

Perfect Storm Part II: Is a Tsunami Brewing

**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 2015 was greater than 150,000 Anesthetics.

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



Parkland Health and Hospital System 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



Wall Street Journal March 17, 1995 – G. Anders “Once a hot specialty, Anesthesiology cools as insurers scale back”

- ▶ 1994 Grads-1,863 Residents graduate from Anesthesia Residencies
- ▶ 1995 Start – 892 Residents, consisting of 348 IMG’s and 544 AMG’s
- ▶ “This was the start of the lost generation.” The specialty is now feeling this loss at another level, as individuals from this “lost generation” should be morphing into significant leadership positions.

Size of Residency Training Programs

- In 2015- 1,641 Senior Residents graduated (**35% women**). A total of 5,978 Anesthesiology Residents are enrolled in 133 Core Residency Programs.

Residency Production: Confounding Factors

- ▶ In 2015, we know that the following pursued ACGME fellowships:

Number of Programs	N=	Positions Filled	% Women
Critical Care Medicine	54	159	29%
Pain Medicine	97	336	24%
Pediatrics	53	191	59%
Adult Cardiothoracic	61	177	31%
OB	27	35	57%

Understanding Clinical Productivity for Anesthesiology Departments

Utilize the Following:

- ▶ Not Simple
- ▶ Key Point: Organizational factors that determine a facility type impact clinical productivity.
- ▶ To best understand, compare to similar types of facilities:
 - ❖ASC to ASC
 - ❖Community Hospital to Community Hospital
 - ❖AMC / Trauma to AMC / Trauma

Understanding Anesthesia Clinical Productivity and Survey Results

Utilize the Following:

- ▶ Figure from 2003 Paper
- ▶ Median Data by Facility Type, 2013 Survey

Clinical Productivity by Facility Type

- 2003 Survey
Anesth Analg 2003;96:802-12
- 2013 Survey

2013 Survey of Clinical Productivity of Academic Anesthesiology Departments
Association of Academic Anesthesiologists (AAA) of Society of Academic Anesthesiology Associations (SAAA)

Benchmarks by Facility Type SAAA 2013

MEDIAN VALUES (50%)	All Groups (n=143)	All non ASC (n=111)	ASC (n=32)	AMC/ Indigent* (n=80)	Children (n=11)	Community (n=20)
Sites						
tASA/OR	tASA = Total ASA units billed, OR = Anesthetizing Site					
H/OR/d	H = 4 time units, d = 250 weekdays/year					
tASA/h	Hourly productivity					
Base/case						
H/case						
Staffing Ratio						

* Includes 1 Heart Hospital
2013 Survey of Clinical Productivity of Academic Anesthesiology Departments, ww2.SAAAhq.org

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Benchmarks by Facility Type SAAA 2013

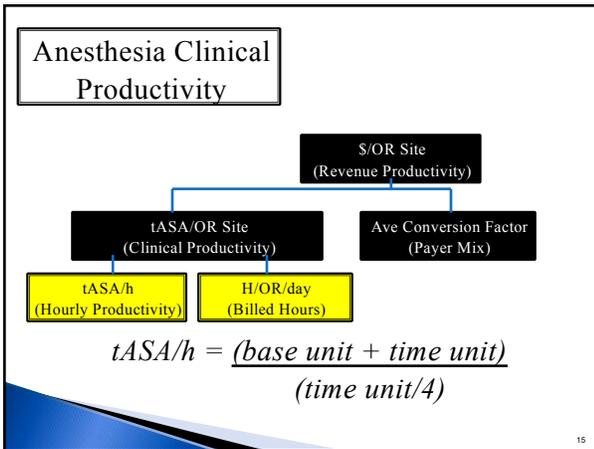
MEDIAN VALUES (50%)	All Groups (n=143)	All non ASC (n=111)	ASC (n=32)	AMC/ Indigent* (n=80)	Children (n=11)	Community (n=20)
Sites	21.0	26.0	4.0	31.4	18.0	14.5
tASA/OR	What is Overall Clinical Productivity?					
H/OR/d						
tASA/h						
Base/case						
H/case						
Staffing Ratio						

