



UT SOUTHWESTERN MEDICAL CENTER

**Perfect Storm Part II:
Is a Tsunami Brewing?**


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**Conflict of Interest +
Why am I qualified to do this??**

- I have no conflicts except:
 - I have a long standing interest in the economics of academic anesthesia practice dating back to collaborations which began with Amr Abouleish and others in the late 1990's.
 - We continue to perform collaborative research utilizing national databases.
- At UTSW we have recently undergone over \$2 billion of health care construction on Harry Hines Blvd. in Dallas, TX. Our hours of operation/sites of service have increased by almost 50% in the last year. Case volume in 2014 was greater than 140,000 Anesthetics.

**William P. Clements, Jr.
University Hospital
December 6, 2014**



**Parkland Memorial Hospital
August 20, 2015**




**Perfect Storm Overview:
Part I**

This has been presented from 2000-2011 and leaves a wonderful legacy for us in Academic Anesthesiology.

- No data was presented in 2012 at the SAAA Meeting. I have included this for completeness in some of the slides.

The Etiology of Perfect Storm Part I

**Match Day
1994**



Dealing with Generational Issues in Academic Medicine

Benchmarks by Facility Type, SAAA 2013

MEDIAN VALUES (50%)	Facility Type					
	All Groups (n=143)	All non ASC (n=111)	ASC (n=32)	AMC/ Indigent* (n=80)	Children (n=11)	Community (n=20)
Sites	21.0	26.0	4.0	31.4	18.0	14.5
tASA/OR	What is Overall Clinical Productivity?					
H/OR/d						
tASA/h						
Base/case						
H/case						
Staffing Ratio						

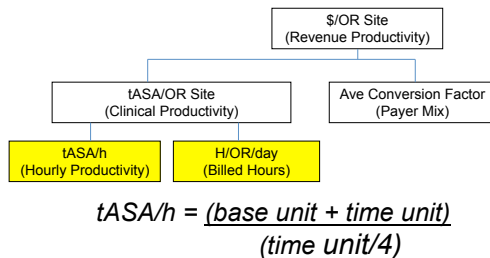
* Includes 1 Heart Hospital
2013 Survey of Clinical Productivity of Academic Anesthesiology Departments, www.SAAAahq.org

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H/OR/d						
tASA/h						
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H/case						
Staffing Ratio						

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Anesthesia Clinical Productivity



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H/OR/d						
tASA/h	6.7	6.7	7.4	6.5	7.3	7.1
Base/case	5.8	6.0	4.5	6.2	5.8	5.4
H/case	2.2	2.3	1.2	2.5	1.7	1.6
Staffing Ratio						

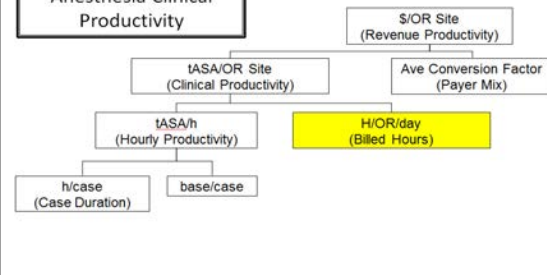
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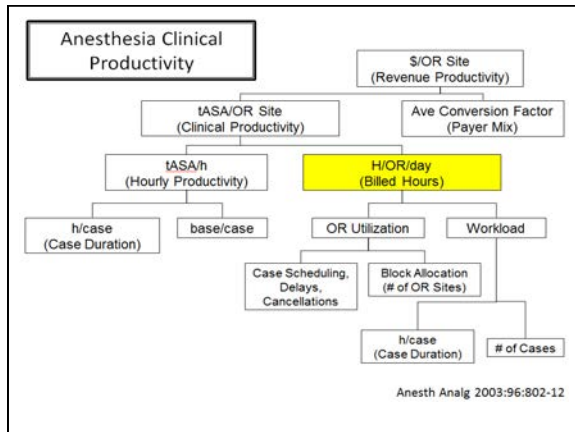
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Anesthesia Clinical Productivity



Anesth Analg 2003;96:802-12

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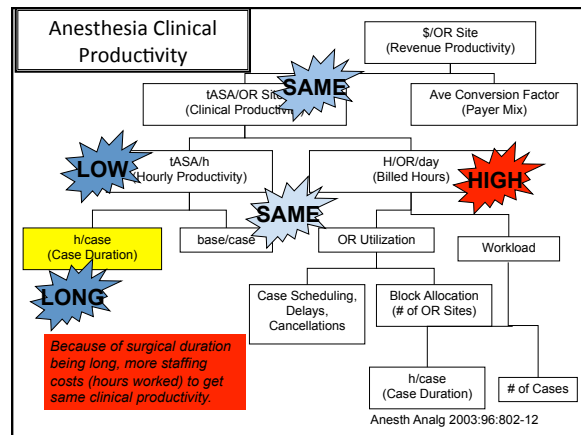
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Staffing Ratio						

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How to use the benchmark data?

