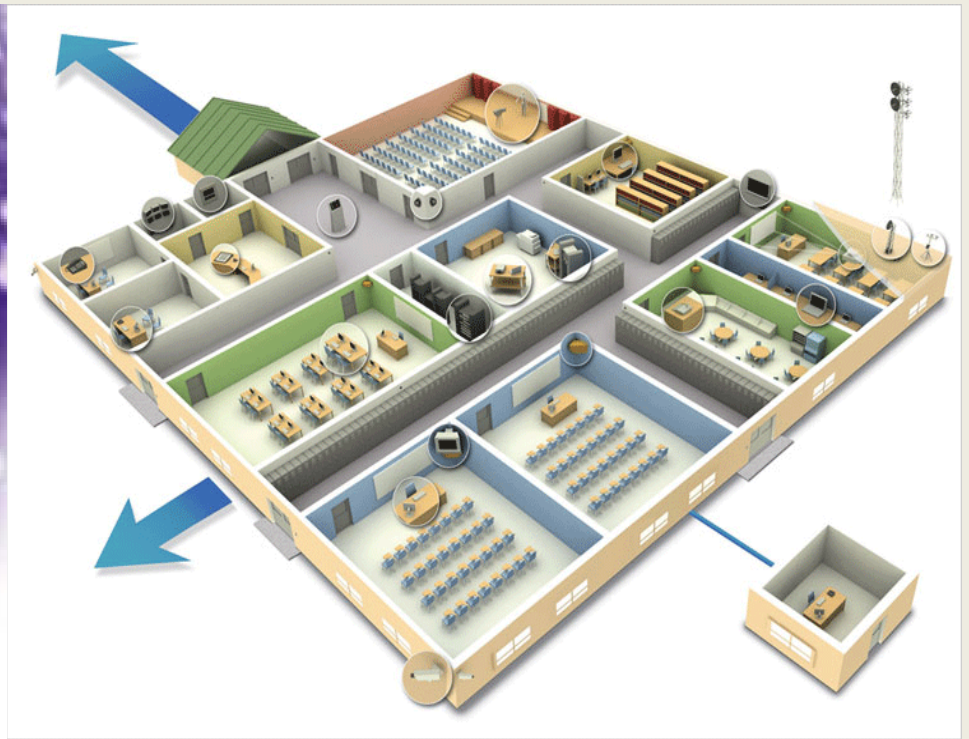


# The CRNA Workforce: Too many, too few or just right?

Programs, Students, Clinical Sites, Accreditation



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# Objectives

1. Describe trends in programs, students and graduates
2. Analyze the workforce variables which impact the CRNA job market including certification
3. Discuss issues faced by programs, students, providers and the profession when considering workforce trends

# Nurse Anesthesia Education

- Many changes....
  - Accreditation
  - Certification (NBCRNA)
  - Students have changed
    - Generational differences
    - Consumers
    - Debt
  - Technology has changed the dynamic
    - On line programs....



# Accreditation

Council on Accreditation of Nurse Anesthesia  
Educational Programs  
(COA)

# COA

- Sets case numbers
- Accredits programs
  - Site visitors
  - Standards and Guidelines
- Complies with USDE and CHEA
- Handles complaints
- Sets standards



Council on Accreditation  
of Nurse Anesthesia  
Educational Programs

*"Supporting quality assesment and improvement in nurse anesthesia education"*



# CRNA Education Programs

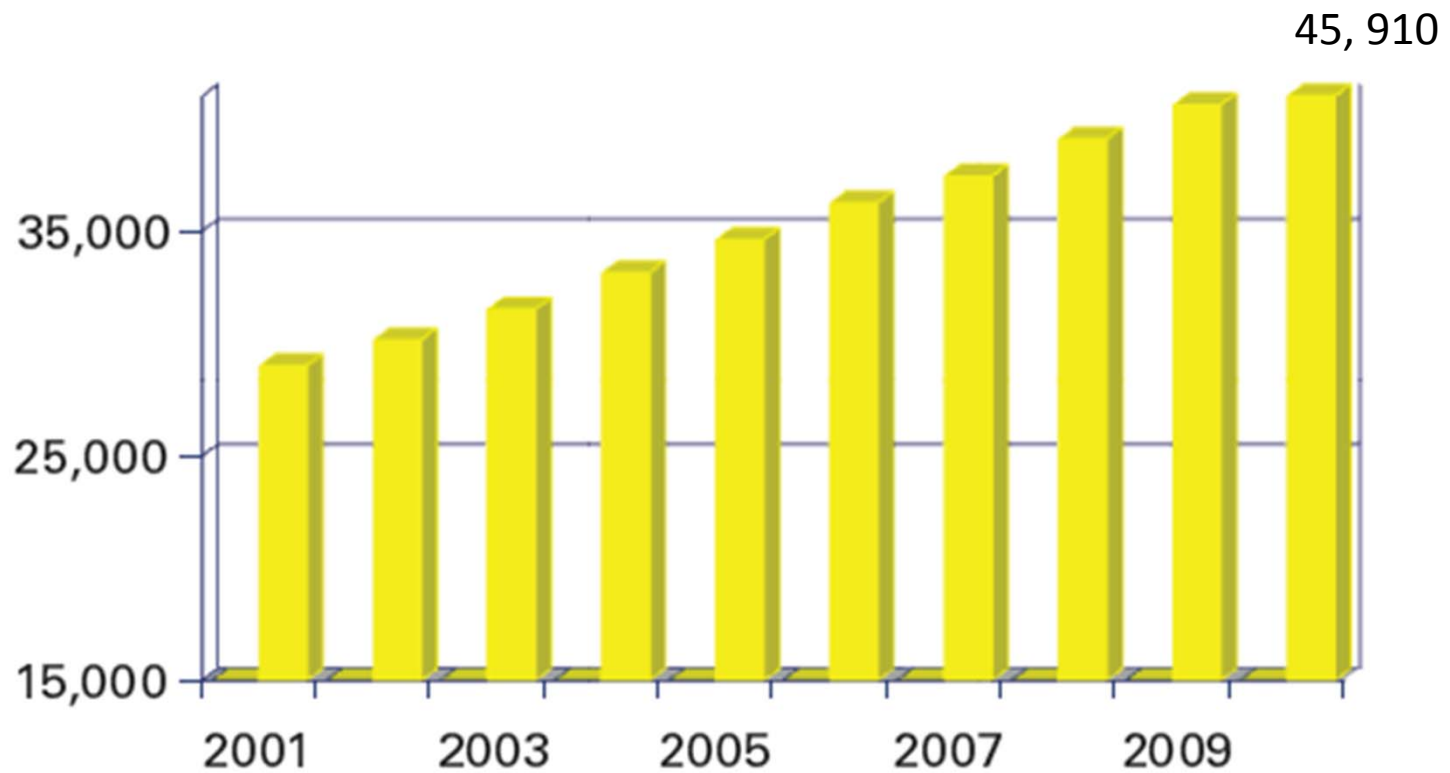
- 1976 ----- 194 programs
- 1980 ----- 161 programs
  - same number of graduates
  - greatest drop in CRNA programs contrasted by significant increases in MD residencies
- 1990 ----- 82 programs
  - DHHS study: need to AT LEAST triple CRNA grads by 2010
  - $750 \times 3 = \mathbf{2250}$
- 1995 ----- 87 programs
- 1999 ----- 82 programs (619 clinical sites)
- 2/2004 – 88 programs (1016 clinical sites)
- 2/2005 – 94 programs
- 2/2006 – 99 programs (1300+ clinical sites)
  - 11 new programs eligible for application in 2006
- 1/2007 – 106 programs (1500+ clinical sites)
- 1/2009-- 108 programs (> 2000 clinical sites)
- 1/2010- 109 programs (2077 clinical sites)
- 1/2011- 112 programs ( > 2200 clinical sites)

