Defining Anesthesia Services in a Value-based Era

Laureen L. Hill, MD, MBA
SVP-COO NYP-Columbia
November 3, 2017
SAAA

Disclosures

- I have no conflicts of interest related to this presentation

Objectives

- Review current factors driving need for anesthesiology support
- Discuss approaches for hospital-based support of anesthesiology departments
- Examine a proposed model for defining value of anesthesiology-based services

The problem…

- Anesthesiology departments increasingly dependent on hospital support
- Current manpower, economic and legislative realities will increase that need
- Hospitals less able/willing to financially support academic missions
- Inadequate resources impact clinical care and patient safety

Status of the Anesthesia Workforce in 2011: Evolution During the Last Decade and Future Outlook

Armin Schubert, MD, MBA,* Gifford V. Eckhout, MD, MBA,† Anh L. Ngo, MD, MBA,†
Kevin K. Tremper, PhD, MD,§ and Mary D. Peterson, MD, MHA‖

Anesthesia Analgesia 2012; 115: 407-27

Table 1. Data Relating to Demand for Anesthesia Services: 2000 to 2010

	2000–3[a]	2004–6[a]	2007–8[a]	2009–10[a]
Anesthesiologist salary (US $)	317,481	364,758	410,658	423,657[n]
% change (versus prior year)	3.9	3.0	3.3	—
CRNA salary[r] (US $)	145,000	164,000	189,000	—
% change (versus prior year)	NA	5.1	2.2	—
Hospital operating rooms	29,735	30,830	31,721	32,290
Medicare-certified surgery centers[d]	9620	12,220	13,452	NA
Surgery center operating rooms[d]	9620	12,220	13,452	NA
No. of active surgeons[e]	127,100	133,796	135,854	127,100
Estimated demand growth[f]	1.5%–2.0%	1.5%	0.5%–1.0%	0
Medicare case mix index[g]	1.0	1.17	1.19	—
Median ASA units/anesthesiologist/year[n]	—	11,394	11,202	12,575[o]
Median no. of cases/anesthesiologist/year[n]	1021	1007[r]	851	—

Number operating rooms, CMI, salaries and productivity increasing over time….

Status of the Anesthesia Workforce in 2011: Evolution During the Last Decade and Future Outlook

Armin Schubert, MD, MBA,* Gifford V. Eckhout, MD, MBA,† Anh L. Ngo, MD, MBA,†
Kevin K. Tremper, PhD, MD,§ and Mary D. Peterson, MD, MHA‖

Anesthesia Analgesia 2012; 115: 407-27

Table 2a. Growth of Median Anesthesiologist Income in the United States, 1999–2009

Year (data)[a]	Private sector median income (MGMA)[b]	%Δ[c]	Academic median income (MGMA)	%Δ[c]	Merritt Hawkins[d]	%Δ[c]	Academic institutional support[e]	%Δ[c]
1999	244,091	—	176,156	—	—	—	—	—
2000	279,977	14.7	194,375	10.3	—	—	34,300	—
2001	281,963	0.7	198,413	2.1	278,000	—	—	—
2002	305,676	8.4	—	—	290,000	4.3	60,000	75[f]
2003	317,481	3.9	220,144	11.0[f]	300,000	3.4	86,000	43
2004	321,686	1.3	240,489	9.2	303,000	1.0	98,000	14
2005	354,241	10.1	241,455	0.4	306,000	1.0	116,000	18
2006	364,758	3.0	267,881	10.9	300,000	−2.0	120,000	3
2007	398,925	9.4	285,618	6.6	336,000	12.0	126,000	5
2008	410,658	2.9	276,045	−3.3	344,000	3.6	136,000	8
2009	423,657	3.2	299,802	?	331,000	−2.0	159,000	17
2010	404,996	−4.4	?	?			166,000	4

Institutional support increasing over time……

Professional Staffing Practice of Academic Anesthesia Departments in the United States

Steven Ginsberg[1], Jonathan Kraidin[1], Christopher Gallagher[1], Don R. Hoover[2], Alann Solina[1]

Table 4. Staffing related problems.

Staffing Issues	N	%
The average % of clinical assignments that are performed by a faculty member alone	60	11.25
% of institutions indicating that inadequate clinical staffing affects their ability to provide adequate faculty non-clinical time	62	74.2
% of institutions indicating that inadequate clinical staffing affects their ability to provide maximal resident educational experience	62	48.39
% of institutions indicating that inadequate staffing creates situations where patient safety is compromised secondary to suboptimal supervisory ratios	62	32.26
% of institutions indicating that inadequate staffing creates obstacles to providing vacation time for faculty	62	38.71
% of institutions reporting that they occasionally supervise 3 simultaneous anesthesia sites	60	7
% of institutions reporting that they only supervise one clinical site at a time	60	1.7

Open Journal of Anesthesiology 2013

System in crisis…….

The Consequences: Hospital Relationship

- Dependence on hospital support erodes department autonomy
  - staffing patterns, resident workforce, service /site choices i.e. preop clinic
- Hospital focus on clinical service and costs
  - Lack of clarity around financial drivers (call, remotes, OR block policies)
  - Lack of aligned interest in academic missions
  - Poor understanding of opportunity in leveraging anesthesiologist expertise
- Negotiations may be difficult and strain relationship
  - Hospital emphasis on *support* rather than *contributions*
- Stigma of "charity"
- Competition from external groups offering economies of scale

