

# Faculty Compensation & Research

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# Disclosures

- Active Grant Funding
  - Integra Foundation, NIH - R01-NS049135-01 and R01-HL083475-01A2
- Consultant
  - Micromechatronics, Inc., Advance Medical, Inc.
- Stock
  - Micromechatronics, Inc., Advance Medical, Inc., Cortex, Inc.
- Fiduciary Responsibility
  - President, CHYNA, LLC
  - Chief Medical Officer, NuHope, LLC
  - Treasurer, NeuroPoint Alliance, Inc.
- U.S. Patent Applications
  - 20060212097 and 20070138915





# The Good, The Bad & The Ugly

- The Good

- Neurosurgeons want to do research
- Neurosurgeons command high salaries

- The Bad

- Federal grants cap compensation at \$179,700 and foundation grants often do not offer salary support.

- The Ugly

- How can academic neurosurgery departments fund the % effort required for successful grant applications?

# A Personal Problem

- From 2003-2009 I was responsible for overall department performance but did not need to do mission based budgeting for each faculty member.
- For fiscal year 2010 we instituted mission based budgeting.
- On September 11, 2009 I was informed that almost \$800,000 had been removed from department reserves to cover two years worth of “unfunded clinical faculty research effort”.



# A Personal Problem

## Two Examples

### Associate Professor

- ~\$750,000 total compensation
- Received \$50,000 foundation grant with 5% effort and no salary support
- \$37,500 per year from Department Reserves to cover 5% of total compensation

### Professor

- ~\$900,000 total compensation
- Co-PI on two R01 grants with 10% effort on each
- 20% salary support from NIH = \$35,940 at NIH cap
- \$144,060 per year from Departmental Reserves to cover the difference between \$35,940 and 20% of total compensation

# The Crux of the Problem

- What does “% effort” mean?
  - In the minds of accountants, everyone works 40 hours per week.
  - Therefore, if one has 10% effort in research one works four hours per week in research and must reduce other work activities by four hours.
  - In many specialties if a faculty member obtains a grant he or she asks for protected time from clinical activities.
  - In my experience this does not happen in Neurosurgery.

# A Personal Response

- How do other academic medical centers deal with this issue?
- Queried academic Neurosurgery department chairs with more than 50 responses
- What are the key financial questions to address?
- How do Neurosurgeons contribute to academic medical centers?
- Do Neurosurgeons reduce their clinical effort when they do research?



# Key Financial Question

*How do Neurosurgeons contribute to academic medical centers?*

- Professional revenues from patient care
  - RVUs, charges, net revenue, profit/loss
- Revenue to hospitals from patient care
  - DRGs, revenue, expense, profit/loss
- Academic and administrative work
- Grant funding



# Key Financial Question

*How do Neurosurgeons contribute to academic medical centers?*

- Ratio of technical revenue to professional revenue
  - Penn State Neurosurgery Data
    - Professional Gross Revenue/Hospital Gross Revenue
      - $\$42,352,384 / \$193,001,535 = 0.22$
    - Professional Net Revenue/Hospital Net Revenue
      - $\$8,384,157 / \$90,710,721 = 0.09$
  - For every dollar we collect on Neurosurgery professional fees the hospital collects ~ \$11.00. Profit margin is ~ \$24 million

# Key Financial Question

*Does research reduce clinical productivity?*

- From FY 2003 through FY 2009 there had been a continuous increase of work RVUs, work RVUs per clinical FTE and grant funding in the Penn State Department of Neurosurgery
- There was no evidence that increasing grant funding had resulted in decreased clinical effort.

# Resolution to a Personal Problem

- Based on the analysis of PSHMC data and examples from other academic medical center Neurosurgery chairs I was successful in changing the PSHMC physician compensation model to include an academic base salary
- The academic base salary is the same as the salary for a PhD at the same academic level in our Department and is capped at the NIH cap.



# Resolution to a Personal Problem

## Two Examples

### Associate Professor

- ~\$750,000 total compensation
- Academic salary \$100,000
- Received \$50,000 foundation grant with 5% effort and no salary support
- Previously \$37,500 from Department Reserves to cover 5% of total compensation
- Now \$5000 from reserves to cover 5% of academic salary
- Net savings for department of \$32,500

