SURGEON SHORTAGE IN THE US: FACT OR FICTION, CAUSES, CONSEQUENCES (I HAVE NO SOLUTIONS!)

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MY BACKGROUND

- Born in rural Kentucky
- Attended University of Kentucky Medical School
- Trained in general/thoracic surgery
- Surgical faculty at University of Louisville for 34 years. Directed residency/busy clinical surgeon.
- Chair, American Board of Surgery; Vice-Chair, Residency Review Committee for Surgery; Regent, American College of Surgeons
DISCLAIMERS

• Definitely will not be my best talk (and may be my worst!) but done on the shortest notice
• Practical interest in surgical workforce (on ACS Workforce Committee) but no health care systems expert or policy wonk
• There is a huge shortage of doctors of all types; difficult to find primary care physician (PCP); this is not to devalue other specialties
• Most remarks focus on general surgeon but all surgical disciplines have issues
SURGEON SHORTAGE: FACT OR FICTION?

- Anecdotal
- Data
SURGEON SHORTAGE

• USA TODAY 2/26/08 Shortage of surgeons pinches U.S. hospitals

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Jul 28, 2009
ANECDOTAL EVIDENCE FOR SHORTAGE

• Google surgeon shortage – 841,000 citations

• Over 1000 hospitals seeking general surgeons (over 40 in KY) in our survey of hospitals/search firm

• Average KY recruiting time is over three years
DATA

• Ohio State – general surgeon issues

• UCLA - shortage of all surgical specialties

• North Carolina – SHEPS, ACS Health Policy Institute
GENERAL SURGERY SHORTAGE

- Estimated 21,500 general surgeons in US
- Estimated 6,000 do few, if any, operations: semi-retirement, administration, office practice, etc.
- **705 die or retire annually**
- 7.53/100,000 population
- Annually train 1,000 general surgeons
- Need to train 1875 surgeons annually by 2020 to stay even with population growth
FATE OF GENERAL SURGERY TRAINEES

• 1000 finish residency annually
• About 50-100 never practice (disability, change careers, women’s issues – family, children, etc.)
• 60% now do additional training – many focus on very narrow fields: transplant, heart surgery, etc. These are important but create tremendous generalist shortages; i.e., general surgeon.
• Specialization has created a huge void of generalists in almost all specialties
• About 500 general surgeons entering practice annually (705 needed for status quo)
<table>
<thead>
<tr>
<th>Specialty</th>
<th>2020 Projected Growth % Cases</th>
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<tbody>
<tr>
<td>Ophthalmology</td>
<td>47</td>
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<tr>
<td>Cardiac</td>
<td>42</td>
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<td>General surgery</td>
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<td>Otolaryngology</td>
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SHORTAGE OR MALDISTRIBUTION?

• Critics occasionally cite maldistribution as the real problem
• Maldistribution is a major problem and access to surgical care in rural areas is a major problem that will worsen
• Only oversupply might be plastic surgeons
• General surgery needs are present in most cities as well, large and small
• ED coverage is huge problem
• Louisville appointment times: foot surgeon 2-3 mos. Spine surgeon 1-2 months; G.S. weeks
DISTRIBUTION OF GENERAL SURGEONS

• 1981: 1,025 of all US counties had no practicing surgeons (1/3 of counties in U.S.)
• 2006: 303 gained a surgeon but 203 lost all surgeons
• 925 counties with surgeon had collective population of 14.7 million
• 60% of all urban counties had declining surgeons
MISPERCEPTIONS ABOUT SHORTAGES

• Many academic surgeons (Ivory Tower), health policy types and politicians do not understand the fundamental nature of where shortage occur

• Assume the shortages occur in very small towns/wilderness environments; in fact, most towns of 10,000 to 25,000 function as regional medical centers in much of the country and have shortages

• Hometown example: Morehead has a 6-county service area with one hospital – lost surgeons to Chillicothee, OH and Valpariso, IN
Figure 3. Percent Change in General Surgeons per 100,000 Population, 1981-2006

1 Graduate Medical Education National Advisory Committee (1980). Report to the Secretary, Department of Health and Human Services, Geographic Distribution Technical Panel Vol III. (DHHS Publication No. HRA 81-653). Washington, DC.
CAUSES OF SURGEON SHORTAGE

• Shortages of all physicians
• Bad projections on surgeon supply
• Devaluation of surgeons
• Public policy
• Economics
• Lifestyle
GENERAL SHORTAGE OF PHYSICIANS

- Many shortages exist, hard to find PCP, who wants to deliver babies at night?, etc.
DEVALUATION OF SURGEONS AND WHAT WE DO