# AANA Membership Info 2010-2011

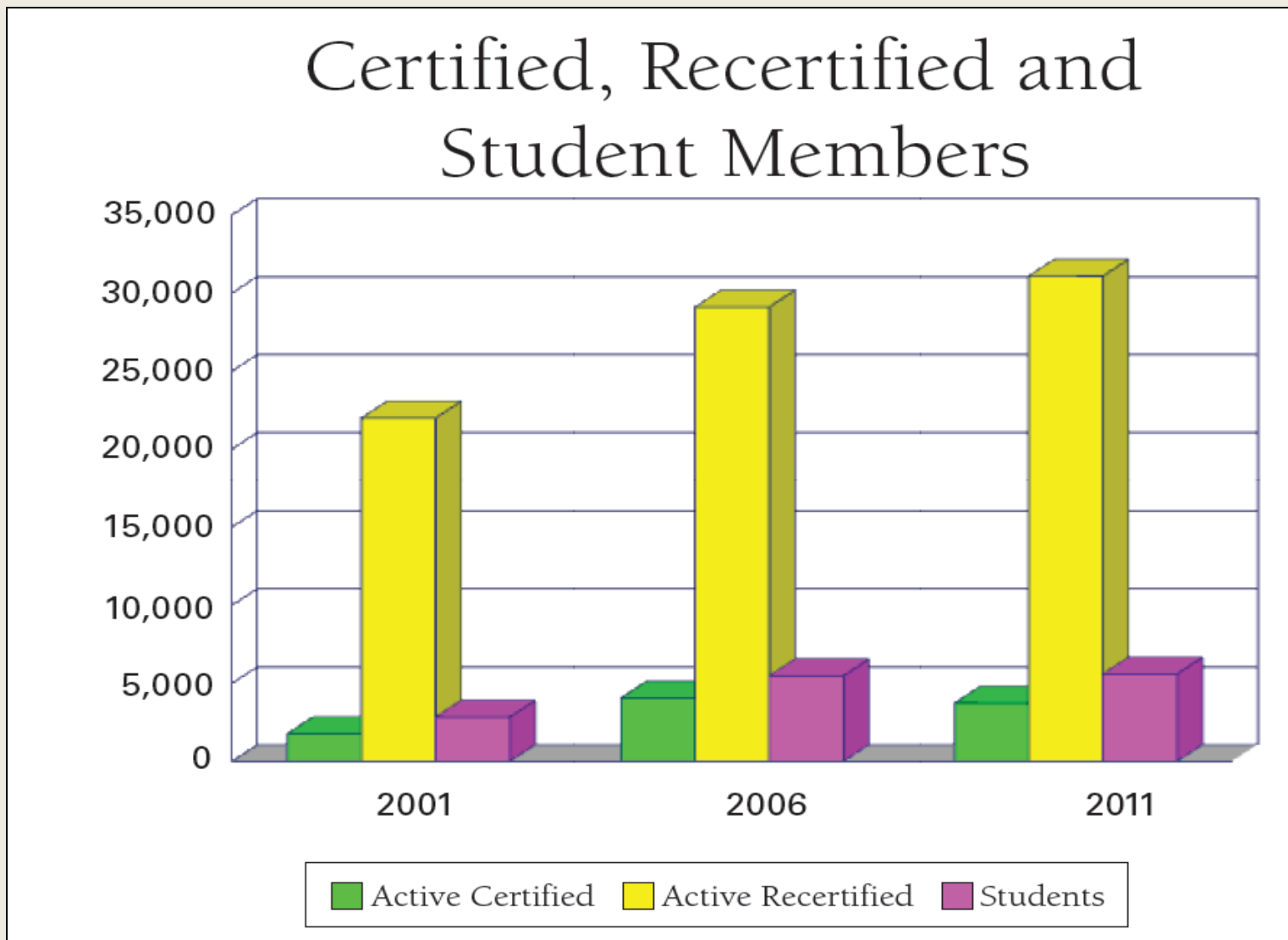
~6,000/~20,000 respondents

# Total Membership

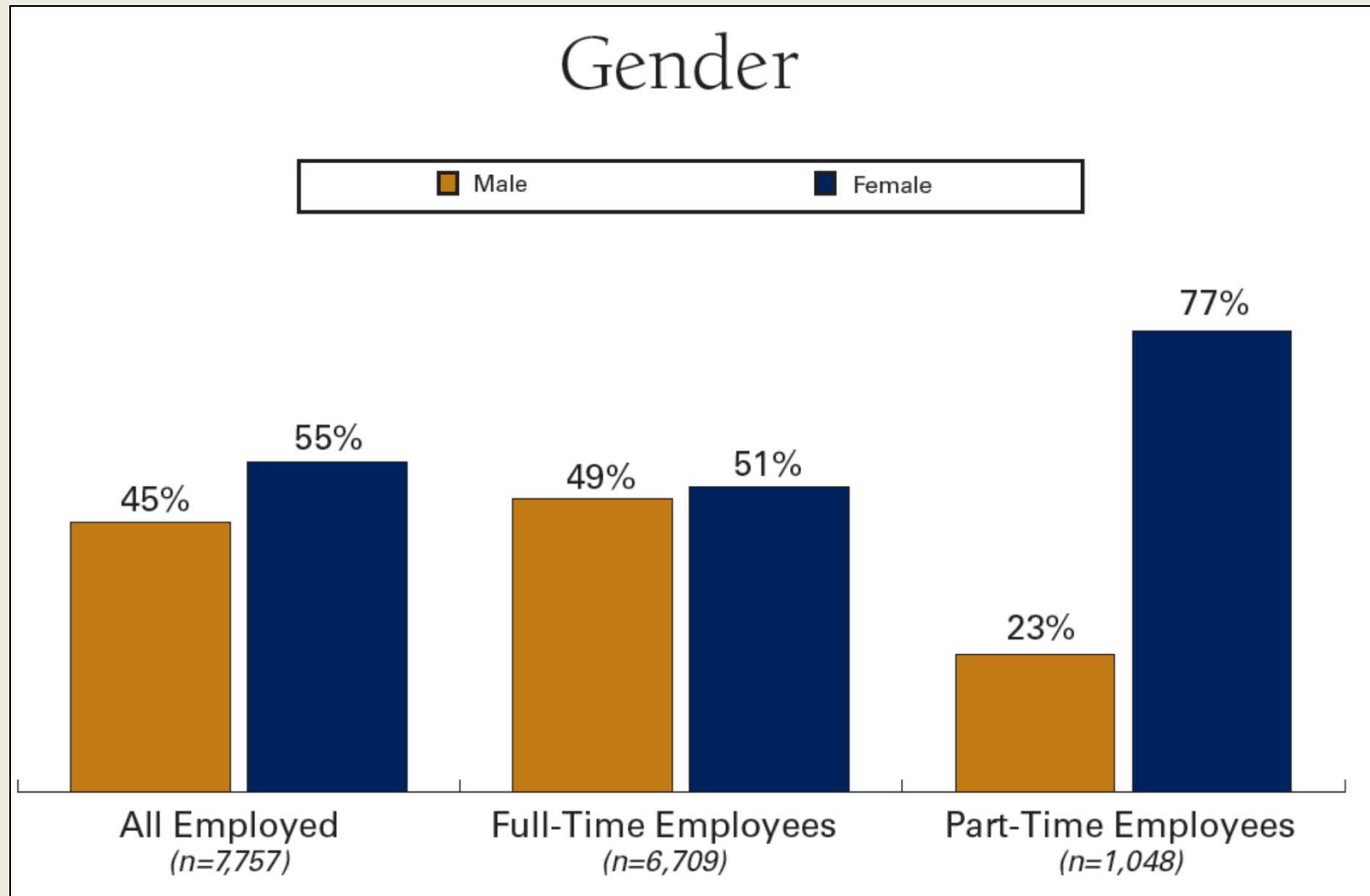
## Total Membership 2001-2011



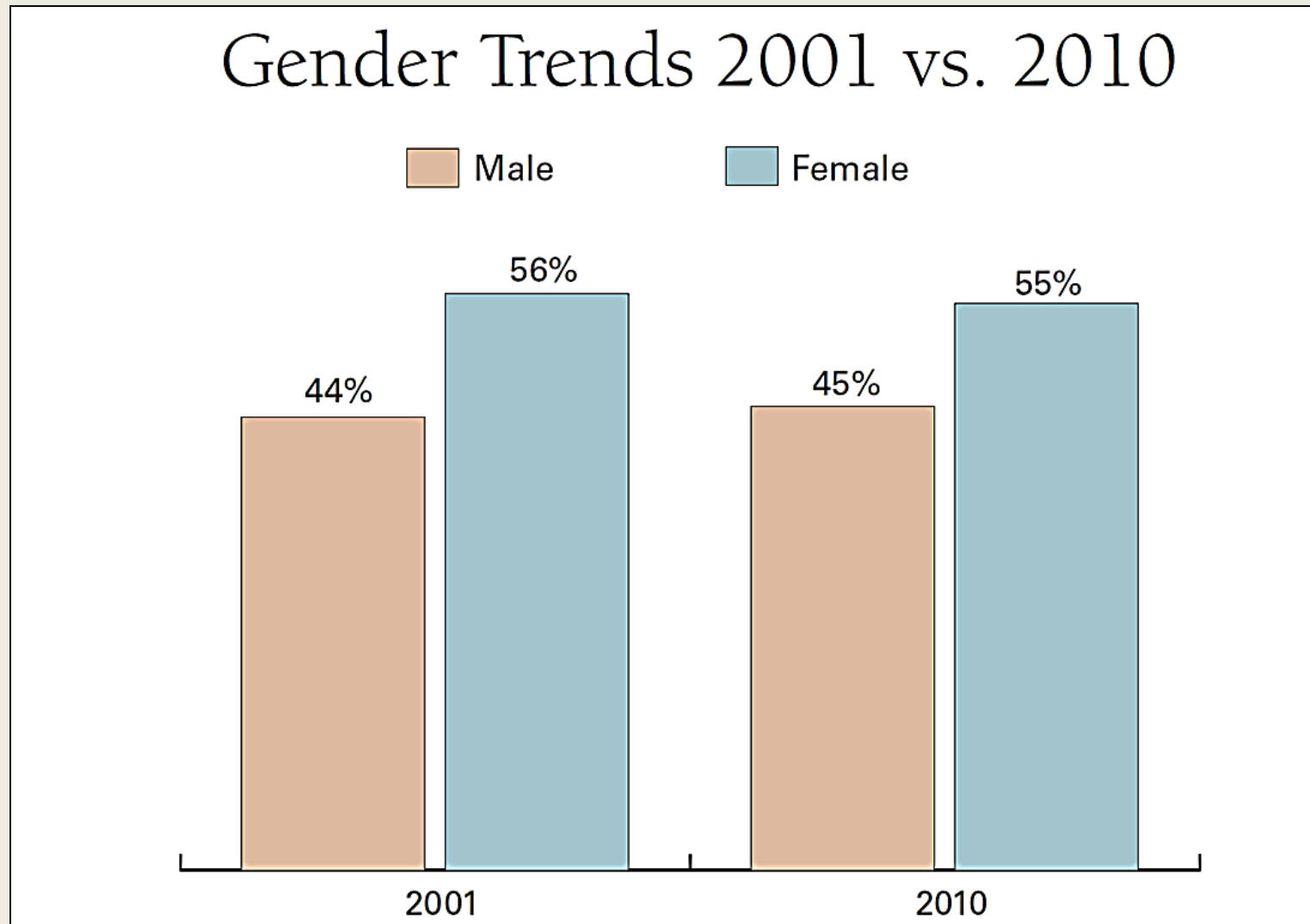
# Certified, Recertified, Students 2011



# Gender Proportions: 2011

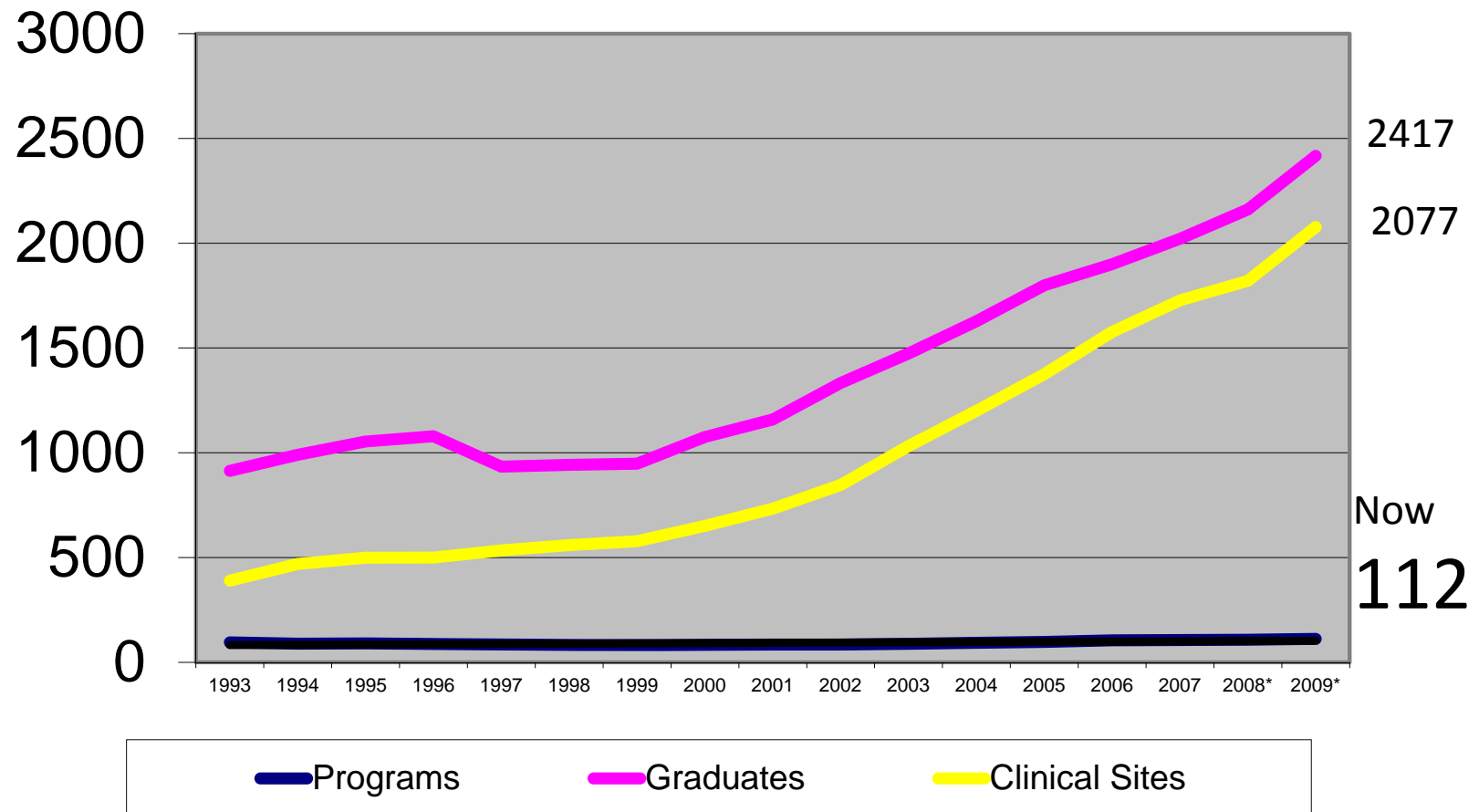


# Gender Trend: Annual Report 2011



# February 09..... 108 programs

## Nurse Anesthesia Programs, Graduates and Clinical Sites



Courtesy, Dr. Frank Gerbasi, Director of Accreditation, AANA COA, Feb 2009

Year	Grads
1980	1023
1988	574
1990	<b>750</b>
1994	981
1996	1000
1997	934
1999	948
2001	1159
2003	1500
2006	1946
2007	2021
2008	2161
2009	2239
2010	2417

# CRNA Graduates



# Possible Responses

- Advantages


- CRNA vacancy rates have been as high as 10%- not sustainable
- Failure to fill vacuum = alternative providers
- Better relationships with industry leaders
- Helps to change the workforce demographic
- More membership = more influence
- Quality opportunity
- Educational opportunity

