Geriatrics and Surgery:
Key Components for Improving Care

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Objectives

• Briefly review the impact the “Silver Tsunami” will have on US hospitals
• Summarize key events leading to new quality mandates facing US hospitals
• Recognizing and treating delirium in the peri-operative period
• Review course evaluations from 2008-2009 geriatrics lecture series
Silver Tsunami

Number of people age 65 and over, by age group, selected years 1900-2000 and projected 2010-2050

Note: Data for 2010-2050 are projections of the population.
Reference population: These data refer to the resident population.
Source: U.S. Census Bureau, Decennial Census and Projections.
Why does it matter?

• Slow and progressive “aging” of who occupies hospital beds
• 52% of non-obstetric hospital days
  ▪ 60% of med-surg patients
  ▪ 50% of ICU days
• Account for ~50% of hospital expenditures
“Sickest” part of the wave hitting the hospitals

- ~35% have Cognitive Impairment on admission (65% unrecognized)
  - Dementia: ~25% older inpatients
  - Delirium
    - 10-15% on admission
    - 10-40% in-hospital (new onset)
    - 43-61% of hip surgery patients
    - 83% of mechanically ventilated patients
- Depression
  - Minor depressive symptoms: 23%
  - Depression + dementia: 22-54%

“Sickest” part of the wave hitting the hospitals

- 23-62% are under-nourished
- 25-35% are more dependent in their ADLs at discharge
- Up to 50% receive potentially inappropriate medications
- Higher rates of re-admission within 30 days
Disaster Preparedness

- Only 0.5% of medical school faculty are geriatric specialists
- < 10% of medical schools have a required geriatrics course
- < 1% of 2.2 million practicing RNs are ANCC certified in geriatrics
  - Only 33% of BSN programs have a required geriatrics course
  - Associate degree programs - unknown
- < 1% of pharmacists certified in geriatric
- Only 4% of SWs specialize in geriatrics
  - Only 20% of BSW and 29% of MSW programs
Potential Impact of “Silver Tsunami” on Quality and Reimbursement in the Hospital Setting
Quality Timeline

- **1999**
  - To Err is Human: Building a Safer Health System

- **2001**
  - ACOVE Quality Indicators Published

- **2006**
  - National Quality Forum releases “Never Events”

- **2003**
  - Joint Commission’s initial National Patient Safety Goals

- **2008**
  - CMS limits payments for “Hospital Acquired Conditions”
“There is a dearth of clinical programs with the multidisciplinary infrastructure required to provide the full complement of services.”
ACOVE Quality Indicators

- 22 conditions identified for quality improvement
- Hospital Care QIs for vulnerable elders
  - Admission evaluation of cognition and function
  - Discharge planning initiated within 48 hrs
  - Medication reconciliation
  - Transfer of records across settings
  - Decision-making capacity assessed prior to informed consent
  - Evaluation for causes of delirium
  - Avoidance of potentially inappropriate medications

Joint Commission National Patient Safety Goals (NPSGs)

• First published in 2003
• The purpose of the NPSGs is to promote specific improvements in patient safety
• Requirements:
  ▪ Highlight problematic areas in health care
  ▪ Describe evidence and expert-based solutions to these problems
  ▪ Focus on system-wide solutions, wherever possible
2007 National Patient Safety Goals for Hospital Care

• Improve the accuracy of patient identification
• Improve the effectiveness of communication among caregivers
• Reduce the risk of health care-associated infections
• Improve the safety of using medications
• Accurately and completely reconcile medications across the continuum of care
• Reduce the risk of patient harm resulting from falls
• Encourage patients’ active involvement in their own care as a patient safety strategy
Never Events

• 2006: National Quality Forum releases lists of 28 “Never Events”
• Serious and costly medical errors that should never happen
• Clearly identifiable, preventable, and serious in consequences
• Increase Medicare hospital payments per case by average of $700 (pressure ulcer) to $9000 (post-op sepsis)
• Some states require reporting of “never events”
  ▪ Minnesota
  ▪ New Jersey
  ▪ Connecticut
  ▪ Illinois
Timeline for CMS Reduced Reimbursements

• “Clearly, paying for ‘never events’ is not consistent with the goals of these Medicare payment reforms.”

• “Reducing or eliminating payments for ‘never events’ means more resources can be directed toward preventing these events rather than paying more when they occur.”
Timeline for CMS Reduced Reimbursements

• 2007: CMS selects 7 “never events” to be included in 8 Hospital Acquired Conditions (HACs)

• April 14, 2008 CMS Media Release: “As of October 1, 2008, Medicare will no longer pay at a higher weighted DRG for the original 8 HACs as well as any conditions CMS is proposing to add in this year’s rule.”
Medicare’s HAC “Do Not Pay” List

**Originally Approved HACs**
- Foreign object left in surgical patient
- Air embolism
- Incompatible blood transfusion
- Stage 3 or 4 pressure ulcers
- Catheter-associated UTIs
- Vascular catheter-associated infection
- Mediastinitis after coronary artery bypass grafting
- Falls (covered under specific trauma codes)