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

Benchmarks by Facility Type- SAAA 2013

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tASA/OR	11,215	11,632	8,912	11,982	10,839	10,630
H/OR/d						
tASA/h						
Base/case						
H/case						
Staffing Ratio						

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Benchmarks by Facility Type- SAAA 2013

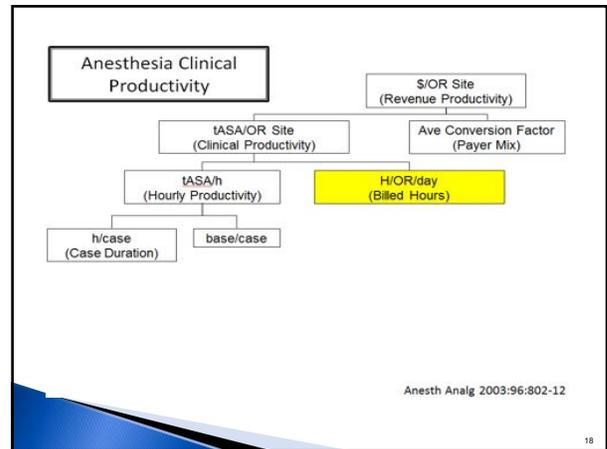
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H/OR/d						
tASA/h	6.7	6.7	7.4	6.5	7.3	7.1
Base/case	5.8	6.0	4.5	6.2	5.8	5.4
H/case	2.2	2.3	1.2	2.5	1.7	1.6
Staffing Ratio						

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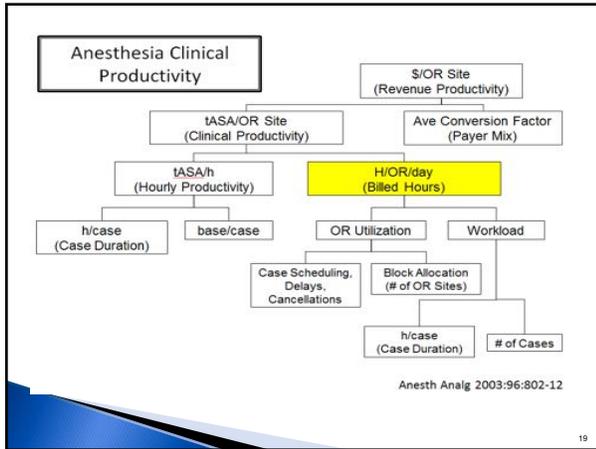
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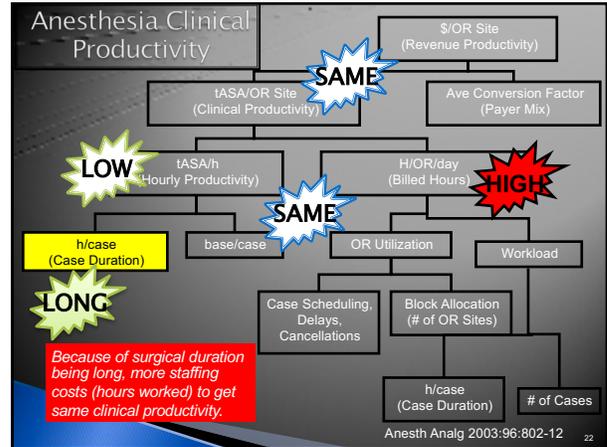
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How to use the Benchmark Data?

