Acute Care Surgery Model in the World of Specialty Surgery

A Park MD, FRCSC, FACS, FCS(ECSA)
Chair, Dept of Surgery
Anne Arundel Health System Annapolis, MD
Professor of Surgery, PAR
Johns Hopkins University School of Medicine

Outline

• Hospital versus Surgeon needs
• Definitions
• History
• Data- Quality? Demographic?
• Challenges and Controversies
• AAMC Reflections
• Looking ahead
Every important hospital should have on its resident staff of surgeons at least one who is well trained and able to deal with any emergency

- Dr. William Steward Halsted

Evidence that...

- Elderly require twice the time and effort of the general surgeon - even more relevant for the elderly patient in the Acute Care Setting

Beyond GMENAC — Another Physician Shortage from 2010 to 2030?
Ernest P. Schloss, Ph.D.
Hospital-Based Surgical Referrals

- Under/Non-insured
  Low reimbursement
- Low health literacy
  Poorly prepared for surgery and recovery
- Poorly Compliant
  Not well-integrated into PCP/health system
  low resources for follow-up/rehab services
- Many non-English speaking
- Many Elderly
  Elderly- Medicare

Nature of Hospital-Based Surgical Referrals

- Economics: Many are non-operative
  SBO vs. ileus
  Decubitus
  Abscess drained by ED previously
- Increasing non-operative initial management
  Diverticulitis
  Interval appendectomy
  Cholecystitis
  Perc Chole showing improved results in elderly
  Choledocholithiasis to Endoscopist first
- Second-look surgery or multiple take backs
  Necrotizing Fasciitis
  Ischemic Gut
Hospital-Based Surgeon

• Possible Nomenclature
  - Emergency Surgery
  - Acute Care Surgery
  - Surgical Hospitalist
  - Surgicalist

• Advocates for:
  - Acute Care Surgeon
    - Board certified trauma and critical care
    - Acute Care Surgery fellowship trained only
  - Surgicalists/ Emergency Surgeon
    - General surgeons without fellowship

The Origins of ACS

• A call to action to address an emergency case crisis (especially rural) in 1993
• Michael John, MD FACS (Former Emory U. Chancellor) proposed creation of a mandatory Natl Health Service Corp (NHSC)
• Specific General Surgery NHSC to deploy BC surgeons for extended rotations across rural US
• Did not get traction
The Emergency Surgical Care Crisis

- ACEP – 2005 Survey: 75% of ED Med Directors reported inadequate surgical coverage
- IOM “Hospital Based Emergency Care: At the Breaking Point” (2006): hospitals in many states closed ED’s due to lack of surgical coverage - devastating results for critically ill & uninsured
- Bill 1873 introduced (2007, 110th Congress) to allocated $12M/yr. from ‘08 to ‘13 to design & implement regionalized system of Emergency Case
- ...by Senator B. Obama ...did not pass!


1999 – U Penn D.o.S. combined trauma, emergency surgery & surgical critcare to form ACS service
- ACS vs. Traditional model demonstrated signif↓ in perf rates, complications & LOS in appendicitis pts.
- ↑ surgeon satisfaction
- Enhanced resident training opportunities
Early Academic ACS Experience:
(Maa et al JACS 2007)

- UCSF reorganized Acute Gen Surgery service into hospitalist model of ACS (2005) due to:
  - Prior faculty dissatisfaction with disruption of elective clinics, OR list & academic activity
  - Poor continuity of pt. care

UCSF: Key Elements of the Surgical Hospitalist Model

- On-call period lasts continuously for 1 week, not 24 hours, in order to improve continuity of care.
- During the on-call period, no elective clinics or procedures are scheduled that might disrupt or conflict with acute surgical care.
UCSF: Key Elements of the Surgical Hospitalist Model (cont’d)

- A resident or attending should evaluate the patient within 30 mins of consultation during the day and within 45 mins off hours.
- Patients requiring special expertise initially assessed by the team then triaged to a higher level of expert care as indicated.
- After the on-call period, the care of inpatients and consults is handed off to the next on-call surgeon in a group-practice model.