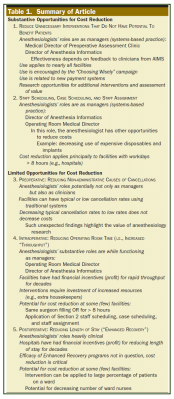


Table 1. Summary of Article

Substantive Opportunities for Cost Reduction

1. Reduce Unnecessary Interventions That Do Not Have Potential To Benefit Patients
   Anesthesiologists' roles are as managers (systems-based practice):
   Medical Director of Preoperative Assessment Clinic
   Director of Anesthesia Informatics
   Effectiveness depends on feedback to clinicians from AIMS
   Use applies to nearly all facilities
   Use is encouraged by the "Choosing Wisely" campaign
   Use is related to new payment systems
   Research opportunities for additional interventions and assessment of value
2. Staff Assignments, Case Scheduling, and Shift Assignment
   Anesthesiologists' roles are as managers (systems-based practice):
   Director of Anesthesia Information
   Operating Room Medical Director
   In this role, the anesthesiologist has other opportunities to reduce costs
   Example: decreasing use of expensive disposables and implants
   Cost reduction applies principally to facilities with workdays < 8 hours (e.g., hospitals)

Limited Opportunities for Cost Reduction

3. Preoperative: Reducing Nonadministrative Causes of Cancellations
   Anesthesiologists' roles potentially not only as managers but also as clinicians
   Facilities can have typical or low cancellation rates using traditional systems
   Decreasing typical cancellation rates to low rates does not decrease costs
   Such unexpected findings highlight the value of anesthesiology research
4. Intraoperative: Reducing Operating Room Time (i.e., Increased "Throughput")
   Anesthesiologists' substantive roles are while functioning as managers:
   Operating Room Medical Director
   Director of Anesthesia Informatics
   Facilities have had financial incentives (profit) for rapid throughput for decades
   Interventions require investment of increased resources (e.g., extra housekeepers)
   Potential for cost reduction at some (few) facilities:
   Same surgeon filling OR for > 8 hours
   Application of Section 2 staff scheduling, case scheduling, and staff assignment
5. Postoperative: Reducing Length of Stay ("Enhanced Recovery")
   Anesthesiologists' roles heavily clinical
   Hospitals have had financial incentives (profit) for reducing length of stay for decades
   Efficacy of Enhanced Recovery programs not in question, cost reduction is critical
   Potential for cost reduction at some (few) facilities:
   Intervention can be applied to large percentage of patients on a ward
   Potential for decreasing number of ward nurses

Strategies for Net Cost Reductions with the Expanded Role and Expertise of Anesthesiologist in the Perioperative Surgical Home

Dexter F et al Anesth Analg 2014; 118:1062-1071

Acad Med. 2012 Mar;87(3):348-55. doi: 10.1097/ACM.0b013e31824c36e.

Perspective: Hospital support for anesthesiology departments: aligning incentives and improving productivity.

Hill LL[1], Evers AS

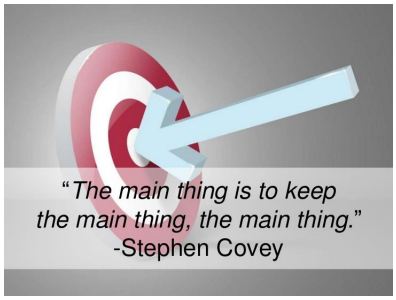
A. "Availability" services…….manpower intensive with inadequate revenue opportunities to cover costs
   (On-call teams, Pre-op / PACU, Directorships, OB…)

B. "Productivity" services…….can be managed for high efficiency
   (Elective OR locations, High case-density sites i.e. GI endoscopy)

C. "Remote" services…….anesthetizing locations that may have low case density and are inherently inefficient but may be necessary
   (Interventional radiology, cath lab, EP lab…)

SAAA Salary and Practice Survey…are these comparisons helpful?

- Compensation by rank
- Number of FTEs, part-time FTEs and academic FTEs
- Number of positions to be filled by subspecialty
- Number of residents in the program
- Amount of weekend call
- Number of CRNAs (does not specify CAAs)
- Pain RVUS generated and number of clinic sessions
- ICU covered by faculty and trainees
- Faculty and resident assignments by specialty each day
- Patients seen in preop clinic by provider type



C suite objectives….their “main thing”

Proposed survey measures

- What does your department produce?
  - Takes into account staffing ratios, scheduling density, OR utilization…
  - Recommend separate analysis each for OR, CCM and Pain services
- What does it cost your department to produce it?
  - Takes into account resident numbers, staffing ratios, compensation, NC time
  - Can include overhead, admin costs, preop, PACU, etc.
  - Helpful to split out call (availability) costs as “cost of doing business”
- Likely not useful to benchmark nationally due to unique local factors

OR Rack report template

Units
Base Units
Qualified Units
Time Units
Total Units
Expense
Cash Compensation
Physicians
Base
Variable
Anesthetists
Benefits
Malpractice
Assessment /Overhead
Other Operating
Total Operating Expenses
Total Operating Expenses less Call
Total FTEs
Total FTEs w/o Call, PACU, & Pre-Op
Call FTEs
PACU/Pre-Op FTEs
Anesthetist FTEs
Total Units/Physician FTE
~Units/MD FTE w/o PACU/Pre-op/Call
Physician Comp/FTE
Base/FTE
Variable/FTE
Anesthetist Comp/FTE
Physician Comp/Total Unit
Base Comp/Total Unit
Var Comp/Total Unit
Call Expense
Practice Expense/Total Unit

- Used to track year over year operating expenses
- Productivity data used to support comp and hiring
- Base/variable itemization used to target 80/20% ratio
- Administrative costs itemized separately for practice
- Call expenses include pre and post-call time
- Preop and PACU FTEs may be listed separately
- Useful to compare academic and private groups

Discussion

- Is this approach generalizable?
- Is this approach helpful for hospital negotiation?
- Could/should this be used for benchmarking externally?
- What details are missing?