Faculty Compensation & Research

Robert E. Harbaugh, MD, FAANS, FACS, FAHA
Director, Institute of the Neurosciences
Distinguished Professor & Chair, Department of Neurosurgery
Professor, Department of Engineering Science & Mechanics
Penn State University
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**
      
      \[
      \frac{\$42,352,384}{\$193,001,535} = 0.22
      \]

    - **Professional Net Revenue/Hospital Net Revenue**
      
      \[
      \frac{\$8,384,157}{\$90,710,721} = 0.09
      \]

    - 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

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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.
Thank You for Your Attention