### Professor

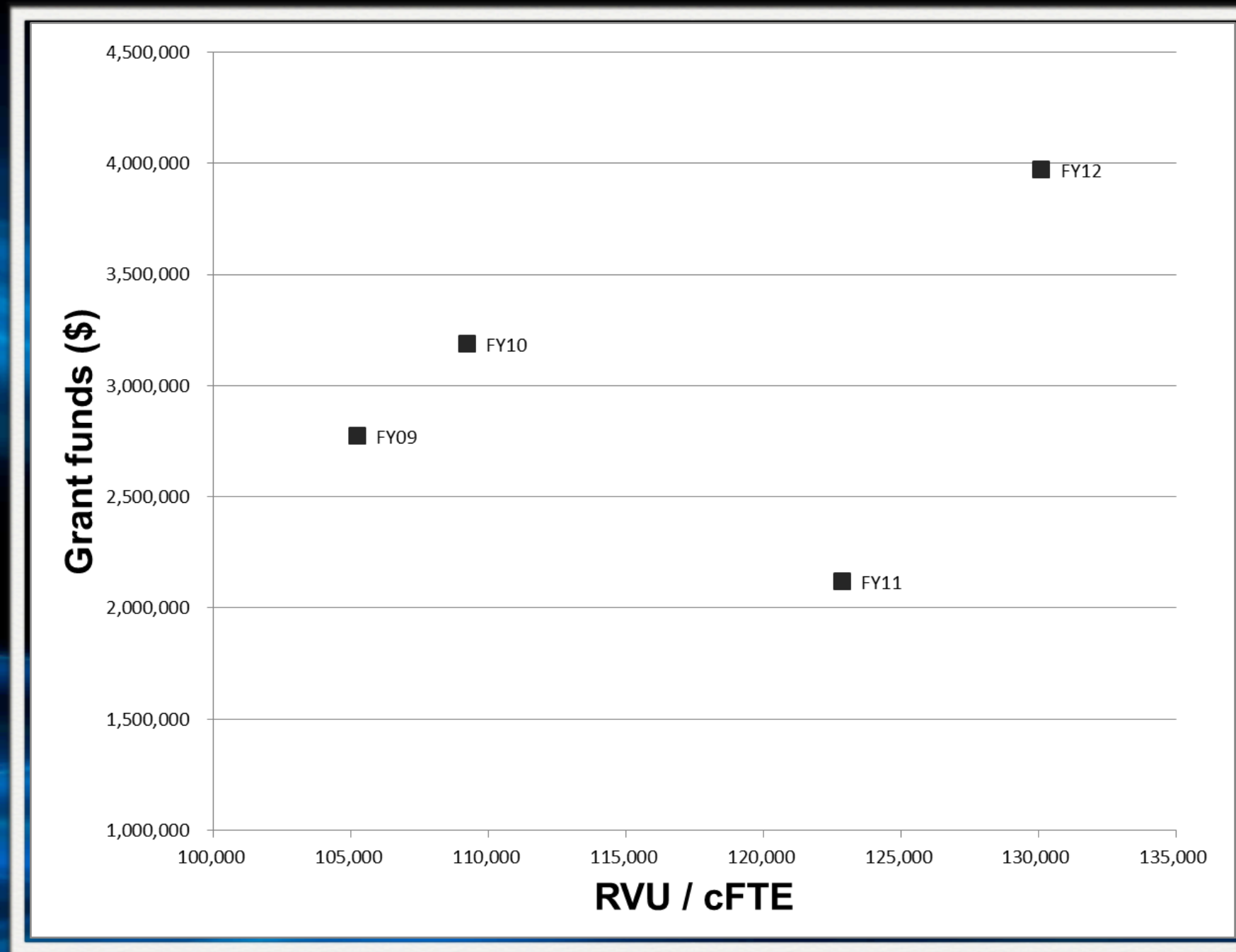
- ~\$900,000 total compensation
- Academic salary \$179,700
- Co-PI on two R01 grants with 10% effort on each
- 20% salary support from NIH = \$35,940 at NIH cap
- Previously \$144,060 from Departmental Reserves to cover the difference between \$35,940 and 20% of total compensation
- Now \$0 from reserves
- Net savings for department of \$144,060

# Neurosurgery NIH Rank 1-1-2012

Rank	Name
1	UNIVERSITY OF CALIFORNIA SAN FRANCISCO
2	YALE UNIVERSITY
3	UNIVERSITY OF MIAMI SCHOOL OF MEDICINE
4	STANFORD UNIVERSITY
5	UNIVERSITY OF PITTSBURGH AT PITTSBURGH
6	UNIVERSITY OF ROCHESTER
7	UNIVERSITY OF MICHIGAN AT ANN ARBOR
8	UNIVERSITY OF LOUISVILLE
9	UNIVERSITY OF PENNSYLVANIA
10	UNIVERSITY OF CALIFORNIA LOS ANGELES
11	UNIVERSITY OF WASHINGTON
12	OHIO STATE UNIVERSITY
13	UNIVERSITY OF MARYLAND BALTIMORE
14	WASHINGTON UNIVERSITY
15	UNIVERSITY OF TEXAS HLTH SCI CTR HOUSTON
16	UNIVERSITY OF KENTUCKY
17	UNIVERSITY OF CALIFORNIA DAVIS
18	PENNSYLVANIA STATE UNIV HERSHEY MED CTR
19	UNIVERSITY OF WISCONSIN MADISON
20	EMORY UNIVERSITY
21	NEW YORK UNIVERSITY SCHOOL OF MEDICINE
22	UNIVERSITY OF IOWA
23	OREGON HEALTH AND SCIENCE UNIVERSITY
24	UNIV OF MED/DENT OF NJ-NJ MEDICAL SCHOOL
25	UNIVERSITY OF SOUTH FLORIDA

[http://www.brimr.org/NIH\\_Awards/2011/NIH\\_Awards\\_2011.htm](http://www.brimr.org/NIH_Awards/2011/NIH_Awards_2011.htm)





# External Funding vs Work RVUs FY 2009-2012



# Conclusions

- Sharing information among our peers can be of considerable value in addressing common problems.
- Fostering research creates unique challenges for highly compensated specialties like Neurosurgery but it can be done.
- It is important to understand the assumptions of administrators - especially when they differ from ours. Before we talk to bean counters we must learn to count beans.

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# Thank You for Your Attention