Special GME Session

Patient Safety, Quality Improvement and Resident Education

Sunday April 25, 2010, 7-10 PM, Asilomar, CA
Patient Safety, Quality Improvement and Resident Education

• Patient Safety & Quality Improvement are central themes in health care today
Impact on resident education

- Restriction of duty hours, increased hand-offs
- Increased supervision, decreased autonomy
- Patient Safety & QI part of residency training
Speakers

• **Joseph York, PhD, MBA**, Assistant Dean for GME at the University of Southern California’s Keck School of Medicine in Los Angeles

• **John Q. Young, MD, MPP**, Assistant Professor of Psychiatry at UCSF

• **Arpana R. Vidyarthi, MD**, Associate Professor in the Division of Hospital Medicine at UCSF
The Relationship Between Fatigue and Errors and the Impact of Duty Hour Restrictions

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“Patients have a right to expect a healthy, alert, responsible, and responsive physician.”

January 1994 statement by American College of Surgeons
Re-approved and re-issued June 2002
“We all know that you stop learning after 12 or 13 or 14 hours. You don’t learn anything except how to cut corners and how to survive.”

--anonymous resident
Duty Hour Issues/Research Agenda

- Safety
- Professionalism
- Handoffs
ACGME Duty Hours

- Implemented July 2003
- 80 hours/week averaged over 4 weeks
- 10 hour break
- 1 day off in 7 averaged over 4 weeks
- Max in house call 24+6
What is the evidence that GME duty hour restrictions lead to safer care?

Volpp et al., JAMA 2007:

1. Resident-to-bed ratio in non-federal teaching hospitals did not predict changes in Medicare patient mortality between 2000-03 and 2003-05.

2. Resident-to-bed ratio in VA hospitals had mixed results in predicting Medicare patient mortality between 2000-03 and 2003-05.
Extended Shifts Associated with Higher Error Rate

Odds ratio of an event occurring for first year residents who worked extended shifts in the previous month, versus those who did not...

<table>
<thead>
<tr>
<th>Measure</th>
<th>1-4 Extended Shifts</th>
<th>5 or more Extended Shifts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adverse Event</td>
<td>8.7</td>
<td>7.0</td>
</tr>
<tr>
<td>Significant Medical Error</td>
<td>3.5</td>
<td>7.5</td>
</tr>
</tbody>
</table>

Unintended consequences

- 16% drop in neurosurgery written board scores between 2002 and 2006
- 7% decrease in resident abstracts for AANS meetings between 2002 to 2007

Jagannathan et al., *J. Neurosurg* May 2009
## IOM Recommendations

**November 2008**

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>ACGME</th>
<th>IOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum work week</td>
<td>80 hours</td>
<td>80 hours</td>
</tr>
<tr>
<td>Maximum Shift Length</td>
<td>24+6 hrs</td>
<td>16 or 16+5+9 hrs</td>
</tr>
<tr>
<td>Maximum Time Admitting</td>
<td>24 hrs</td>
<td>16 hrs</td>
</tr>
<tr>
<td>Maximum Call Frequency</td>
<td>q3 averaged</td>
<td>q3 no average</td>
</tr>
<tr>
<td>Minimum Time Between Shifts</td>
<td>10 hrs</td>
<td>10-12-14 hrs</td>
</tr>
<tr>
<td>Mandatory Time Off</td>
<td>4 days</td>
<td>5 days</td>
</tr>
<tr>
<td>Moonlighting</td>
<td>Internal Only</td>
<td>Internal + External</td>
</tr>
</tbody>
</table>
Professionalism

“Should I Lie about My Work Hours This Week?”

Favorability of IOM recommendations over current ACGME duty hour rules

Survey of USC residents September 2009 (n=545)
Professionalism and the Shift Mentality

How to Reconcile Patient Ownership With Limited Work Hours

Did you receive a written hand-off policy, or directions to access a policy on-line?

Survey of USC residents December 2009 (n=344)
Mode of Handoff Information transmission

Survey of USC residents December 2009 (n=344)
In your experience, which element(s) are frequently NOT communicated during hand-offs?

