Acute Care Surgery Model in the World of Specialty Surgery

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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.
N Engl J Med 1988; 318:920-922April 7, 1988DOI:

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!

Origins of ACS : Academic Depts. Of Surgery Coverage & Quality Challenges

(Early,Schwab et al Ann Surg Oct 2006)

- 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 thee 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

Retrospective Comparison of Appendicitis Experience (LLMC):

	Traditional G.S. Service	ACS Service
# of cases over 1 year	82	93
Avg time to surgical eval(hrs)	6.6	4.6
Avg time to OR(hrs)	16	11
Mean LOS (days)	2.8	1.8
Mean Case Cost ($)	$8,942.00	$7,018.00

Retrospective Comparison of Cholecystitis Experiences (LLMC):

	Traditional G.S. Service	ACS Service
# of cases over 1 year	51	51
Avg time to surgical eval. (hrs.)		-5.84
Avg time to OR (hrs.)		-25.37
Mean Case Cost ($)	$13,128.00	$9,903.00

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 drain pus 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

Acute Care Surgery by LD Britt MD, Andrew Peitzman MD

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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?)