

Using Metrics to Manage

NCURA Region IV Annual Meeting
Omaha, NE

Heather Offhaus and Craig Reynolds
University of Michigan Medical School

April 26, 2010




What *drives* our research enterprise?

- Faculty & Research Interest Areas
- Patient Populations
- Education of Students
- Finances

... the quest for knowledge and medical advancement is directly impacted by financial support...

2




Being “successful” is also “survival”

All are experiencing financial challenges...

- Doubling of the NIH budget is over
- Reductions in state support
- More restrictive funding in a world of higher compliance

3



What does everyone know?

- Institutions need to be proactive
 - If we wait to be reactive, it will be too late
- Institutions need to focus on what is important
- Institutions need to manage better/smarter

• In order to base goals & improvement on benchmarks, you have to know...

4



What is success?

Define your success.
Increasing space utilization

What is our strategy?

What will have the most impact?
*Setting concrete, understandable goals.
Improve our recovery of additional dollars.*

How are we doing?


Need a way to measure where we are...
...and where we have been.

Driven by...

Leadership

Data


5



Why Use Metrics to Manage?

- Demonstrate value to stakeholders/constituents
- Assess progress toward goals and adherence to mission statement
- Make decisions regarding resource allocation
- Demonstrate commitment to fairness and transparency


6



How do you organize?

There are baseline concepts you have to consider first...

7




How do you organize?

It takes organization decisions...

- What data do we need for decision making?
- Where is your primary data source?
 - School Data Warehouse
 - Campus Data Warehouse

8




How do you organize?

It takes a lot of work over time...

- Thought into establishing level of detail
 - Unit Structure/Organization
 - Expenditures
 - Effort Categories
 - Data Views

Level of detail going in to the system has to be equal to the data expected out of the system.

9




How do you organize?

It takes data management decisions...

- How much data is “good” data?
 - Go back and fix prior years **OR**
 - Pick a date and *commit*
- What is required to insure data consistency?
- How often is it realistic to refresh data for a real-time approach?

10




Align Resources with Activities

Reasonable & Understandable Calculations

- How are we doing? Compared to what? What is our trend?
- Sometimes you have the data points, but you have to agree on how to count things
- Redefine! Realign!
 - A new look at old ratios
 - Apples to Oranges in calculations


11



Align Resources with Activities

<div> <div>\$299,147,768</div> <div> All Federal and Non-Federal Research Expenditures, Times to Medical School All Funds <small>Includes: clinical trials, training grants, on-campus organized research, off-campus organized research, etc.</small> </div> <div>A</div> </div>		
<div> <div>\$22,634,226</div> <div> Removes off-campus organized research, clinical trials, etc. and any dollars for departments without space, is PM&R </div> </div>	<div> <div>\$276,513,542</div> <div> Includes only on-campus organized research (as defined by class codes 16000 & 20000 in the Nighthawks general ledger) </div> <div>B</div> </div>	
<div> <div>\$22,634,226</div> <div> Removes off-campus organized research, clinical trials, etc. and any dollars for departments without space, is PM&R </div> </div>	<div> <div>\$41,746,422</div> <div> Removes on-campus organized research where research is done exclusively in hosp, VA, Subcontracts, NH Equipment or Construction grants. </div> </div>	<div> <div>\$234,767,120</div> <div> Includes only on-campus organized (as defined by class codes 16000 & 20000) research where research is performed in Medical School buildings (excludes expenditures where research is done exclusively in hospital, VA, Subcontract NH Equipment or Construction grants) </div> <div>C</div> </div>

12




Performance Measurements: Attributes

Attributes of Key Performance Indicators

- Representative
- Inclusive
- Dynamic
- Comprehensive
- Benchmarked
- Motivating
- Customized

16



Performance Measurements: Integrated Measures

Interrelation of KPIs


Pyramid

- Key**
 - Limited in number
 - Department's primary accountability to School
 - Thresholds to layout minimal (maximal) levels of performance
- Strategic**
 - 2-4 per mission
 - Of interest to School
 - Examined if problems with key indicators/thresholds
- Operational**
 - Departments maintain/monitor them
 - Defined at Department/Section/Faculty level
 - May vary from (and within) departments

Department

Section


Faculty



Goal of analyzing KPIs:

- Obtain better understanding of metrics currently in use
- Redefine culture as necessary
- Facilitate an accessible shared understanding of organizational direction
- Ensure consistency with the Strategic Vision


18



How do you influence use of KPIs?