- Compare similar facilities
- Use to identify where to investigate more
- Use to confirm your understanding
- Example: Similar overall productivity (tASA/OR), but Long surgical cases (High H/case)



Benchmarks by Facility Type, SAAA 2013

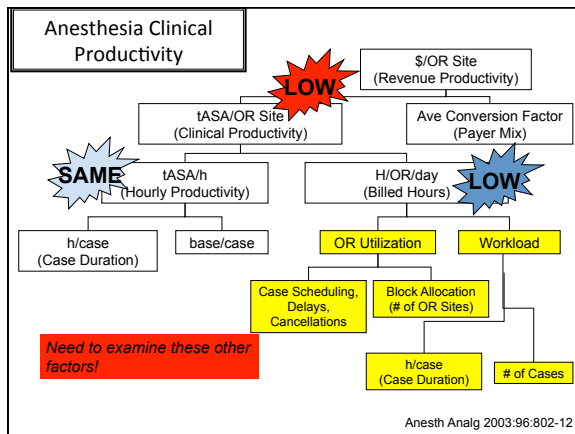
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Staffing Ratio						

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How to use the benchmark data?

- Compare similar facilities
- Use to identify where to investigate more
- Use to confirm your understanding
- Example: Similar overall productivity (tASA/OR), but Long surgical cases (High H/case)
- Example: Low tASA/OR but similar tASA/h

Dealing with Generational Issues in Academic Medicine



Other Findings

- Breakdown by number of sites, type of surgical staff (academic or mixed private/academic)
- Staffing ratio

Benchmarks by Facility Type, SAAA 2013

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H/OR/d	6.5	6.9	4.3	7.3	6.0	6.0
tASA/h	6.7	6.7	7.4	6.5	7.3	7.1
Base/case	5.8	6.0	4.5	6.2	5.8	5.4
H/case	2.2	2.3	1.2	2.5	1.7	1.6
Staffing Ratio	1.8	1.7	2.8	1.8	1.7	1.8

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Benchmarks 2013

MEDIAN VALUES (50%)	Facility Type					Type of Surgical Staff		
	All Groups (n=143)	All non ASC (n=111)	ASC (n=32)	AMC/ Indigent* (n=80)	Children (n=11)	Community (n=20)	Academic Only (n=57)	Mixed/ Private Practice** (n=54)
Sites	21.0	26.0	4.0	31.4	18.0	14.5	29.0	25.0
FTE	12.0	15.0	2.0	17.0	13.0	6.0	16.0	13.0
Staffing Ratio	1.8	1.7	2.8	1.8	1.7	1.8	1.8	1.7
tASA/case	14.3	15.6	9.1	16.6	12.5	12.3	16.6	14.1
Base/case	5.8	6.0	4.5	6.2	5.8	5.4	6.2	5.8
H/case	2.2	2.3	1.2	2.5	1.7	1.6	2.5	2.1
tASA/h	6.7	6.7	7.4	6.5	7.3	7.1	6.5	6.8
Case/OR/d	3.1	3.0	3.6	3.0	3.5	3.2	2.9	3.3
tASA/OR/d	11,215	11,632	8,912	11,982	10,839	10,630	12,023	11,445
H/OR/d	6.5	6.9	4.3	7.3	6.0	6.0	7.2	6.8

SAAA YEARLY SURVEY 2014

2014 Average Department

	Mean	+/- SD	Median
Surgical Anesthesiologist FTE's	48.3	31.9	41
Pain	4.0	2.85	3.6
ICU	3.6	4.6	2
Residents			
CA-1	14.0	7.1	13
CA-2	13.8	6.9	14
CA-3	13.8	7.54	13
CA-4	9.8	11.6 (Max 61)	6
Per ACGME Average sized Program - CAs 1,2 & 3 - 44.3			
Internship			
CA-0	8.9	6.7	8
Interns in home Dept.	10.7	5.8	10