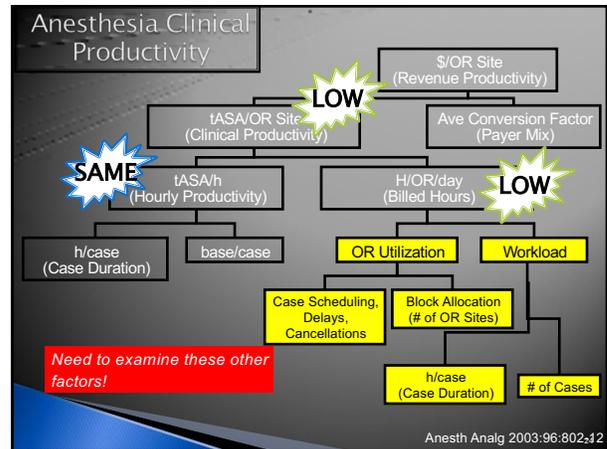
- Compare similar facilities
- Use to identify where to investigate more
- Use to confirm your understanding
- Example: Similar overall productivity (tASA/OR), but long surgical cases (High H/case)
- Example: Low tASA/OR but similar tASA/h



Benchmarks by Facility Type, SAAA 2013

MEDIAN VALUES (50%)	All Groups (n=143)	All non ASC (n=111)	Facility Type			
			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	11,215	11,632	8,912	11,982	10,839	10,630
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H/case	2.2	2.3	1.2	2.5	1.7	1.6
Staffing Ratio						

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



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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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

*Includes 1 Heart Hospital

2013 Survey of Clinical Productivity of Academic Anesthesiology Departments, www.SAAAq.org

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Benchmarks by Facility Type, SAAA 2013

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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

*Includes 1 Heart Hospital

2013 Survey of Clinical Productivity of Academic Anesthesiology Departments, www.SAAAq.org

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Benchmarks 2013

MEDIAN VALUES (50%)	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

*Includes 1 Heart Hospital, **Private practice only

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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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SAAA YEARLY SURVEY 2015

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2015 Average Department

	Mean	+/- SD	Median
Surgical Anesthesiologist FTE's	49.3	30.5	44.5
Pain	4.3	3.2	4.0
ICU	3.7	4.2	2.1
Residents			
CA-1	14.2	6.8	14
CA-2	13.8	6.8	13
CA-3	13.8	7.3	13
CA-4	9.6	11.0 (Max 67)	6
Per ACGME Average sized Program – CAs 1,2 & 3 = 41.8			
Internship			
CA-0	9.0	6.5	9
Interns in home Dept.	10.9	5.5	10

National Clinical Coverage

	Mean	+/- SD	Median
How many OR's does your Department cover each day?			
Sunday	3.7	3.8	3
Monday	40.8	21.8	38
Tuesday	41.1	22	38
Wednesday	40.9	21.6	37
Thursday	40.9	21.6	38
Friday	40.5	20.9	37
Saturday	4.4	4.2	4
How many Non-OR/Off Site locations does your Department cover each day?			
Sunday	0.8	1.7	0
Monday	10.9	8.6	8
Tuesday	11.1	8.6	9
Wednesday	11	8.5	9
Thursday	11	8.5	9
Friday	11	8.3	9
Saturday	1.0	1.9	0
How many OB deliveries with anesthesia involvement does your Department have each year?	2,992	2,073 (maximum 10,099)	2,651

Total Work FTE

	Mean	+/- SD	Median
If your institution funds retirement/pension, what is the average percentage of total compensation provided?	9.7%	5.36%	9%
What is the total number of part-time clinical physicians faculty that your Department employs?	9.1	9.68	6
What is the average percentage of faculty fringe benefits, excluding malpractice premium and pension as compared with the base?	18.2%	9.57%	17%
What is the total number of clinical faculty members who have 40% or greater academic time for scholarly work ?	3.6	5.46	1

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	1.4	0.95	1
ICU	1.7	1.46	1
Acute Pain	1.4	1.16	1
Pain Clinic	2.4	1.81	2
Pre-Op Clinic	1.0	0.57	1
Other	0.3	1.00	0
Total	8.2		