- Disadvantages (fears)

- Competition for jobs
- Competition for **cases**
- Salary compression?
- Not enough clinical sites?
- Quality
- Shortage of qualified program faculty
- Pressurizes the clinical system
  - Sites
  - Coordinators
  - Instructors



# Increases 1999- 2009 (10 yrs)

- Graduates: 236%
  - Clinical sites: 317%
  - Programs: 31%
- 
- Barometer of issue- PD/faculty turnover

# Program Director/Faculty Turnover

- 1998- 2010 average- 15%
- 2005- 22%- Highest reported %
  - 21/94 programs
- Other faculty % turnover is higher
- Pressures
  - Doctoral education
  - Clinical pushback
  - Too much work
  - Endless job



# What About Applicants?

- Exact numbers unknown- some programs report economy is affecting
- Over the last 10 years- significant excess of applicants
- 150-220 at Pitt over last 5 years
- Major recruiting tool at undergraduate level
  - Obstacles to early admission as in dentistry, medicine etc

# COA 2010 Annual Report

## Number of Qualified Applicants Turned Away (108 Programs)

# of Applicants	N	# of Applicants	N
0 - 10	26	51 - 60	7
11 - 20	19	61 - 70	5
21 - 40	16	71 - 80	5
31 - 40	9	81 - 90	3
41 - 50	9	> 90	9

Total Number Turned Away = 4,152

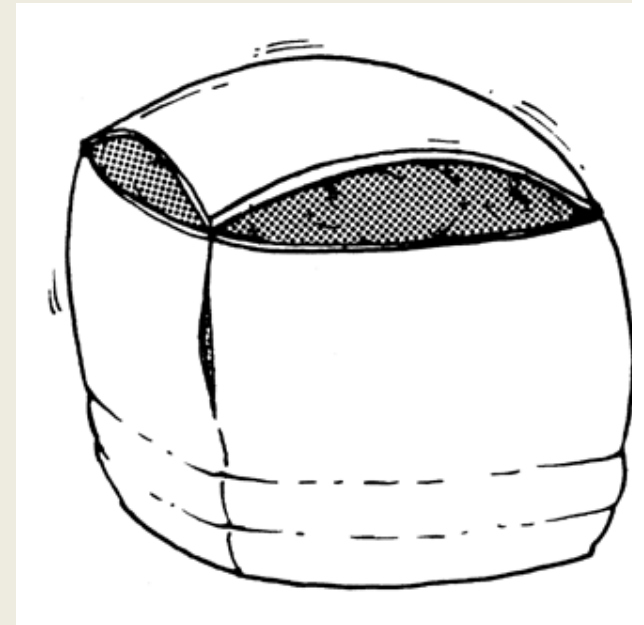
What does the NBCRNA do and  
who is the Director?

**Certification**/Re-certification

Karen Plaus

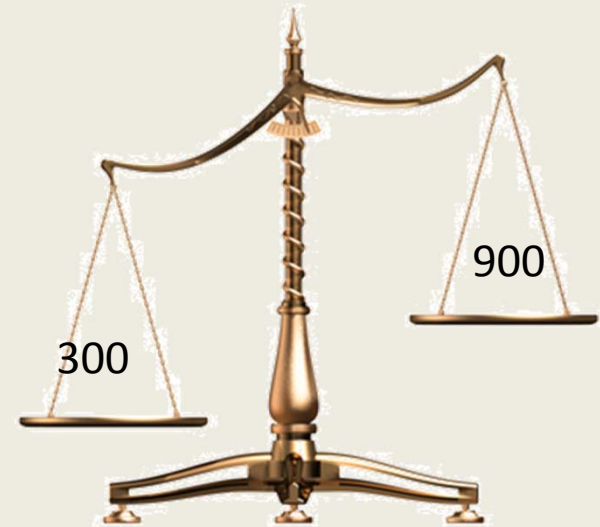
# Changes in Certification 2007- Now

- Reorganization into National BOARD of Certification and Recertification of Nurse Anesthetists
  - Council on Certification
  - Council on Recertification
- Changes in the exam
- Minimum of 100, Max of 170
- Alternative formats



# Certification Exam Changes

- Scale of certification exam has also changed
  - Pass score remains 450



- Scale used to be 300-600
  - 300 = I signed my name (same)
  - 600 = maximum *reported* score- NOT PERFECT
    - Many people mis-interpreted this as a perfect score
  - Program web sites reported results this way

# Other Changes in Certification

- Candidate eligibility as of Jan 1, 2009
  - NBCRNA has determined that if a candidate admits to having been on probation for academic integrity, cheating or unethical behavior....they have the right to investigate and deny certification examination eligibility regardless of the decision reached at the educational program
  - Designed to protect the integrity of the exam



## *NBCRNA Clarification of New Eligibility Policy*

*Disciplinary Actions Based on Unethical Behavior, Questions of Academic Integrity or Documented Evidence of Cheating*

# Change in Rigor and Test Map

- Rigor has increased
  - Alternative items
  - Pass rates as low as 86% for 1<sup>st</sup> time takers
  - Average in last 5 years- ~90%
- Test map has changed to emphasize
  - Professional issues, Equipment, Instrumentation, Technology
  - De-emphasizes Basic principles, Basic sciences

# AANA Assembly of School Faculty

- February 2008
- Announced new testing approach
  - Multiple, multiples (pick all of the following which are correct, which 4 choices, how many of the following....)
  - Interactive models (eg regional anesthesia)
  - Screen based formulas and calculations (calculator will hover)

# NBCRNA Changes: When and How Often

- Prior to 2009
  - Fail- could take the exam as many times as desired
- 2009 (applies retroactively to grads from 2007)
  - Fail- can retake up to 4 times in one year
  - Have a total of 2 years post-graduation to pass
  - If unsuccessful?
- Repeat a **full and unabridged** course of study in a Nurse Anesthesia Program

# Certification Bottom Line

Testing and the entire process is more rigorous  
than it used to be

The penalty for not being able to pass the  
exam is more severe

# Have Changes in Student Numbers Hurt CRNA....

Employment settings

Income

How they are treated and valued

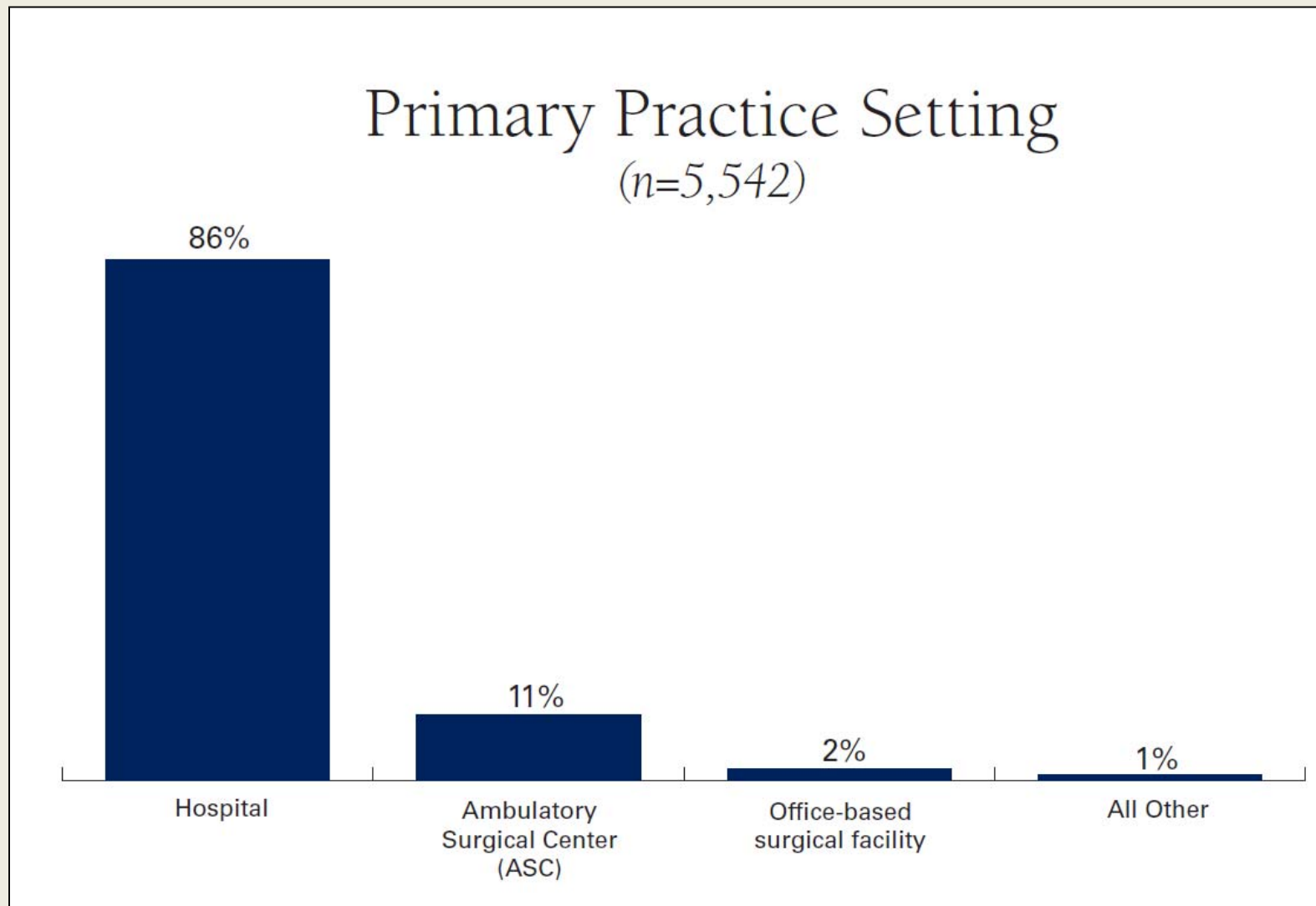


# Example: Minneapolis, MN

- 2010 AOSF
- Graduate from a Minneapolis program indicated they could not find a job in the twin cities
- Did **not** want to relocate.....