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Clinical Coverage

	Mean	+/- SD	Median
How many OR's does your Department cover each day?			
Sunday	4.1	3.68	4
Monday	40.7	26.5	38
Tuesday	41	26.5	39
Wednesday	40.8	26.5	38
Thursday	40.9	26.5	38
Friday	40.6	26.1	38
Saturday	4.8	4.2	4
How many Non-OR/Off Site locations does your Department cover each day?			
Sunday	0.8	1.2	0
Monday	10.9	10.4	8
Tuesday	10.8	10.4	8
Wednesday	11	10.4	8
Thursday	10.9	10.4	8
Friday	10.9	10.5	8
Saturday	0.9	1.3	0
How many OB deliveries with anesthesia involvement does your Department have each year?	2,908	2,157 (maximum 13,485)	2,409

Clinical Coverage

	Mean	+/- SD	Median
How many faculty do you have on each of these services per day on average, Monday thru Friday in the daytime.			
OB	1.5	1.06	1
ICU	1.6	1.3	1
Acute Pain	1.3	0.93	1
Pain Clinic	2.2	1.72	1
Pre-Op Clinic	0.9	0.57	1
Other	0.4	1.54	0
Total	7.8		

CRNAs/AAs

	Mean	+/- SD	Median
Paid for by Dept.	47.4%	44.5%	40%
Paid for by your Hospital	50.1%	44.1%	40%
By other sources	2.6	9.87%	0%

*Previous years have reported these as total #s. Total # of CRNAs, AAs employed is not available.

Average Department Clinical Coverage Monday-Friday

	Mean	+/- SD	Median
ORs	40.8	16	39
Off Site	10.9	10.4	8
OB	1.5	1.06	1
ICU	1.6	1.3	1
APS	1.3	0.9	1
Pain	2.2	1.72	1
Pre-Op	0.9	0.57	1
Other	0.4	1.54	0
Total	59.6		
Faculty/Sites	50.7/59.5 =	0.939	

Average Department Clinical Revenue

	Mean	+/- SD
Average Department Clinical Revenue	\$ 30,244,498	\$ 21,123,509
Clinical Revenue per FTE	\$ 516,055	\$ 256,820
Research Revenue	\$ 1,606,511	\$ 2,471,942 (Max \$11,500,000)
Research Revenue per FTE	\$ 20,326	\$ 24,621
Total Institutional Support	\$ 10,541,397	\$ 9,127,210
Total Institutional Support per FTE	\$ 196,491	\$ 144,207
Support from the Hospital	\$ 8,092,944	\$ 8,425,490
Support from Medical School	\$ 1,107,828	\$ 1,726,378
Support from other sources	\$ 1,304,625	\$ 3,045,381
Other income	\$ 684,364	\$ 2,315,391
Total Department Revenue	\$ 43,076,770	\$ 28,612,988
Total Department Revenue per FTE	\$ 740,693	\$ 231,042

Billing Production

	Mean	+/- SD
Total Anesthesia Units Billed	666,082	446,746
Total Anesthesia Units Billed Per FTE	11,983	6,964
Time Units per Case	11.5	4.33
Cases Billed	40,551	26,675
Total Work RVUs for Intraoperative Procedures (Line Placement/TEE/Blocks) (n=52)		32,640
How many work RVUs did you bill for your ICU Service last year? (n=55)	18,547	25,188
How many work RVUs did you bill for Pain Management last year?		
In-Patient	4,358	4,837
Outpatient	13,746	13,175

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Billing Data

	Mean	+/- SD
What is your gross unit value?	\$119.00	\$ 35.30
What is your average \$ amount collected per unit?	\$ 37.00	\$ 12.57
What unit value do you receive from Medicaid?	\$ 17.10	\$ 6.38

Billing – Median Data

	Median
Total Anesthesia units	566,368
Total Anesthesia units billed per FTE	11,982
Total Anesthesia time units billed per case	10.6
What is the average unit dollar amount you collected?	\$35.00

Margin Analysis

	Mean	+/- SD
Margin (n=85)	\$ 833,057	\$3,864,251
Margin: Those with profit(n=58)	\$2,332,510	\$3,295,824
Margin: Those with loss (n=21)	-\$3,070,273	\$3,005,330