Results of UCSF ACS Reorganization

- High satisfaction among ED. Drs.
- ↓ pt. waiting times
- ↑ consults & reimbursement
- High satisfaction among participating surgeons:
  - Appropriate triage of complex pts.
  - Financial incentives
  - ↑ protected time for education & research
Quality Impact of Transition to ACS Model
(Gomez et al JACS 2012)

- Loma Linda Med Center 2010 – Combined Trauma & Emergency G.S. Divisions:
  - 12 hr. in house shifts
  - One surgeon on call; one back up from home

- Retrospective comparison of pts. undergoing appendectomy & cholecystectomy over following year

<table>
<thead>
<tr>
<th></th>
<th>Traditional G.S. Service</th>
<th>ACS Service</th>
</tr>
</thead>
<tbody>
<tr>
<td># of cases over 1 year</td>
<td>82</td>
<td>93</td>
</tr>
<tr>
<td>Avg time to surgical eval (hrs)</td>
<td>6.6</td>
<td>4.6</td>
</tr>
<tr>
<td>Avg time to OR (hrs)</td>
<td>16</td>
<td>11</td>
</tr>
<tr>
<td>Mean LOS (days)</td>
<td>2.8</td>
<td>1.8</td>
</tr>
<tr>
<td>Mean Case Cost ($)</td>
<td>$8,942.00</td>
<td>$7,018.00</td>
</tr>
</tbody>
</table>
Retrospective Comparison of Cholecystitis Experiences (LLMC):

<table>
<thead>
<tr>
<th></th>
<th>Traditional G.S. Service</th>
<th>ACS Service</th>
</tr>
</thead>
<tbody>
<tr>
<td># of cases over 1 year</td>
<td>51</td>
<td>51</td>
</tr>
<tr>
<td>Avg time to surgical eval. (hrs.)</td>
<td>-5.84</td>
<td>-25.37</td>
</tr>
<tr>
<td>Avg time to OR (hrs.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean Case Cost ($)</td>
<td>$13,128.00</td>
<td>$9,903.00</td>
</tr>
</tbody>
</table>

Surgery Residency Training: uniquely challenging times

- Generalist vs. specialist
- “Tracked” training within Gen Surg
- Choice guided by factors
  - Finance
  - Lifestyle
    - research/family/mission work/extra-curric
  - Call/Emergencies
  - Business implications
    - fiscal/time management
Formation of Acute Care Surgeons

- Am Coll of Surgeons (Dr. Britt) proposes new training paradigm for ACS (2007)
- First Formal AAST Fellowship program begins 2008
- Currently 14 Accredited program (+ others)
- 24 month curriculum (Trauma/Crit Care/Emergency Surgery)

Challenges for ACS: Concrete

- Decide upon a name! O/W can’t track nor measure
- Negative (peer) Perception-who goes into ACS?:
  - “sundowners” winding down practice
  - those who failed to build practices
  - “newbies”undecided-straight out of training
- “What successful surgeon with an established elective practice signs up to drainpus at night?!”
ACS Challenges: Concrete & Emotional

- Litigation challenges:
  1) In several jurisdictions Priv practice Gen Surg groups have sued hospitals claiming restraint of trade /unfair labor practices. Some hospitals have settled & turned to “pay for call” (plaintiff’s end game?)
  2) Med Mal ↑ among ACS surgeons - higher concentration of sicker pts?

- Elective practice?

Misc. ACS Strategies

- For in house coverage need 6-7 surgeons
- Most (all?) subsidized by hospital
- Some Acad hospitals put new recruits on ACS for “X” shifts over “Y” months
  - allows even subspecialists to get case experience with back up
    - builds confidence
    - builds practice
    - helps institutions with staffing
Acute Care Surgery Model

Core Management Principles:
• Expeditious initial assessment
• End point guided resuscitation
• Early intervention and definitive management
• Essential physiologic monitoring

Transition to Practice- TTP

• Offer mentored ‘finishing’ in General Surgery
• Focus on Emergency Surgical Cases
• Elective Months offer additional specialty training
• Recruitment potential
• Focus not on Trauma
  increasingly non-operative
  many ACS programs do not have trauma
Controversies Around ACS:

- Quality programs variable-best practice, choosing wisely* (lean opportunities) protocolization.
- Challenge of managing increasingly complex emergency surgical problems. When is subspecialty care more appropriate? - eg post Bariatric surgery SBO, colonoscopy perfs, etc.
- Work hours / cycle
- Compensation
- Institutional Gen Surg ED call
- Elective practice (or not?)