# AANA Annual Report 2011

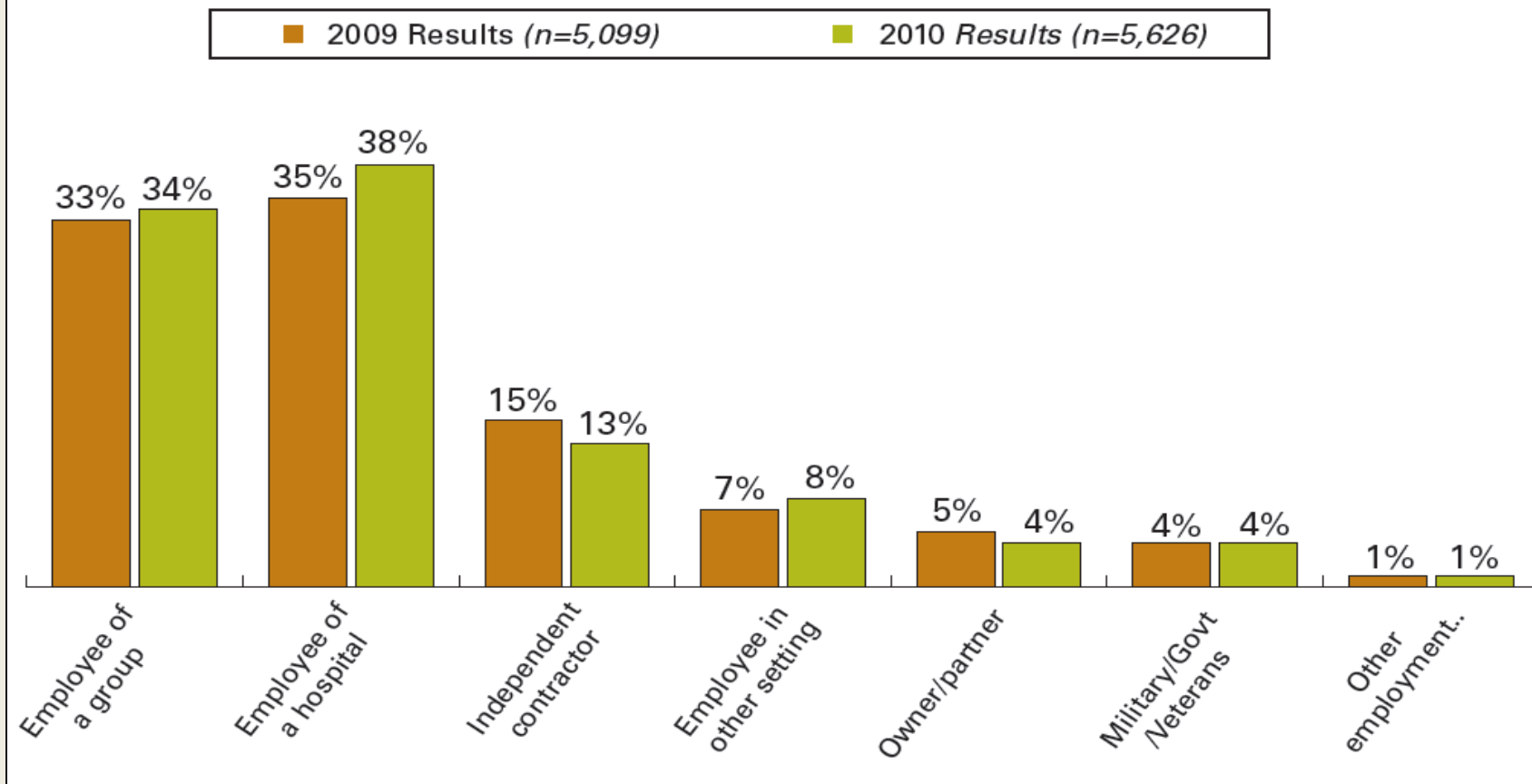
## Primary Practice Setting



# AANA Annual Report 2011

## Sources of Income

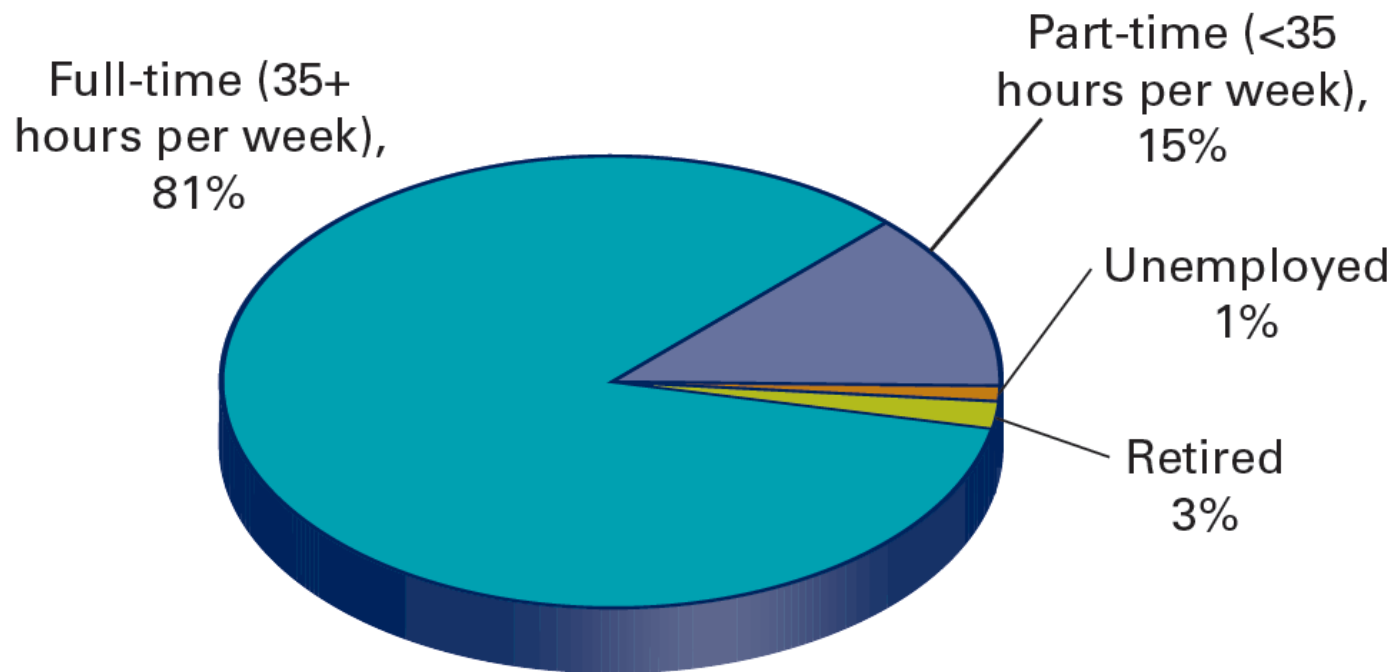
### Primary Employment Arrangement/Source of Income