Compensation

How much additional compensation do you pay for the following subspecialty?	Mean	+/- SD	Median
For Departments paying additional comp.			
Cardiac	\$14,414	\$13,549	\$ 10,000
ICU	\$10,386	\$13,245	\$ 5,000
Pediatrics	\$14,193	\$16,597	\$ 10,000
Pain	\$12,580	\$18,331	\$ 10,000
OB	\$5,182	\$7,337	\$ 10,000
Neurology	\$ 2,284	\$4,408	\$ 0,000
Call – How much do you pay per hour for late/ weekend In-House Coverage	\$152.00	\$36.00	\$ 150.00

2014 Compensation Average total compensation including income plus pension contributions

Compensation includes income plus pension contribution	25%	Median	75%
Instructor	246,026	285,553	324,503
Assistant Professor	309,013	331,149	361,370
Associate Professor	328,000	367,110	402,450
Professor	341,004	376,145	426,655
Chair	501,280	544,266	606,802

Faculty Benefits

	Mean	+/- SD	Median
What is the average of non-clinical/ academic time for faculty (not counting the day after In-Hospital Call)	17.7%	8.5%	15.0%
Number of vacation days	24.6	5.95	24
Number of meeting days	7.4	3.86	7

Dealing with Generational Issues in Academic Medicine

Total Department Support (without CRNA Support) 2014

	Mean	+/- SD	Median
Support without CRNA Support	\$ 7,851,927	\$ 6,148,498	\$ 7,096,471
Support without CRNA Support per FTE	\$ 143,964	\$ 119,849	\$ 117,960

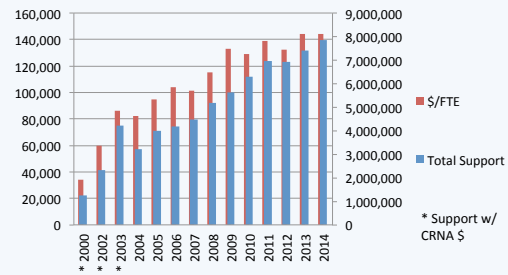
Mean Total Department Support (without CRNA Support)

	\$ Support	\$ Per FTE (Mean)
2009	\$ 5,630,386	\$ 133,196
2010	\$ 6,579,848	\$ 128,619
2011	\$ 7,008,978	\$ 140,435
2012	\$ 6,920,575	\$ 132,339
2013	\$ 7,413,000	\$ 144,000
2014	\$ 7,851,927	\$ 143,964

Mean Institutional Support

Total Support/FTE	2014	2013	\$
			\$ 196,441
			\$ 181,000
(Total support – CRNA Support)/FTE	2014		\$ 143,964
	2013		\$ 144,000
	2012		\$ 132,338
	2011		\$ 140,435
(Support without CRNA support)/Site	2014		\$ 7,851,927
			+ 59.6=
			\$ 131,744
	2013		\$ 137,277
	2012		\$ 128,831
	2011		\$ 134,934

Total Department Support (Without CRNA Support)



Trends 2014 vs 2013

Total support without CRNA Support per FTE	Stable
Reporting departments with a positive margin	Increased
Faculty per site	0.939 Is lower – not statistically significant
Clinical coverage out of OR per day	Increased

The Tsunami???

Is this all sustainable???

Dealing with Generational Issues in Academic Medicine



ECONOMICS, EDUCATION, AND HEALTH SYSTEMS RESEARCH
 Steven James
 RONALD B. MILLER

Organizational Factors Affect Comparisons of the Clinical Productivity of Academic Anesthesiology Departments

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 Charles W. Whitten, MD, Tamas Uchida, MD, and Jeffrey L. Apfelbaum, MD

¹Department of Anesthesiology, University of Texas Medical Branch, Galveston, Texas; ²Department of Anesthesiology, University of Arizona, Tucson, Arizona; ³Department of Anesthesiology and Pain Management, University of Texas Southwestern Medical Center, Dallas; ⁴Chief of Hematology, University of Texas Medical Branch, Galveston, Texas; and ⁵Department of Anesthesia and Critical Care, University of Chicago, Chicago, Illinois

