NEW YORK UNIVERSITY SCHOOL OF MEDICINE

Phase I Report of the Academic Excellence Commission

Academic Performance Standards and Metrics for Basic Research

DECEMBER 2007

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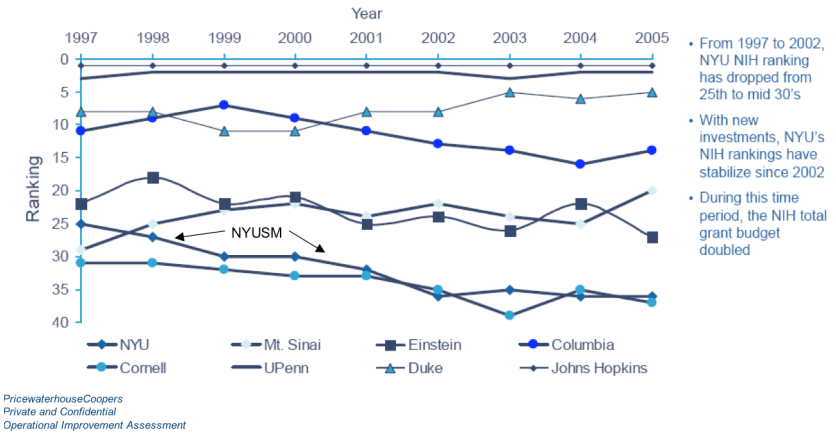
Executive Summary

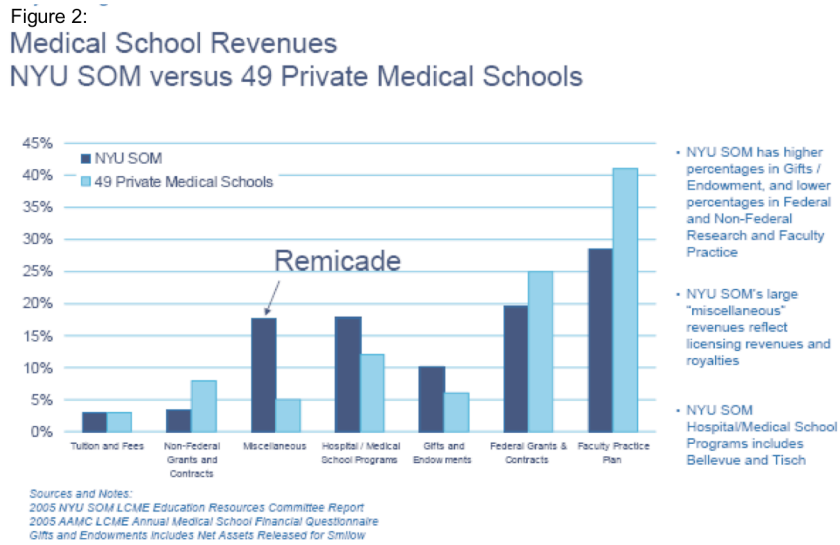
Since 1841, NYU School of Medicine (NYUSM) has had a multi-centennial legacy of academic excellence and has stood as a premier medical research institution. From the development of drugs to combat yellow fever at the turn of the last century by Walter Reed, to the development of the poliovirus vaccine by Albert Sabin, to the identification of heart murmurs by Austin Flint, to the development of the enormously successful recent anti-inflammatory agent Remicade by Jan Vilcek, to name but a few accomplishments, our faculty have established a long tradition of world class research accomplishments and medical care. However, as scientific research has become ever more complex, with a climate of research support fiercely competitive in the face of declining Federal investment, medical research has been transformed into an enterprise in which well organized, cohesive, team-oriented collaborative efforts are essential. In this regard, NYUSM has fallen behind the curve, being late in responding to these challenges. This is evident in the academic and NIH ranked standing of the School of Medicine, which has fallen from the top 20's in the 1990s to 36 in 2005 (Figure 1).