CRNAs/AAs

	Mean	+/- SD	Median
Paid for by Dept.	42.7%	43.9%	28%
Paid for by your Hospital	52.8%	44.8%	52%
By other sources	4.4	15.6%	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	21	39
Off Site	11.0	11.0	8
OB	1.4	0.95	1
ICU	1.7	1.46	1
APS	1.4	1.16	1
Pain	2.4	1.81	2
Pre-Op	1.0	0.57	1
Other	0.3	1.00	0
Total	60		
Faculty/Sites	57.3/60=	0.9555	

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Average National Department Clinical Revenue

	Mean	+/- SD
Average Department Clinical Revenue	\$ 32,824,158	\$ 21,381,643
Clinical Revenue per FTE	\$ 542,346	\$ 223,525
Research Revenue	\$ 1,772,563	\$ 3,545,230 (Max \$21,649,535)
Research Revenue per FTE	\$ 21,997	\$ 35,654
Total Institutional Support	\$ 10,472,349	\$ 8,413,381
Total Institutional Support per FTE	\$ 191,388	\$ 123,743
Support from the Hospital	\$ 8,176,628	\$ 7,049,378
Support from Medical School	\$ 1,012,692	\$ 1,637,578
Support from other sources	\$ 1,283,029	\$ 3,683,966
Other income	\$ 444,286	\$ 1,136,125
Total Department Revenue	\$ 45,513,357	\$ 26,520,998
Total Department Revenue per FTE	\$ 761,825	\$ 207,213

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Billing Production National

	Mean	+/- SD
Total Anesthesia Units Billed	785,703	1,018,003
Total Anesthesia Units Billed Per FTE	13,996	11,128
Time Units per Case	12.3	4.33
Cases Billed	43,430	22,504
Total Work RVUs for Intraoperative Procedures (Line Placement/TEE/Blocks) (n=52)	28,726	49,134
How many work RVUs did you bill for your ICU Service last year? (n=55)	17,245	19,074

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Pain Billing Production National

	Mean	+/- SD
How many work RVUs did you bill for Pain Management last year?	2,737	2,737
In-Patient-Acute Pain	4,704	6,957
Regional Blocks-Post-Op	4,418	10,912
In-Patient-Chronic Pain	987	2,737
Out-Patient-Chronic Pain	15,963	16,023

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Billing Data

	Mean	+/- SD
What is your gross unit value?	\$122.00	\$ 42.50
What is your average \$ amount collected per unit?	\$ 38.00	\$ 15.40
What unit value do you receive from Medicaid?	\$ 17.50	\$ 7.60

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ICU Data

	Mean	+/- SD	Median
On average how many patients does each fellow cover while on service?	6.7	7.4	3
How many ICU weeks required for a faculty member to be considered as 100% clinical with no OR commitment?	23.7	13.1	25
How many ICU weeks required for faculty member to fulfill their departmental on call requirement?	13.7	7.41	12
Following a seven day ICU assignment, how many post-call off are provided to your intensivist?	2.5	2.27	2
How many distinct ICU does your Department cover?	2.5	1.48	50

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Billing – Median Data

	Median
Total Anesthesia Units	600,000
Total Anesthesia Units Billed per FTE	12,234
Total Anesthesia Time Units Billed Per Case	10.5
What is the Average Unit Dollar Amount Collected?	\$36.00

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Margin Analysis

	Mean	+/- SD
Margin (n=89)	\$ 1,578,345	\$4,014,126
Margin: Those with profit(n=58)	\$3,069,624	\$4,059,477
Margin: Those with loss (n=20)	-\$1,878,275	\$2,093,664

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Compensation

How much additional compensation do you pay for the following subspecialty?	Mean	+/- SD	Median
For Departments paying additional comp.			
Cardiac	\$ 21,232	\$ 17,776	\$ 15,000
ICU	\$ 18,288	\$ 17,423	\$ 10,000
Pediatrics	\$ 23,786	\$ 25,101	\$ 15,000
Pain	\$ 20,481	\$ 25,593	\$ 10,000
OB	\$ 14,059	\$ 14,928	\$ 10,000
Neurology	\$ 15,115	\$ 16,328	\$ 10,000
Call – How much do you pay per hour for late/weekend In-House Coverage	\$160.00	\$37.80	\$ 150.00