Survey of USC residents December 2009 (n=344)
Autonomy in GME

John Q. Young, MD, MPP
Assistant Professor, UCSF School of Medicine
Associate Training Director, Department of Psychiatry
Associate Director, Adult Psychiatry Clinic
Associate Editor, AHRQ WebM&M
Autonomy in GME: A Predominant Narrative

- **GME End-point**: ready for independent practice of medicine

- **Principle**: graded authority and progressive responsibility coupled with graded and diminishing supervision
Autonomy in GME: Predominant Narrative

• Threats
  – Medicare regulation IL-372: attending must be directly involved critical parts of care
  – Decreased tolerance for medical errors

• Effect: residents given insufficient autonomy to learn competencies necessary for independent practice
Autonomy:
Merriam-Webster Dictionary

1. the **quality** or state of being self-governing; *especially*: the right of self-government

2. self-directing freedom and especially moral independence

3. a self-governing state
Autonomy: Etymology

1620s, from Gk. *autonomia* "independence," noun of quality from *autonomos* "independent, living by one's own laws," from *auto-"self" (comb. form) + *nomos* "custom, law"
Independent practice of medicine
=
Autonomous practice of medicine
Autonomy in GME: Alternative Narrative

• Emerging Societal Compact with Medicine
  – Less self-governance by MDs
  – Permits less delegation of authority by MDs to trainees
  – More accountability for quality & safety
    • CMS, Joint Commission
    • Purchasers
    • Patient Safety Movement: IHI
Autonomy in GME: Alternative Narrative

• Endpoint for GME: train physicians competent to practice in a highly accountable system

• Independent practice:
  \( \neq \) autonomous practice
  \( = \) accountable practice
Alternative Narrative: Challenging Our Assumptions

• Does increased supervision mean decreased autonomy?

• What are the elements of autonomy that we want to protect?

• The ‘independent practice of medicine’ may no longer = ‘autonomous practice’
Pitfalls

• Residents deliver care only on simulated patients

• Residents observe more, do less

• Residents not allowed to do more complex or higher risk tasks
Opportunities

• Supervisor role changes:
  – Demonstrate/show how
  – Do together
  – Directly observe

• Supervisor focus changes:
  – From basic to more complex competencies
Toward Competency-Based Assessment

Global Assessments
- Faculty
- Patient
- Peers, Staff

Written Tests
- MCQs etc

Direct Observation
- In-vivo
- Standardized Patients
- OSCEs
- Simulations

Learner Products
- Portfolio
- Logs & Self Reflection
- Record Review

Oral Exams
- Standardized Orals
- Chart Stimulated Recall
Opportunities Con’t

• Learn QI/Safety by doing

• Prepare to practice in highly accountable health care systems
Quality and Safety GME Education

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Associate Professor of Clinical Medicine
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Why Teach QI

- ACGME Core Competencies
  - Patient Care
  - Medical Knowledge
  - Professionalism
  - Interpersonal Skills and Communication
  - Practice-Based Learning
  - Systems-Based Practice
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- Future Practice Reflection
  - Environmental Transformation
    - Literature
    - Understanding
    - Responsibility
How to Teach QI/Safety

Didactic Learning → Problem/CaseBased

- Reaction
  (Satisfaction)
- Learning
  (Knowledge, Skills, Attitudes, Content)
- Behavior Change
  (Skills, Self-Awareness)
- Results*
  (Patient level)

Integrated Experientia

* Kirkpatrick model for training evaluation
Didactic----PBL/Case Based

- University of Pennsylvania
  - QI/Safety Boot Camp
    - One dept
    - 5 sessions on clinically relevant patient safety topics (anticoagulation, dc transitions, medication safety, and infection control)
    - Simulation: handoffs, procedures
  - Patient Safety Report
    - 1 hour case-based resident led discussion related to a recent adverse event or near miss
    - 1 or 2 residents lead the conference with mentorship

- UCLA
  - Didactic Curriculum
    - 40 programs
    - 3 Sessions Foundations, measurement, teamwork
    - Mentored Projects (1 per training program)
  - Present in University-wide forum and receive certificate

- BI/Deaconess*
  - QI/PS Rotation
    - Elective
    - Project based, case based, didactic curriculum

### Integrating Quality/Safety: Experentia

**Purpose**
- Recognizing and aligning educational and operational missions
- Residents as part of the solution, not the problem
- Medical center as a driver for improvement, not hassle

**Examples: UCSF**
- RCA engagement
- Incentives
  - Dept specific
  - Overall
- FMEA project
- Case Review
- CR engagement/dinners
Challenges and Successes

**Challenges**
- Building relationships
- Trust and recognition
- Faculty to teach/develop
- Dedicated time (in curriculum and for faculty)

**Success**
- Many examples of innovations across the country
- True far reaching impact
- Crystallizing relationships between med ctrs and educational programs
QI/Safety Curriculum and Education: Conclusions

- Necessary
- Hard
- Fun
- Fulfilling

- Thanks
  - Nasim Afsarmanesh, MD; UCLA
  - Jennifer Myers, MD; Penn
  - Erin Stucky, MD; UCSD
  - Angela Tess, MD; BI/Deaconess

- Resources
  - Society of Hospital Medicine
  - AAMC: Integrating Quality
  - IHI: Open School GME forum