# AANA Annual Report 2011

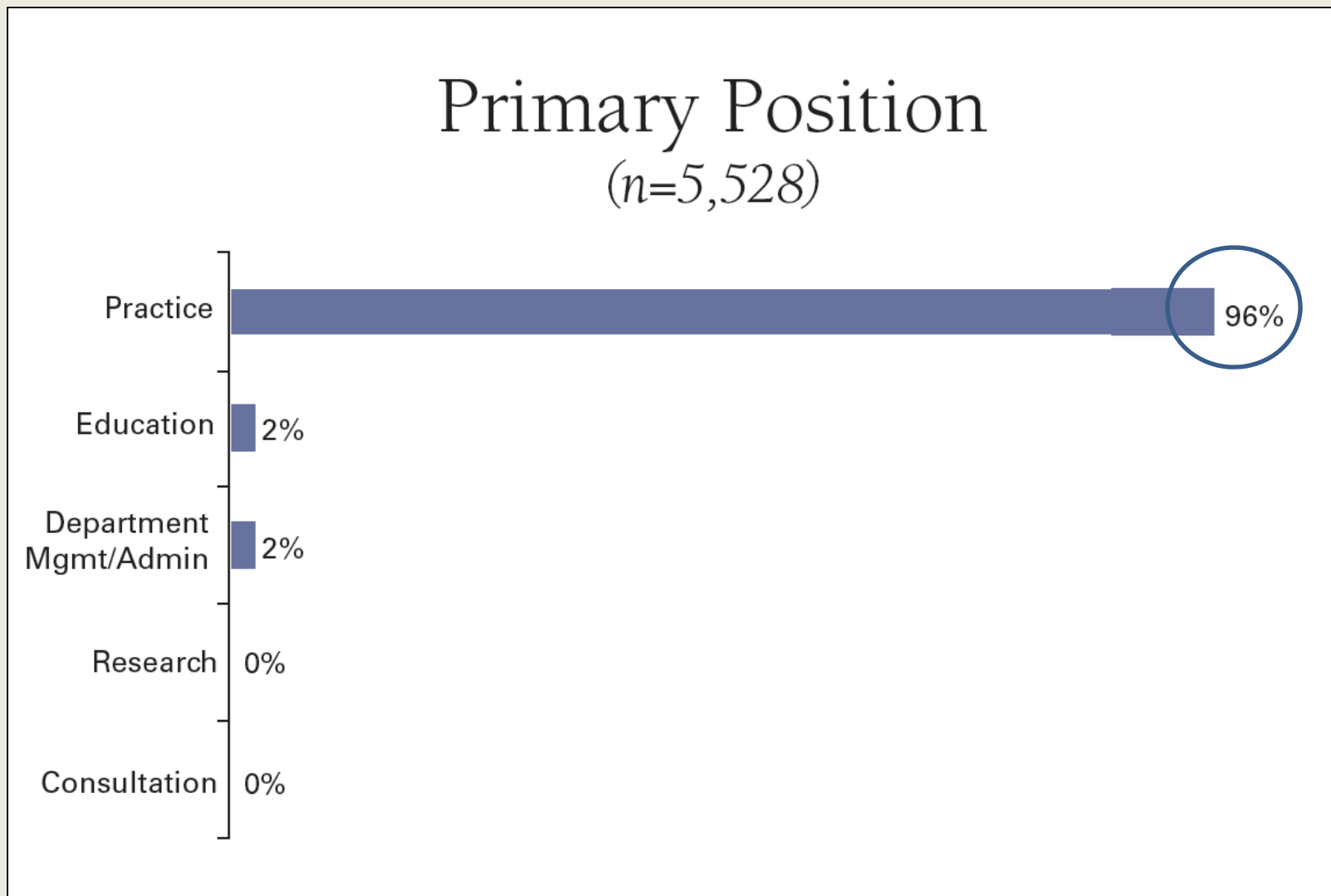
## Full vs. Part-time

### Employment Status ( $n=6,912$ )

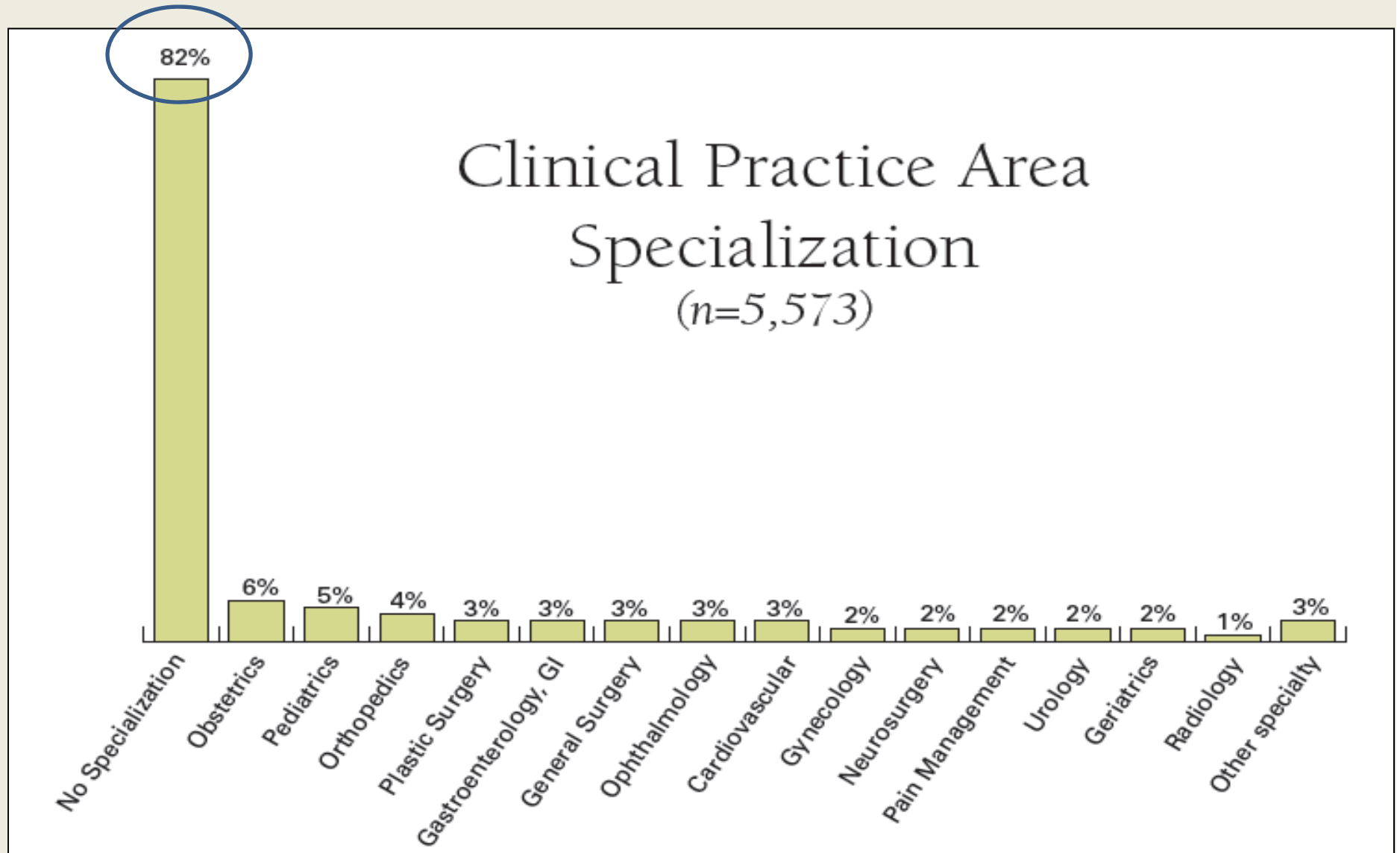


# AANA Annual Report 2011

## Primary Position

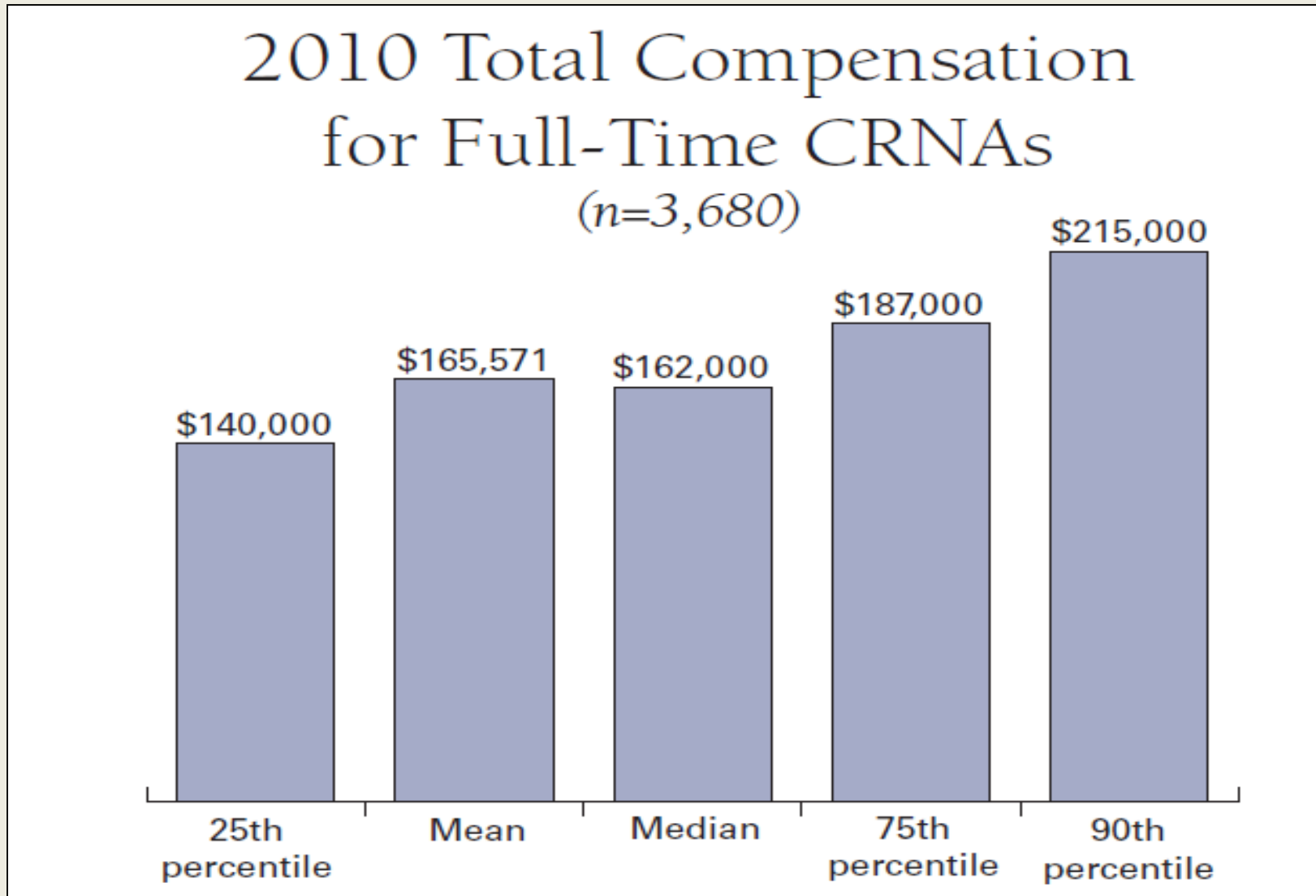


# Practice Specialization



# AANA Annual Report 2011

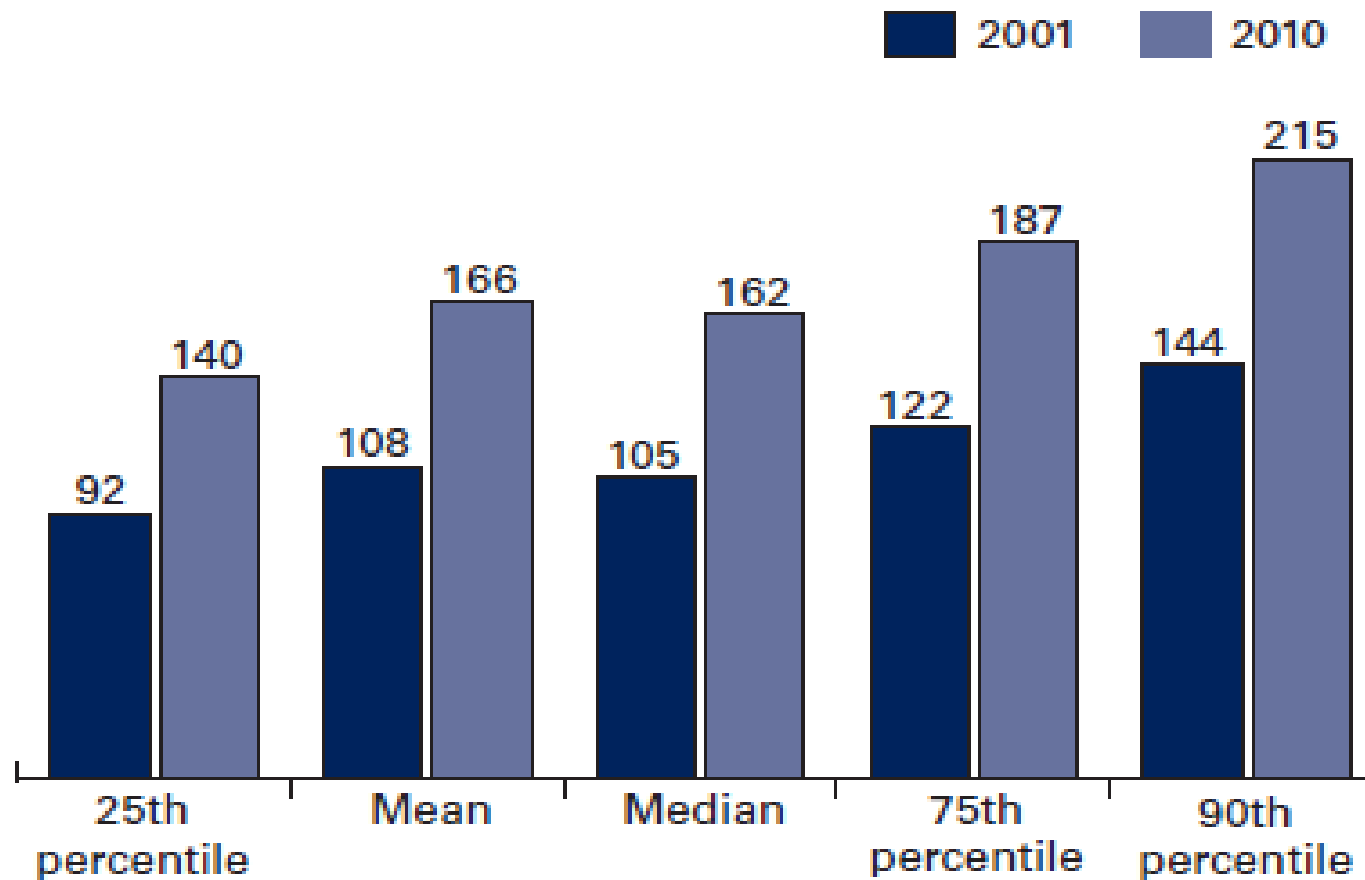
## Total Compensation Statistics- By Setting