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SAAA 2015 Compensation Total Compensation Including Income Plus Pension Contributions

Compensation Includes Income Plus Pension Contribution	25%	Median	75%
Instructor	256,059	280,000	312,910
Assistant Professor	308,560	336,400	367,289
Associate Professor	333,880	372,909	403,753
Professor	349,318	391,707	428,370
Chair	520,000	568,560	632,575

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AAMC Compensation Data (No Pension Contributions)

Department	Rank	P25	P50	P75
Total Anesthesiology	Chair	526	589	663
Total Anesthesiology	Chief	362	416	468
Total Anesthesiology	Professor	336	386	437
Total Anesthesiology	Associate Professor	323	370	420
Total Anesthesiology	Assistant Professor	298	341	385
Total Anesthesiology	Instructor	231	282	340

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AAMC Compensation Data (No Pension Contributions)

Department	Rank	P25	P50	P75
Anesthesiology: General	Chair	524	588	661
Anesthesiology: General	Chief	366	414	475
Anesthesiology: General	Professor	336	386	434
Anesthesiology: General	Associate Professor	325	367	416
Anesthesiology: General	Assistant Professor	297	341	385
Anesthesiology: General	Instructor	232	287	342

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AAMC Compensation Data (No Pension Contributions)

Department	Rank	P25	P50	P75
Anesthesiology: Pain Management	Chair			
Anesthesiology: Pain Management	Chief	407	441	464
Anesthesiology: Pain Management	Professor	320	350	405
Anesthesiology: Pain Management	Associate Professor	301	330	381
Anesthesiology: Pain Management	Assistant Professor	289	323	388
Anesthesiology: Pain Management	Instructor	215	255	326

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AAMC Compensation Data (No Pension Contributions)

Department	Rank	P25	P50	P75
Anesthesiology: Pediatric	Chair			
Anesthesiology: Pediatric	Chief	407	386	418
Anesthesiology: Pediatric	Professor	352	411	466
Anesthesiology: Pediatric	Associate Professor	342	407	441
Anesthesiology: Pediatric	Assistant Professor	309	351	385
Anesthesiology: Pediatric	Instructor	232	257	319

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Faculty Benefits

	Mean	+/- SD	Median
Number of vacation days	25.7	5.58	24
Number of meeting days	8.0	4.46	8

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Total National Department Support 2015 (Without CRNA Support)

	Mean	+/- SD	Median
Support without CRNA Support	\$ 7,727,345	\$ 6,347,077	\$ 6,728,261
Support without CRNA Support per FTE	\$ 150,182	\$ 120,352	\$ 122,806

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Mean Total National 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
2015	\$ 7,727,345	\$ 150,182

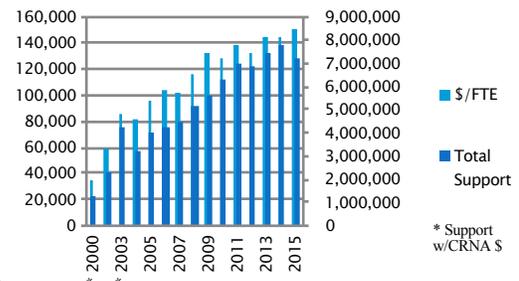
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Mean National Institutional Support

Total Support/FTE	2015	\$ 191,912
	2014	\$ 196,441
	2013	\$ 181,000
(Total support – CRNA Support)/FTE	2015	\$ 150,182
	2014	\$ 143,964
	2013	\$ 144,000
	2012	\$ 132,338
	2011	\$ 140,435
(Support without CRNA support)/Site	2015	\$ 7,727,345 ÷ 60 = \$ 128,789
	2014	\$ 131,744
	2013	\$ 137,277
	2012	\$ 128,831
	2011	\$ 134,934

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Total National Department Support (Without CRNA Support)



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Brewing

THE TSUNAMI???
IS THIS ALL
SUSTAINABLE???

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