- Develop reasonable and understandable calculations of Key Performance Indicators
- Establish the KPIs as the “common language”
- Present the KPIs in a user friendly, straight forward, *latest* technology kind of way....

19



KPIs as the common language

- These are the metrics that leadership will watch
- These are the way we will benchmark
- No more long discussions on how you got to your numbers and we got to ours...
- Transparency between departments

20



Using Metrics to Manage – The Real-Life University of Michigan Story

21




Key Performance Indicators

What areas do you measure?

- Financial Performance
- Research Performance**
- Clinical Performance
- Education Performance
- Management Performance



22



Examples of Financial KPIs

Financial Performance


Days Cash on Hand

Operating Margin

Clinical Operating Margin

Total Margin

23



Examples of Clinical KPIs


Clinical Performance

Work RVU's

Patient Collections

Days in Accounts Receivable;
A/R Balance Over 90 Days

24



Examples of Education KPIs

Educational Performance

Educational Value Units / Lecture Hours


Tuition Revenue

Number of Accepts per Year

MCAT / GRE Scores

Medical Licensing Exam Scores

25



Examples of Research KPIs

Research Performance

Fed/Non-Fed Expenditures (Direct ; F&A; Total)

Fed/Non-Fed Expenditures per Square Foot of Occupied Space (Direct ; F&A; Total)

Percent Effort on External Grants

Percent Change in (Committed + Anticipated) Awards ("Pipeline")

NIH Market Share and NIH Benchmarking (faculty size with awards, amount and type of awards)

26



Why KPIs?

What do metrics influence at the unit or faculty level?

- Strategic Planning & Direction
- Annual / Quarterly Reviews
- Space Allocations
- Research Incentive / Fund Allocation Models
- Hiring Decisions / Faculty size
- Salary Raises / Reductions

27




Why KPIs?

Aligning Incentives with Metrics

- Unit Level
 - Executive Incentive Compensation Plan
 - Fund Allocation Model
 - Reputation
- Faculty Level
 - Discretionary Funds
 - Salary Supplements
 - “Good Citizen” Rewards


28



Caveats about Using Metrics to Manage

- Metrics should align with institutional mission and goals – Cascade Effect
- Beware the law of unintended consequences
- Keep an eye on both long-term trends and short-term improvements/declines
- Establish expected thresholds or the metric has no context


29



Caveats about Using Metrics to Manage


- Metrics should be appropriate to the unit of analysis
- The Devil is always in the details
- Transparency and broad understanding are key
- Not all metrics are applicable across all contexts

30




Not everything that counts can be counted, and not everything that can be counted counts.

Sign hanging in Einstein's office at Princeton




Shortfalls in using identified metrics?

- What about **QUALITY**?
- What about **CONTRIBUTION** to the missions?



“Quantitative information can help institutional leaders in important management decisions. However, the potential for misuse is great. The key is always to regard this information as an aid to judgment, not a substitute for it.”

E.W. Holmes, et al. Measuring Contributions to the Research Mission of Medical Schools. *Academic Medicine*, 75(3), March 2000: 304-313.



Additional Metrics in Research

Potential Research Performance Metrics

- Density of Space Use
- Training and mentoring of students / Junior faculty
- H-Index and Impact Factor
- Betweenness: Research areas as “glue”
- Contribution of established centers
- Patient Population reached through experimental trials

34




Disincentives with the Metrics

- Unit Level
 - Frustration
 - Unequal treatment
- Faculty Level
 - Frustration
 - Unequal treatment

There is ALWAYS a story to tell....

35



How About You...?

- What is considered reasonable to measure?
- Do you make consistent business decisions with the metrics?
- Do you establish thresholds of performance?
- Did you change culture?
- What was/is your incentive?
- Does it “work”?

36