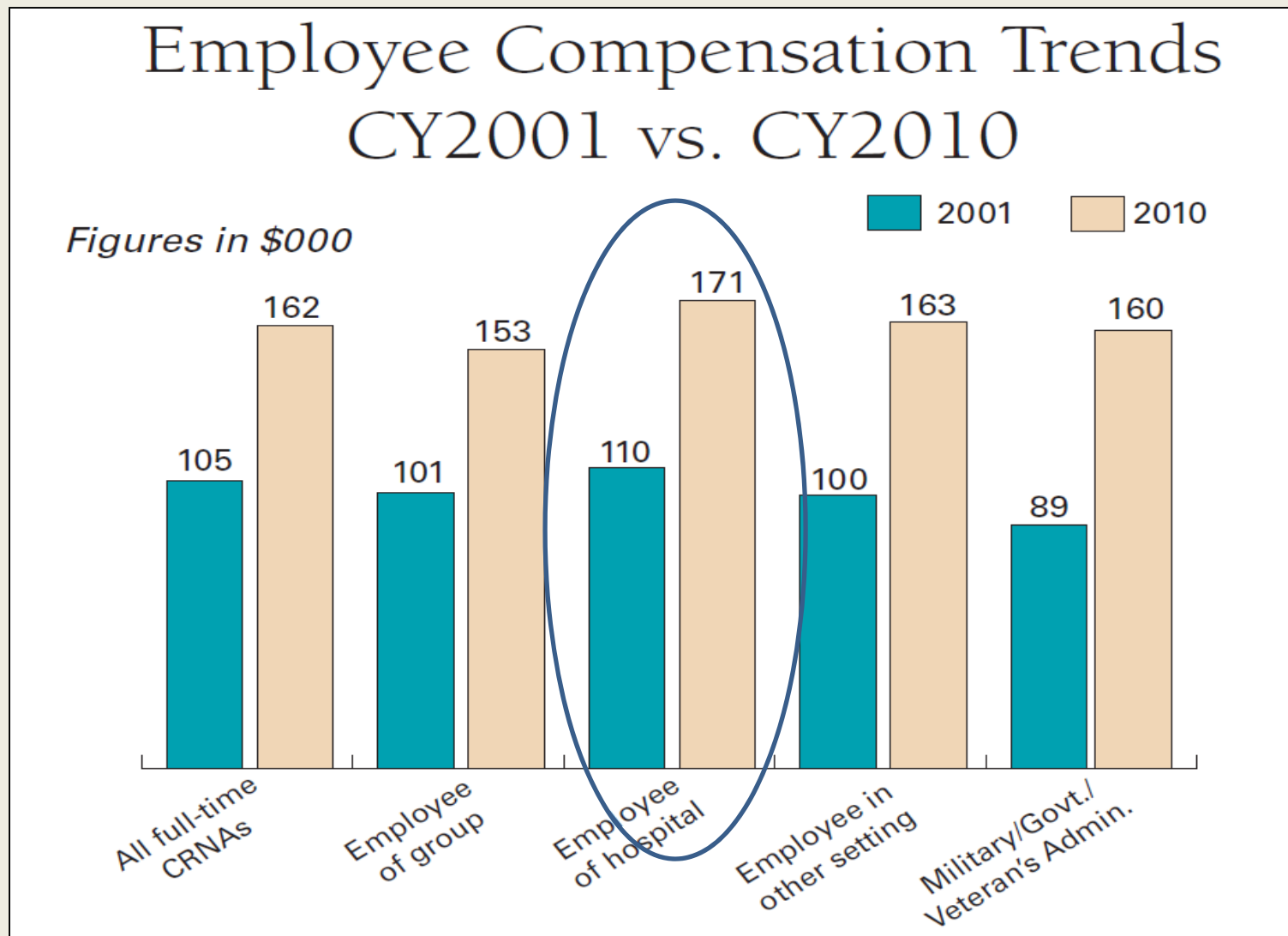
# AANA Annual Report 2011

## Compensation Trend

### Compensation Trends (\$ in Thousands)



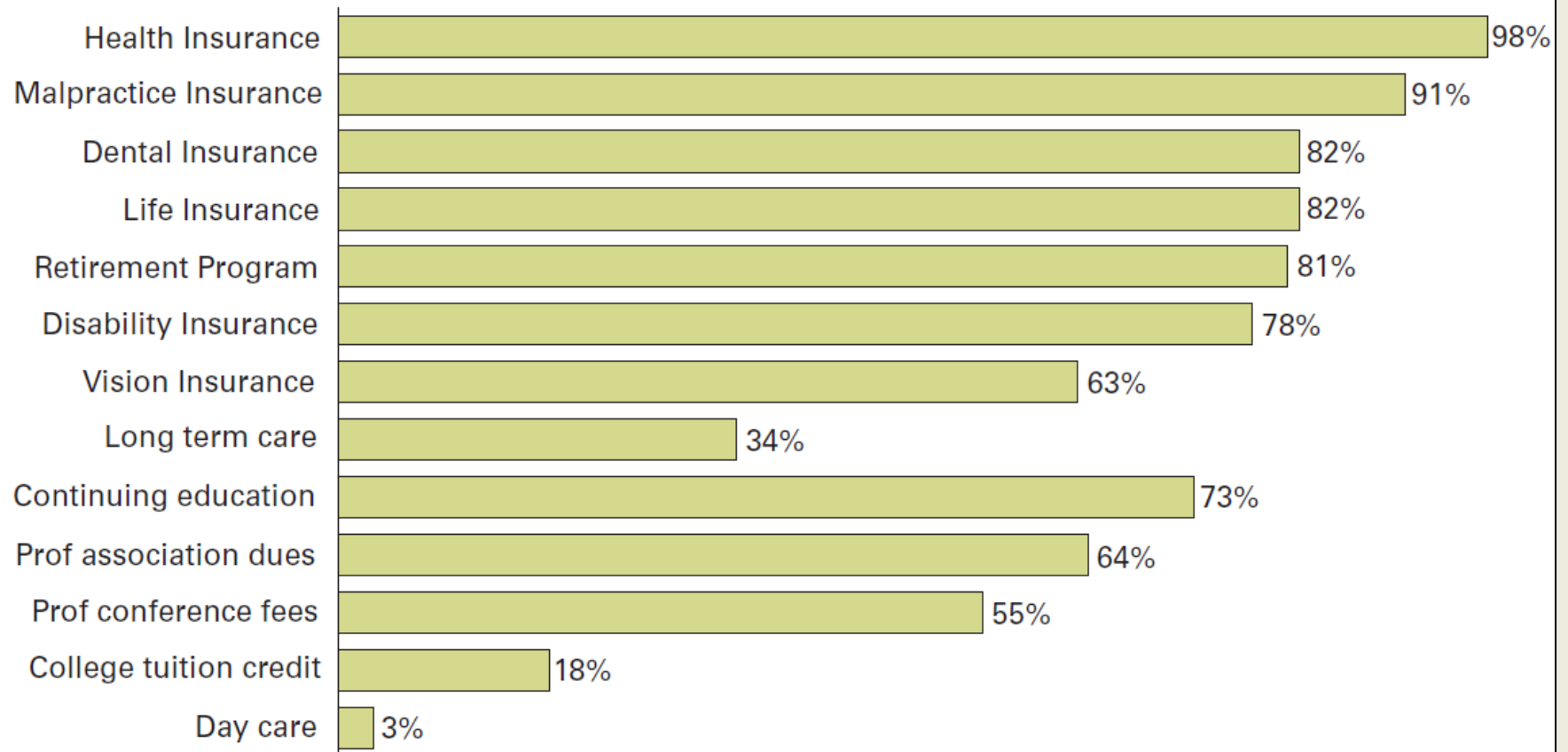
# Compensation Trend by Employment 2001 to 2010



# AANA Annual Report 2011

## Insurance Benefits

### Full-time Employer (n=3,359)



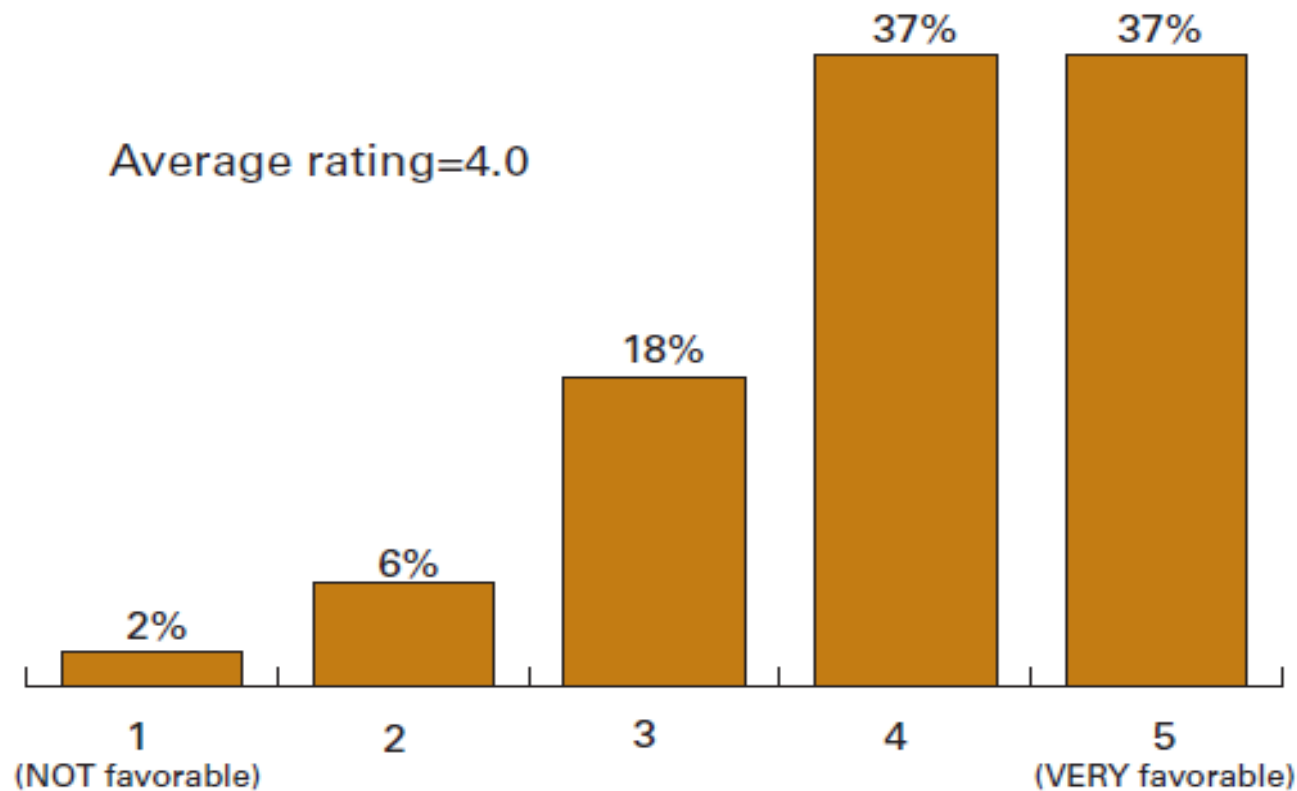
Are We Valued?  
What About Practice?  
Main Professional Concerns?

# AANA Annual Report 2011

## Practice Barometer: Work Environment

How Favorable is Your Primary Work Environment to Nurse Anesthetists?

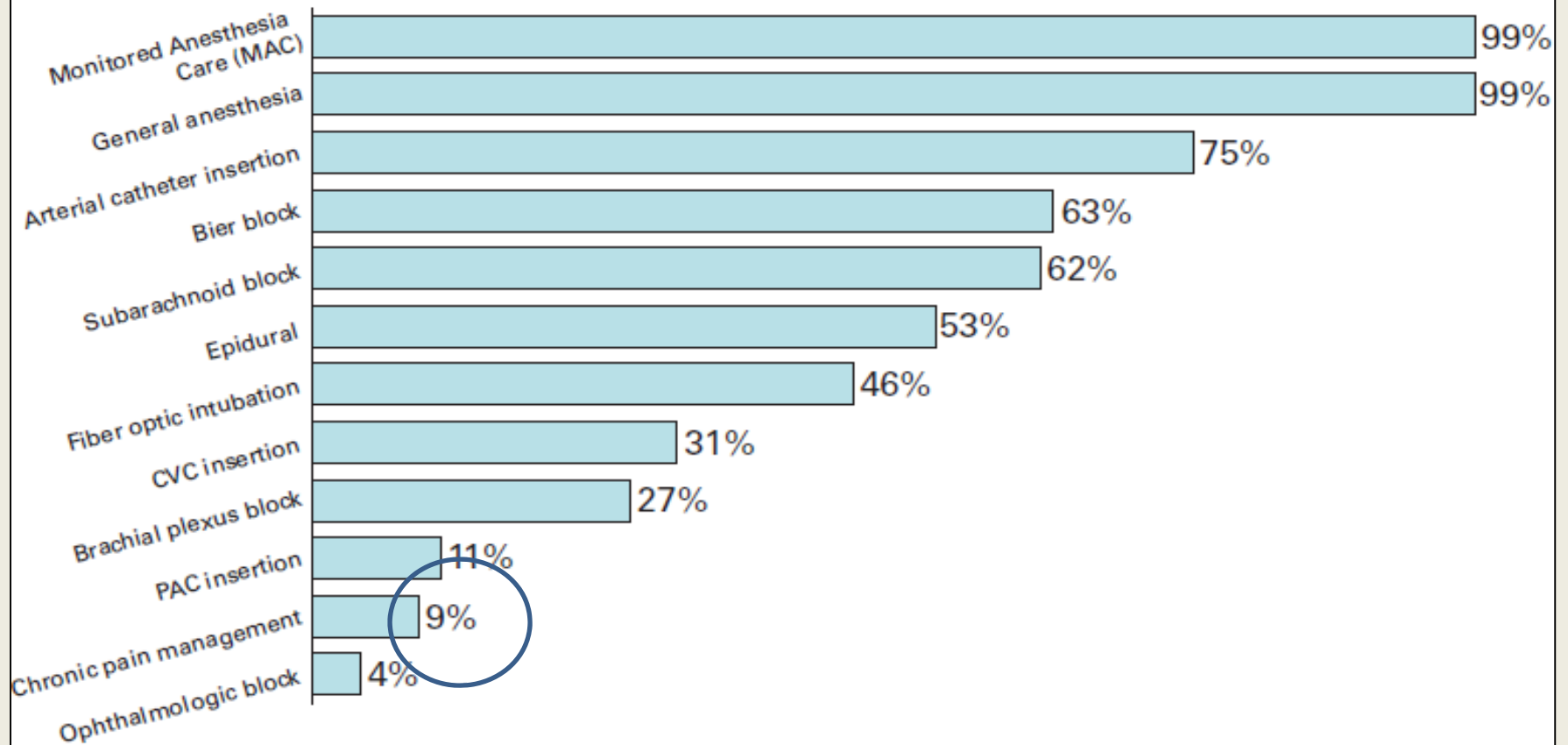
(n=5,144)