• “Cognitive” specialties vs. proceduralist
• The surgeon as a technician view
• Medical schools formed for PCP creation
• Interest in primary care earns points with admission committee
• Focus on procedures as costs drivers while ignoring other factors
• Stereotypical images: Marcus Welby vs. Dr. Kildare
Many examples

Balanced Budget Act capped surgical residency positions while creating a huge surplus in primary care
WORKFORCE PROJECTIONS

• Virtually every workforce projection underestimated the need for surgeons and seriously underestimated the number of surgeons

• Some question the motives behind these studies. My charitable view = difficult to predict the future
ECONOMICS

• In a budget neutral world, the increase paid to primary care and radiology (as an example) has come directly from surgeons

• While some corrections may have been needed, surgeons incomes have plummeted

• Reimbursement for average laparoscopic appendectomy $525, laparoscopic cholecystectomy $600, open cholecystectomy $518, direct repair of aortic aneurysm $1,120, Whipple $2,500,

• The actual amount paid for these ops is less than 1976 when I entered practice simply cannot make it up on volume

• Huge practice expenses, particularly malpractice insurance
LIFESTYLE

• Average education debit of risk punishes longer training disciplines; average surgeon now trains 6.4 years after medical school, nearly 34 before entering practice
• Incredibly rigorous training; requires time to develop master surgeon skills
• Physically very demanding  60-100 hour work weeks once common – new generation not interested especially without appropriate compensation
• Especially tough for these providing 24-7-365 care
CONSEQUENCES OF SHORTAGES

• Access and distribution problems

• Impact on critical access hospitals

• People will die!
ACCESS AND DISTRIBUTION

• As shortages worsen, there will be increasing raiding by wealthy hospitals of rural, less affluent public hospitals of their surgeons

• Already huge pressure on those who provided emergency care (what sane, rational person would do that?)

• Creation of surgical “deserts”
CRITICAL ACCESS HOSPITALS

- 1305 critical access hospitals in July 2009
- Virtually impossible for many of these hospitals to survive without a general surgeon
- Surgeons are the economic drivers for virtually all hospitals, small and large, but small hospitals are particularly vulnerable
- Economic impact of surgeon loss to a small town whose hospital closes is immeasurable
IMPACT ON MORTALITY

• A surgeon actually can save lives: neurosurgeon for certain head injuries, someone who can do a tracheostomy for airway compromise, a surgeon who stops bleeding, treats the badly injured

• I love my internist and he may save my life slowly and incrementally but if I am really dying fast he can’t help me

• PCP get help from nurse practitioners and PA, but extenders or alternate practitioners can’t do procedures for a surgeon
Number of Surgeons by County, 2006 and Smoothed, Age-Adjusted Death Rates per 100,000 Population
Motor Vehicle, Traffic, Unintentional, All Races, All Ethnicities, Both Sexes, All Ages*
Preliminary Data, 2000-2006, United States

Notes: Smoothed data were used to create the death rate map; data based on county of residence. *Standard Population is from year 2000, all races, both sexes.
Reports for all ages include those of unknown age. **Death rates based on 20 or fewer deaths may be unstable. These counties have been suppressed (see legend).
Sources: Surgeons: AMA Physician Masterfile, 2006. Surgeon data include all non-federal, non-resident, clinically active physicians less than 70 years old reporting a primary specialty as any type of surgery. Death Rates: Office of Statistics and Programming, National Center for Injury Prevention and Control, CDC, with age-adjusted death rates derived from the NCHS Vital Statistics System (number of deaths) and the US Census Bureau (population estimates).
Produced By: American College of Surgeons Health Policy Research Institute, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.
Smoothed, Age-Adjusted Death Rates per 100,000 Population
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SOLUTIONS

• Insourcing

• Train more surgeons

• Regionalization of care
INSOURCING (STEALING FROM OTHER COUNTIES)

- Relies on other poorer counties to furnish surgeons for the world’s richest country
- India, Pakistan and Philippines are three primary sources of IMG’s and their training is very different
- We will not get trained surgeons to solve our needs (but they do produce many U.S. resident)
- Considerable social, cultural, and language barriers to overcome at times
INCREASE OUTPUT

• Even if public policy changes and more positions are approved, there are several huge problems:
  – Long lag time to have a surgeon trained
  – Difficult to identify candidates in medical schools where half are women (less interested in surgery than men statistically) and lifestyle desires are different for both sexes
  – Will they go to the “desert”?
REGIONALIZATION

- Referral of surgical cases to centers: already done in many cases
- May be okay for elective problems but does not work well for surgical emergencies
- Do patients have a right to surgical care close to home?
SUMMARY

• Anecdotal and real evidence we have a problem with surgical shortage
• Multi-factorial causation
• Potential adverse consequences to this shortage
• Few short-term fixes