**Proposed HACs**
- Surgical site infections following certain elective procedures
- Legionnaires' disease
- Extreme blood sugar derangement
- Iatrogenic pneumothorax
- Delirium
- Ventilator-associated pneumonia
- Deep venous thrombosis/Pulmonary embolism
- *Staphylococcus aureus* septicemia
- *Clostridium difficile*-associated disease

www.cms.hhs.gov/apps/media/press/factsheet
July 31, 2008 CMS Media Release:

• “…a letter to state Medicaid directors….encourages states to adopt the same non-payment policies…”

• Based on public comment, CMS approved 3 additional HACs:
  ▪ Surgical site infections following certain elective procedures
  ▪ Extreme blood sugar derangement
  ▪ Deep venous thrombosis/Pulmonary embolism following knee and hip replacements
Surgical Care Improvement Project

- 7 Areas measures for quality for surgery
  - Antibiotics given to prevent infection
  - Patients given the right antibiotic
  - Antibiotic stopped at the right time
  - Good blood sugar control after surgery (heart patients)
  - Safer methods for hair removal
  - Preventive treatments ordered for blood clots
  - Blood clot treatment given before or after surgery

www.hospitalcompare.hhs.gov
<table>
<thead>
<tr>
<th>Medical Procedure</th>
<th>UAB</th>
<th>Cooper Green</th>
<th>National Avg</th>
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<tbody>
<tr>
<td>Abx 1-hour prior to surgery</td>
<td>67%</td>
<td>87%</td>
<td>87%</td>
</tr>
<tr>
<td>Right abx given</td>
<td>94%</td>
<td>94%</td>
<td>93%</td>
</tr>
<tr>
<td>Abx stopped within 24h</td>
<td>79%</td>
<td>89%</td>
<td>86%</td>
</tr>
<tr>
<td>Glucose control</td>
<td>80%</td>
<td>-</td>
<td>84%</td>
</tr>
<tr>
<td>Hair removed</td>
<td>93%</td>
<td>86%</td>
<td>95%</td>
</tr>
<tr>
<td>Blood clot tx ordered</td>
<td>87%</td>
<td>78%</td>
<td>86%</td>
</tr>
<tr>
<td>Blood clot tx given</td>
<td>80%</td>
<td>70%</td>
<td>83%</td>
</tr>
</tbody>
</table>
• CW is a 98 yo AAF with metastatic colon cancer/ovarian cancer and colonic AVMs requiring monthly admissions for blood transfusions/chemotherapy. She lives alone in a senior citizen’s apartment. She has no children. She is admitted and ordered to receive 4 units pRBC with benadryl 25 mg IV prior to each unit. She receives benadryl at 4am and 9am, then develops confusion, orthostasis (23 mmHg drop in SBP), and suffers a fall while trying to go to the bathroom.
Mortality of Delirium

- Mortality of in-hospital delirium 25-33%
- Unrecognized by Physicians 30-50% of the Time!

Inouye SK et al, American Journal of Medicine May 1999
Delirium

- Adding a Medication to Treat Delirium May Be Hazardous
  - More Drug Interactions
  - More Adverse Reactions
  - Often Does Not Help the **Patient**!

- If you “must” – low dose Haloperidol 0.05 mg (or other antipsychotic)
Diagnosing Delirium

Confusion Assessment Method

1. Acute Onset & Fluctuating Course
   Plus
2. Inattention
   And One Of The Following:
3. Disorganized Thinking
4. Altered Level of Consciousness

Commonly Used Drugs That Should Be Avoided In Older People

- Propoxyphene (Darvon, Darvocet)
- Meperidine (Demerol)
- NSAID’s – (Indocin, Toradol)
- Diphenhydramine (Benadryl)
- Muscle Relaxants (Flexeril, Robaxin)
- Benzo’s -especially Valium, Dalmane

Beers, MA Archives IM 1997,157:1531-1536), Updated 2002
2008-2009 Course Evaluations

- 68/86 Residents responded, 79%
  - n = 37 General Surgery
  - n = 24 Obstetrics and Gynecology
  - n = 7 Urology

- Course helped with acquiring knowledge of the surgical care of older adults in the peri-operative setting,
  - 24% responded “greatly”
  - 60% responding “somewhat”
  - 16% said “not at all”
Strengths & Weaknesses

STRENGTHS

• short meetings
• palliative care/end of life
• renal lecture
• pre-operative cardiac risk lecture
• the multi-disciplinary approach

WEAKNESSES

• location/hall too large
• timing/clinical duties interfere
• redundancy
• PT/OT lecture
• pre/post tests
• need lectures for review
Test Results

• 71/86, 83% responded
• Overall scores low
  ▪ 47.3 mean pre-test scores
  ▪ 53.2 mean post-test scores
  ▪ P = 0.01 for improvement
• What does this mean???
2009-2010 Geriatrics Course

Remain the Same
- Pre/Post testing
- Format the same
- Pre-op Lecture
- Pain/Palliative Care Lecture
- Online Course information

Changes Implemented
- Testing covering material taught
- New location
- New lectures
  - Capacity/Consent
  - Medications
  - Anesthesiology
  - Falls
  - COPD/Pulmonary considerations
  - Catheter care
Website Information

- http://www.obgyn.uab.edu/residency/edgeriatrics.htm