# AANA Annual Report 2011

## Practice Barometer: Techniques

### Techniques in Anesthesia Practice (n=5,377)

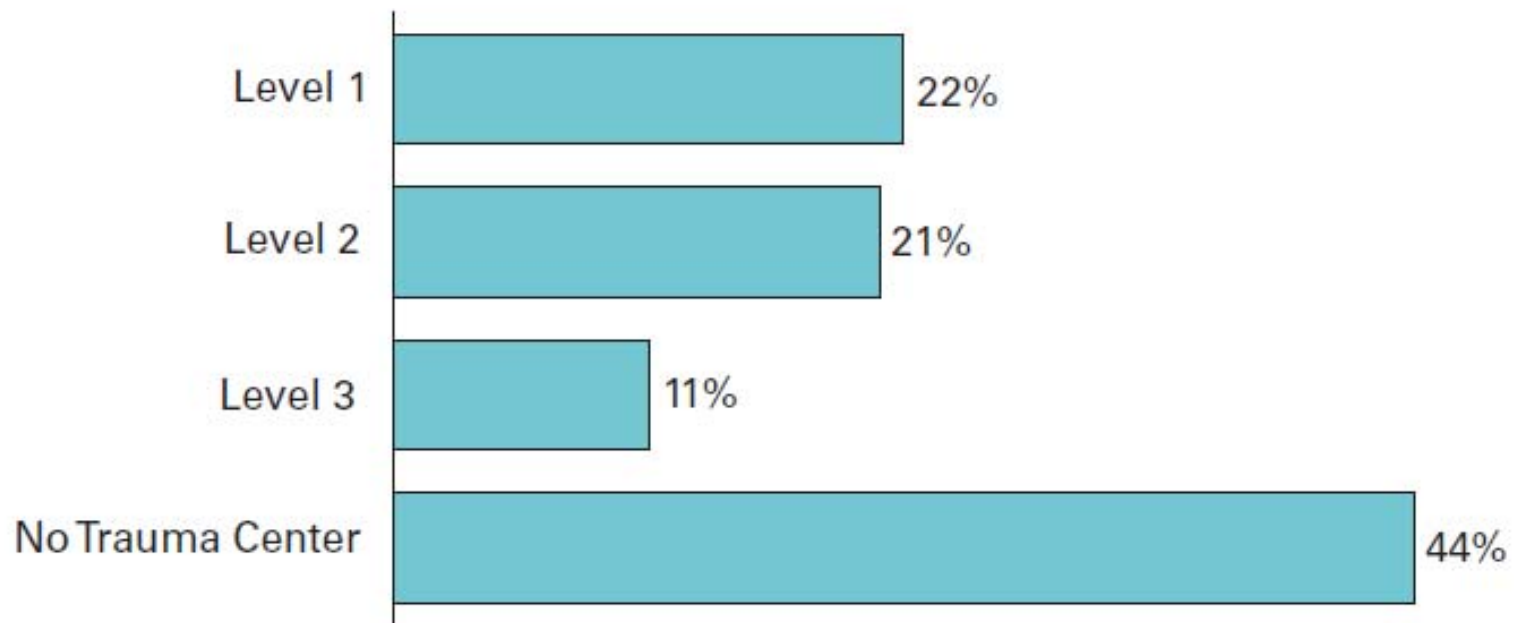


# AANA Annual Report 2011

## Practice Barometer: Trauma

% of CRNAs Working in Designated Trauma Centers by Level

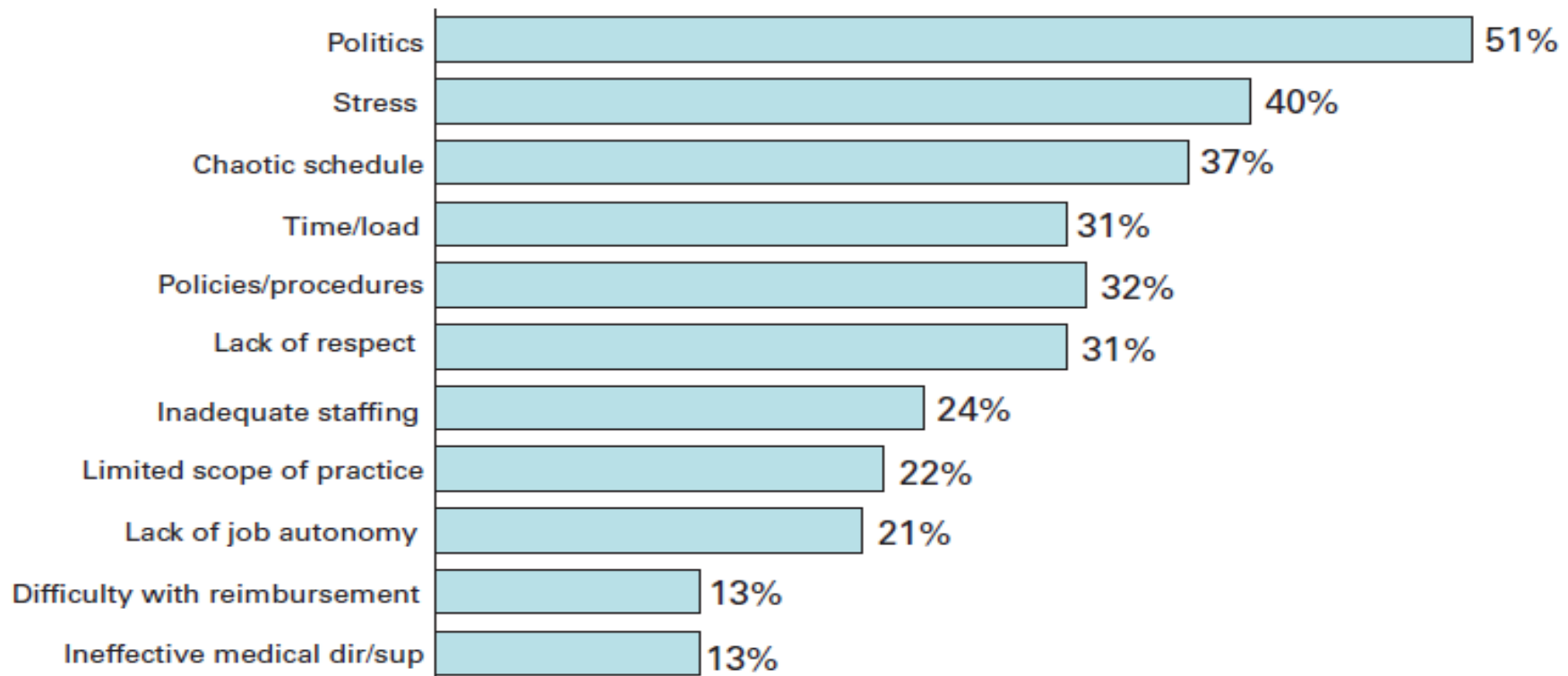
(n=4,780)



# AANA Annual Report 2011

## Major Professional Issues

### Major Professional Issues Affecting CRNAs' Practices (n=5,161)



What does the workforce look like  
from an age perspective?

We are getting more.....

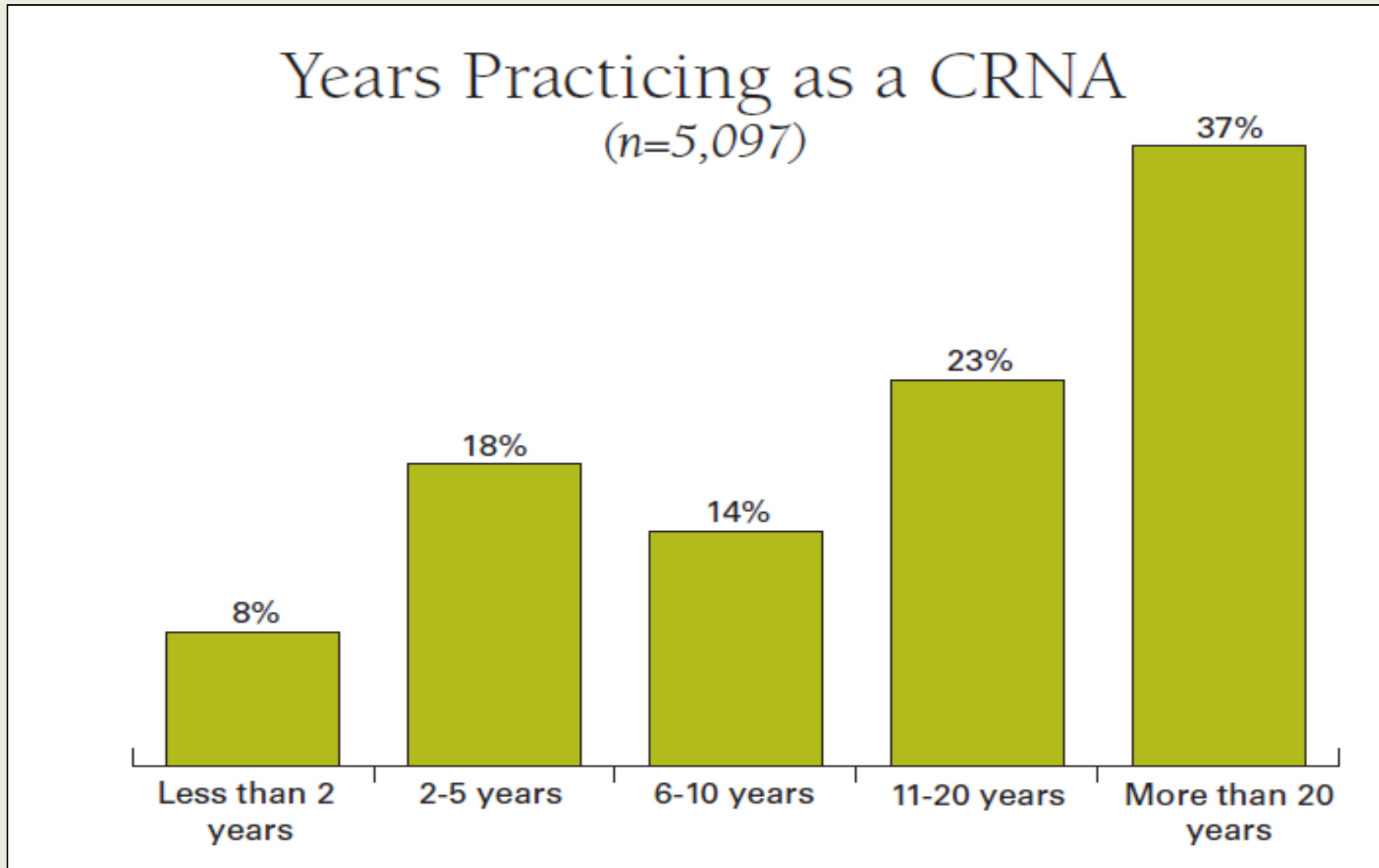
# Experienced!

