
  – improved communication between providers and patients
  – increased efficiency

• Limitations:
  – small sample size and response rate
  – lack of demographic information
  – potential for sample bias
Future Directions

• Expanding our data
  – Collecting demographic information
  – Collaborating with other medical centers
• Assessing the opinions of treating psychiatrists
• Assessing the opinions of our patients
• Further exploration of issues of stigma and bias that underlay controversies
Building Strong Teams: Effects of a Medical Student/RN Shadowing Program

Integrating Quality: Linking Clinical and Educational Excellence at UC Davis Health System Symposium

Amy Doroy
March 6, 2012

Background

- Institute of Medicine Report, 2010
- Association of American Medical Colleges Report, 2011
**Why IPE?**

- Decrease in hospital LOS
- Improved patient outcomes
- Increased work satisfaction

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devries, et.al. (2010). New England Journal of Medicine
Shreve, et.al. (2010). The economic measurement of medical errors
Zwarenstein, Goldman, Reeves (2009). The Cochrane Library

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**Description of Project**

- Race and Health Institute
  - 6 medical students

- TEACH-MS
  - 4 medical students
Description of Project

- 2 hour class on the history of medicine and nursing
- 6 hour RN shadowing
  - Location: SICU, BURN ICU, MICU
- Pre and Post questionnaires
  - Nurses and medical students

What are the 3 most important roles of a bedside nurse? (pre-shadowing)

Nurse:
- Patient/family advocate
- Provide education to patient/family
- Handles stressful situations
- Maintain patient safety
- Administer medications
- Time management
- Work collaboratively with team

Medical Student:
- Assist/serve doctor
- Execute MD treatment plan
- Show patience and compassion
- Monitor equipment

Care for patient
- Monitor patient progress

Pre-shadowing
What are the 3 most important roles of a bedside nurse? (post-shadowing)

- Time management
- Handle stressful situations
- Maintain patient safety
- Decrease patient stress
- Work collaboratively with team
- Patient/family advocate
- Administer medications
- Socialize with patient

Nurse’s Responses (post-shadowing)

- Was there anything that seemed to surprise the medical student about the role of the bedside nurse?
  - “How knowledgeable we were about the patients”
  - “How much we do in the absence of the doctor”
  - “They seemed surprised that there wasn’t more interactions between the nurses and MDs”
  - “Rapport we had with the family members”
Nurse’s Responses (post-shadowing)

- Is there any way this experience has changed you as a bedside nurse?
  - “Realized that med students are not taught what nurses do”
  - “I need to help educate and explain my role”
  - “Made me more empathetic to med students and interns”
  - “I have an appreciation of the fears and stressors of medical students”

Medical Student Responses (post-shadowing)

- Was there anything that surprised you about the role of the bedside nurse?
  - “How little doctors and nurses interact; mostly electronic”
  - “Nurses advocate for their patients to other departments, I thought it was MD role”
Medical Student Responses (post-shadowing)

What do you hope to never forget about what you learned about the bedside nurse?

- “To speak to the nurses- don’t rely on EMR”
- “To appreciate the nurse and what they do for the patients”
- “How professional and respectful the staff worked as a team during a crisis”

How do you hope this has changed you as a future physician?

- “I will never generalize about nurses being unskilled, unimportant, or aggressive”
- “I hope to be more aware of the complete team taking care of the patient and to be active in that team”
- “To be a physician that is respectful to the people I work with and remember their value”
Great partnerships — share common goals.

Don’t just rely on one easy answer, one email, one PowerPoint presentation, or some posters. A single 1-hour seminar, alone, will not break the silo. There is not one easy answer. It’s all the above and more.
Improving Compliance With National Guidelines For Epilepsy Management In Outpatient Clinic

Dr. Sasha Duffy
Dr. Daniel Goldenholz
Dr. Lisa Bateman

Outline

- The Problem
- The AAN Solution
- How To Change
- Our Track Record
- Outcome
- Future Work
Epilepsy Disease Burden

3% of Americans will develop epilepsy by age 75
Annual direct + indirect costs per pt >$14,000
Disparities exist across racial, ethnic and socioeconomic line for access to care
Lack of specialty care = delayed treatment
1 out of 3 patients will not achieve seizure freedom with medication therapy alone

Problems to tackle

Patients who could potential get curative surgery can wait an average of 20 years (thus, more injuries, seizures, decreased QOL)
AED use during pregnancy is associated with 2-3x risk of major malformations
Safety - seizure associated injury (fall, fracture, burn, drowning, MVA, etc), status epilepticus and sudden death
Medication side effects, > 40% of patients had - issue for compliance, seizure control, quality of life
The Problem For Epilepsy Patients In Clinic

- Key items need to be addressed:
  - Details about seizures
  - Medication side effects?
  - Surgical candidate?
  - Safety counseling
  - Pregnancy concerns
- But we don't always have time or incentive
- Large gaps in quality currently exist

The AAN Proposal

- Evidence-based 8 Measures of Quality
- These can be used for:
  - billing
  - quality assessment
  - maintaining certification
- The good news:
  - improve quality of care
- The bad news:
  - financial consequences are coming!
The AAN Quality In Epilepsy
8 Measures

- Seizure type, frequency
- Etiology of epilepsy
- EEG ordered/reviewed
- MRI/CT ordered/reviewed
- Medication side effects
- Surgical referral if indicated
- Counseling for safety
- Counseling women on pregnancy

Fountain et al 2011

Our Intervention

- Email with Fountain et al. paper
- Noon didactic
- Periodic text pages prior to clinic
- Change in the EMR template
- Emailed personalize report cards
- Verbal reminders
How we did this test

- UCD Neurology resident clinic
- Primary ICD9 code: “seizure” or “epilepsy”
- Baseline: 7/1/2011-9/30/2011:
  - 40 patients, 13 residents
- Test: 10/1/2011-1/9/2012:
  - 24 patients, 11 residents

Baseline Period

- All residents: 6.3 out of 8 measures (79%)
- Average resident: 6.2 of 8 measures (77%)
- Encounters with full compliance: 10 (25%)
- Worst compliance:
  - med side effects
  - safety counseling
  - pregnancy counseling
Test Period

- All residents: 6.2 out of 8 measures (78%)
- Average resident: 6.4 out of 8 measures (80%)
- Encounters with full compliance: 6 (26%)
- Worst compliance:
  - med side effects
  - safety counseling
  - pregnancy counseling
- Resident compared to him/her self:
  - 5 out of 11 show improvement

What Was Learned

- Reasons for non-compliance not fully understood
- Simple interventions made very small (not significant) improvement
- Time constraints for clinic encounters = major barrier to compliance
- Cumbersome documentation makes compliance less likely
Ways to Improve

- Further study into causes of non-compliance
- Introduce incentives for compliance
  - food, hall of fame, money
- Introduce dis-incentives for non-compliance
  - extra clinical duty, money
- Change EMR to REQUIRE certain fields
- Test residents and require 100% passing score on the 8 quality measures