Productivity measurements based on "per operating room (OR) site" and "per case" are not influenced by staffing ratios and have permitted meaningful comparisons among small samples of both academic and private-practice anesthesiology groups. These comparisons have suggested that a larger sample would allow for clinical groups to be compared using a number of different variables (including type of hospital, number of OR sites, type of surgical staff, or other organizational characteristics), which may permit more focused benchmarking. In this study, we used such grouping variables to compare clinical productivity in a broad survey of academic anesthesiology programs. Descriptive billing and staffing data were collected for 1 fiscal or calendar year from 57 academic anesthesiology departments representing 39 hospitals. Descriptive data included types of surgical staff (e.g., academic medical centers and ambulatory surgical centers [ASCs]), billing and staffing data (total number of cases performed, total American Society of Anesthesiologists units [ASA] billed, total time units billed [35-min units], and daily number of anesthetizing sites staffed [OR sites]). Measurements of total productivity (ASA/OR site) billed hours per OR site per day (H/OR/d), surgical duration (case) hourly billing productivity (ASA/h), and base units/case were compared. These comparisons were made according to type of hospital, number of OR sites, and type of surgical staff. The ASA had significantly less ASA/OR site fewer H/OR/d, and less h/case than non-ASC hospitals. Community hospitals had significantly less H/OR/d and h/case than academic medical centers and incident hospitals and a larger percentage of private-practice or mixed surgical staff. Academic staff had significantly less ASA/h, and significantly more h/case. ASA/h correlated highly with h/case ($r = 0.68$). This study showed that the hospitals at which academic anesthesiology groups provide care are not all the same from a clinical productivity perspective. By grouping based on type of hospital, number of OR sites, and type of surgical staff, academic anesthesiology departments (and hospitals) can be better compared by using clinical productivity measurements based on "per OR site" and "per case" measurements (ASA/h, H/OR/d, h/case, ASA/h, and base/case).

(Anesth Analg 2003;96:802-812)

Benchmarks 2013

MEAN VALUES	FACILITY TYPE					
	All Groups (n=143)	All non ASC (n=111)	ASC (n=32)	AMC/Indigent* (n=80)	Children (n=11)	Community (n=20)
Sites	23.0	28.3	4.5	33.1	17.2	15.30
FTE	13.7	17.0	2.2	19.9	11.1	8.5
Staffing Ratio	1.9	1.8	2.3	1.8	1.6	1.8
tASA/case	14.3	15.6	9.8	16.6	13.6	12.8
Base/case	5.7	6.0	4.7	6.2	5.9	5.4
H/case	2.1	2.4	1.3	2.6	1.9	1.9
tASA/h	7.1	6.7	8.4	6.5	7.2	7.2
Case/OR/d	3.3	3.2	3.7	3.1	3.3	3.5
tASA/OR/y	11,210	11,900	8,816	12,320	10,717	10,871
H/OR/d	6.6	7.2	4.4	7.7	5.9	6.2

Comparing Apples to Apples: Updated clinical productivity benchmarking survey of academic anesthesiology departments demonstrates importance of benchmarking using data on similar facilities

In order to benchmark anesthesiology clinical productivity of a facility, current and detailed information is needed by organizational characteristics, e.g., type of facility, type of surgical staff, and number of anesthetizing sites (1) because there has not been a survey since 2003, we performed a follow-up survey of clinical productivity of academic programs.

Results: 48% of members responded with 143 facilities accounting for 2.5 million cases, almost 40 million billed ASA units, 3,290 anesthetizing sites, and 1,954 anesthesiologists. Median Values of all and some of the subgroups are shown in Tables 1 & 2.

Comparing Apples to Apples-Continued

Discussion: Academic departments are providing care at more facilities and larger facilities (as compared to 2003 survey). It is even more important to compare productivity of a facility with like facilities. Shorter surgical duration (e.g., ASC, Children's, Community, and smaller facilities) lead to more units billed per hour of care (tASA/h) which results in not having as many billed hours for similar productivity per OR (tASA/OR).

References. (1) *Anesth Analg* 2003; 96:802-812

2013 AAAC/SAAA Clinical Productivity Report

Key Findings:

- 1) Similar to previous reports, ambulatory surgical centers (ASC) have different clinical productivity measurements than full-service facilities. This finding is consistent with the fact that ASC are smaller, do less complex cases, do shorter procedures, and do not function 24/7.
- 2) Smaller facilities (1-9 sites, 10-19 sites) were associated with shorter cases that leads to higher tASA/h productivity. The number of billed hours worked per day (H/OR/d) was less that may be consistent with less after-hour cases and weekend cases.
- 3) Compared to AMC's, Children's Hospitals (not reported in 2003 report) showed lower case duration cases that leads to higher tASA/h numbers. But the overall tASA/OR was not much less despite lower H/OR/d due to this higher hour billing productivity.

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