60% of practicing CRNAs have more  
than 10 years of experience

**average age 49.8**

# Years of Practice- 2011

60% > 10 years



# AANA Annual Report 2011

## Age Demographic

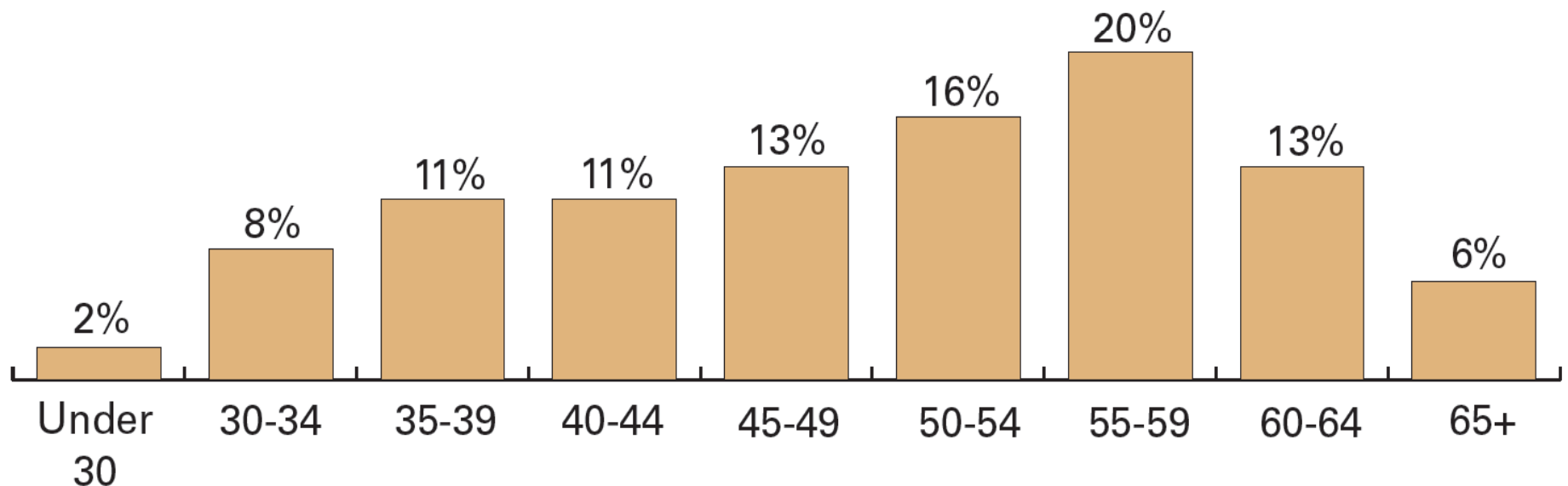
### Age

(n=5,968)

Average = 49.8 years old

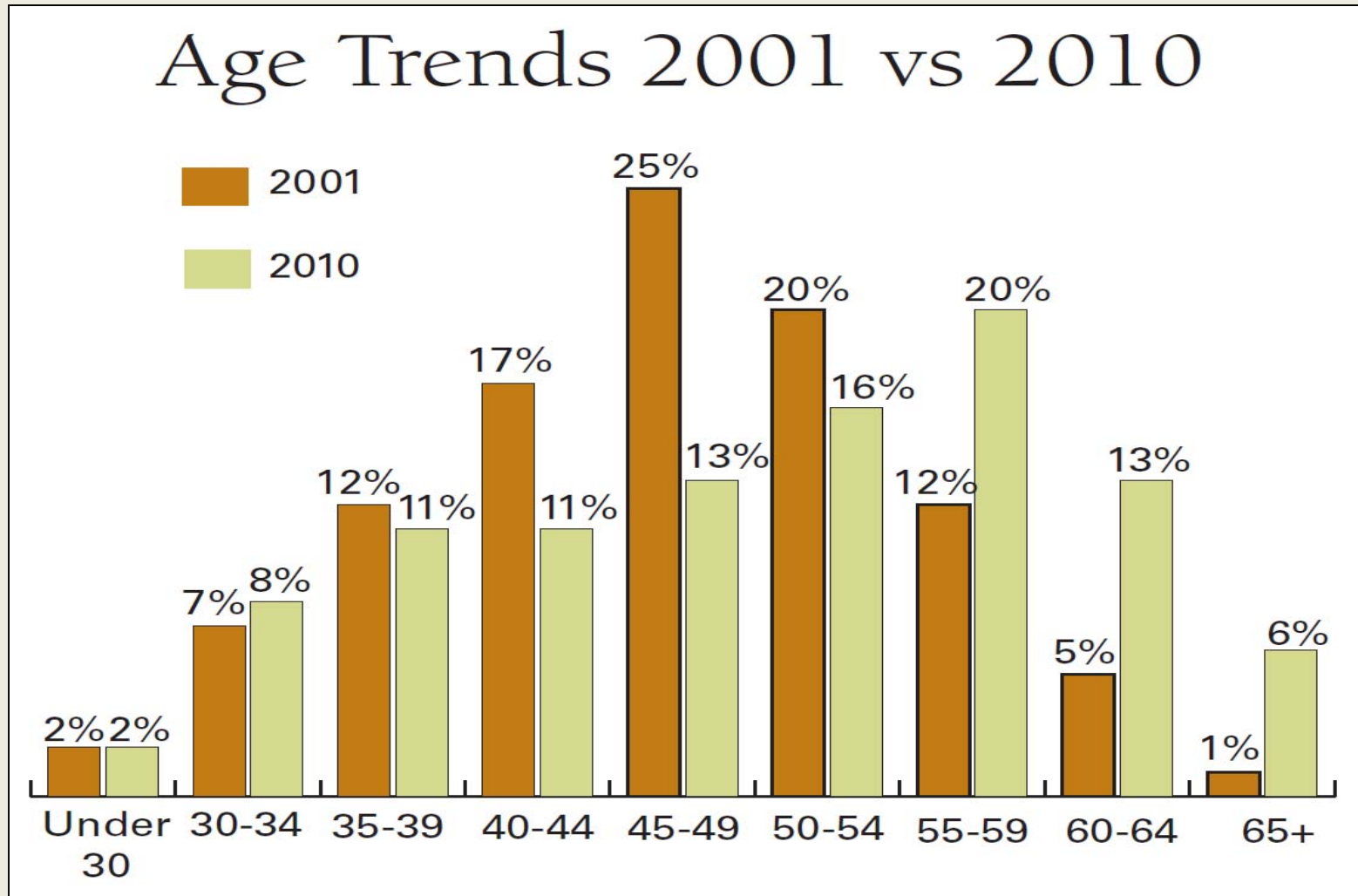
We are  
aging as a  
profession

55% ≥ 50



# AANA Annual Report 2011

## Age Demographic Trend



# AANA Annual Report 2011

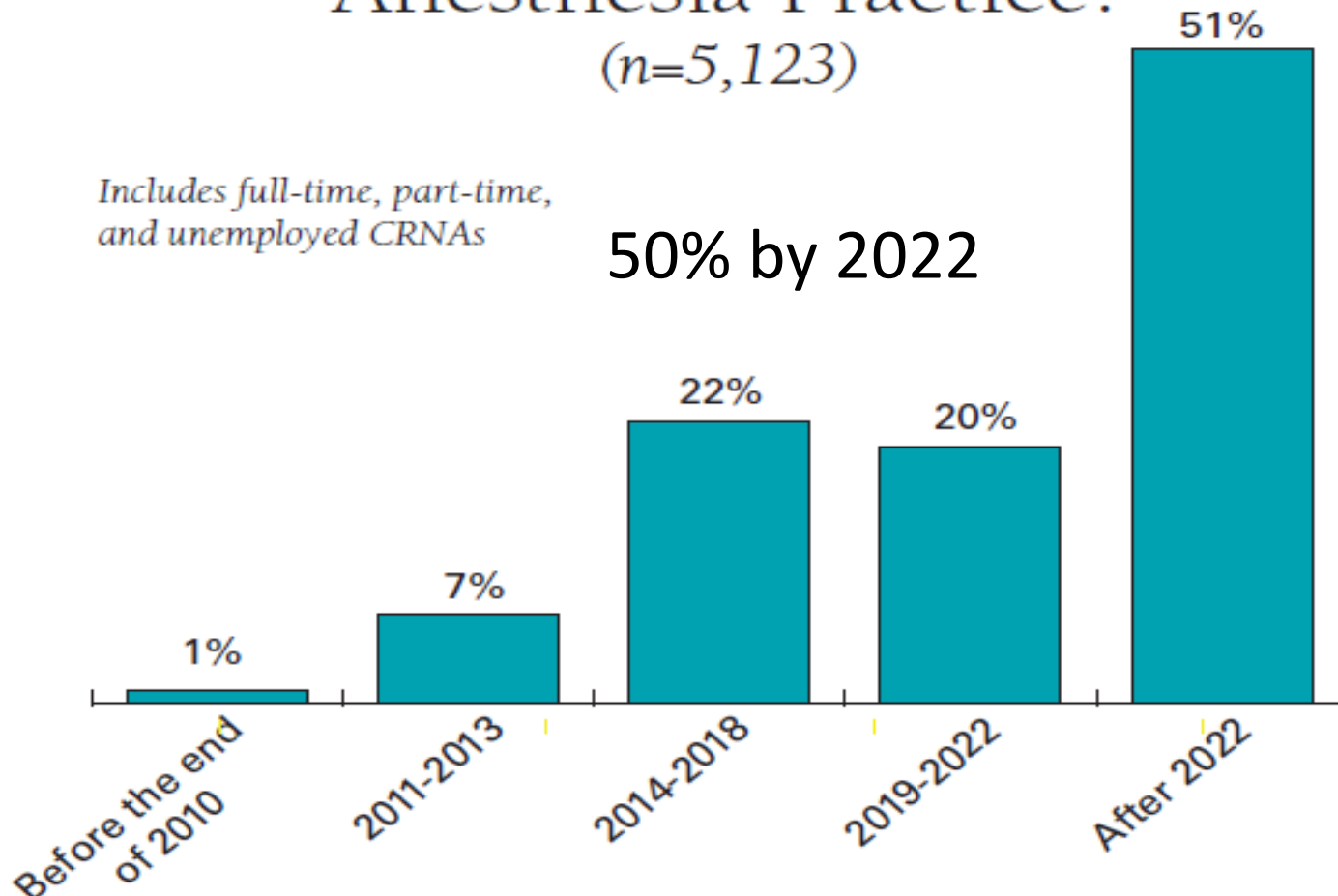
## Retirement Projection

When Do You Expect to Retire from Anesthesia Practice?

(n=5,123)

*Includes full-time, part-time, and unemployed CRNAs*

50% by 2022



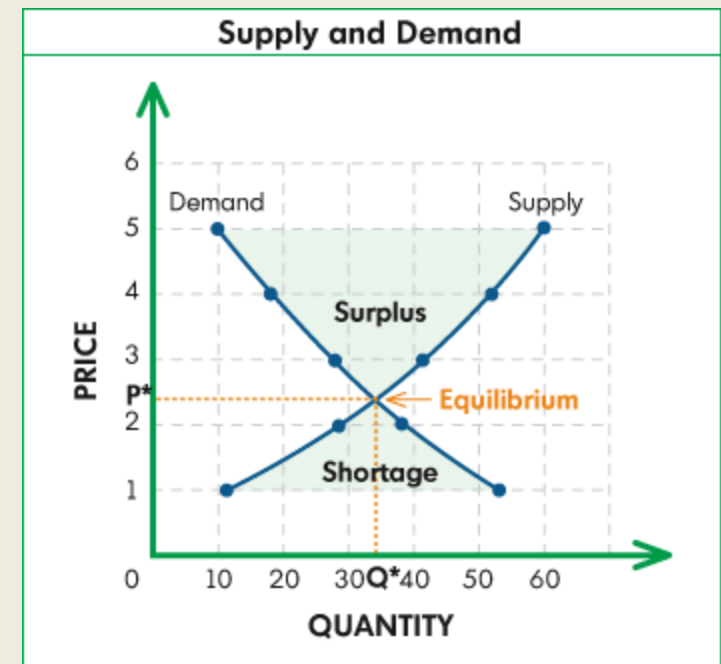
# Retirement

- So if 50% of CRNAs retire over the next 10 years that would be  $0.5 \times 46,000 = -23,000$
- If we continue to produce 2400 students per year =  $2400 \times 10 = +24,000$
- Net gain of **1,000** providers over 10 years given a steady supply

# Take homes...

- More.....
  - Programs
  - Students
  - Clinical sites
  - Clinical faculty
  - Opportunity for teaching and learning
  - Competition??
- High levels of:
  - Satisfaction
  - Salary
  - Benefits

We need to be...



# Threats...

**Economy- CRNAs did not retire....**

**Graduates numbers are increased**

**Control of graduates (no F-S ratio required)**

**Job market tight in some areas of US**

**Alternative providers**

**Politics getting more serious**

**Failure to maintain quality**

# Workforce Positives

- We are affordable, safe and offer high quality
- ↑ in case loads
- ↑ in operating rooms and non-traditional locations
- ↑ in public expectation for painless procedures
- ↑ in worry about patient satisfaction
- ↑ use of non-physician providers
- IOM reports
- Healthcare reform

# Discussion