Figure 1: Why now? Declining Position Among Academic Medical Centers



Other medical schools have predicted and appropriately reacted to these changes. For instance, they have invested heavily in the infrastructure and facilities that are essential for conducting ground-breaking research. They have also instituted formal faculty performance and productivity criteria with accountability procedures at the individual and departmental levels, converging a policy of financial responsibility (through an aggressive pursuit of extramural support) with the achievement of academic excellence. Conversely, until now, no organized efforts in this direction have occurred at NYU. NYUSM has been focused largely on growth at the individual principal investigator level to the exclusion of program building, and has also not dealt with the issue of chronically poorly funded and unfunded faculty. There has been an over-reliance on the

Figure 2:



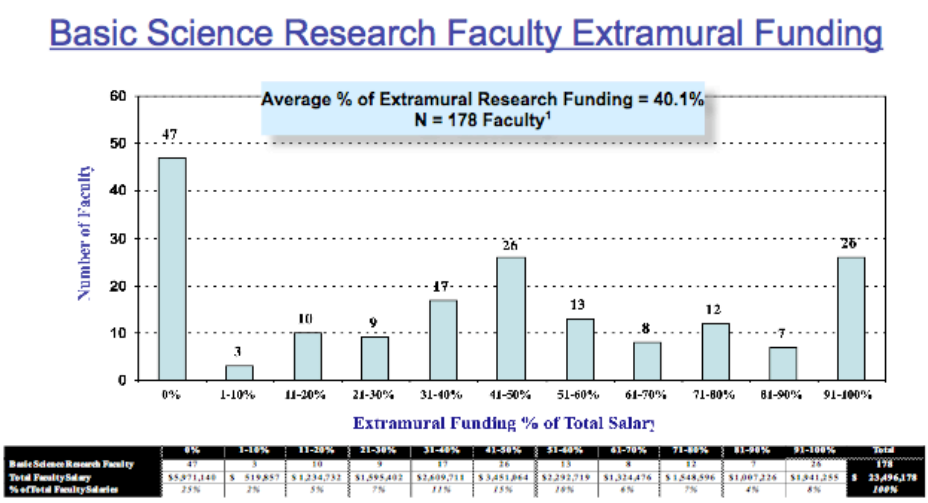
NIH for grant support, to the exclusion of other Federal funding agencies (Department of Defense, Department of Energy, NASA, Department of Homeland Security) and Foundations. There has been no concerted effort to obtain grants and philanthropy directed to building core facilities and a strong research infrastructure, collaborative research programs, research infrastructure and acquisition of expensive instrumentation (see Figure 2). The net effect has been a deficit of non-Federal and non-NIH sourced funding and an overall decline in important research core facilities and research infrastructure compared to other medical schools. The neglect of core facilities and research infrastructure that are essential for both individual and collaborative research has created a research environment that is unable to effectively compete, whether for individual grants or large collaborative program-oriented grants. While NYUSM faculty continue to perform outstanding scientific research, our largely NIH-centric grant portfolio, the lack of large collaborative grants, and the failure to invest in core facilities, combined with the increased number of faculty that do not meet typical performance criteria, have caused a significant erosion of our academic and financial standing. We are particularly sub-optimally leveraged for greater interdisciplinary investigation and collaboration. Although the decrease in academic standing by NIH rank has apparently stabilized (Figure 1), the School of Medicine now faces unsustainable projected budget deficits and must implement new policies to achieve increased academic standing and extramural support of its faculty, to once again become a top tier School of Medicine.

NYUSM has very generous trustees who have developed a culture of philanthropy that exceeds the expectations of many first tier medical schools (11% of global NYUSM revenues are from philanthropy compared to the average 6% at 49 other private medical schools; PWC Report). In the past, a portion of these gifts were applied to offset some of the costs to support faculty salary and other components of the School of Medicine debt. Alternatively, these resources should be used to reward and foster academic excellence by enabling sustainable growth in a context of realistic expectations and accountability.

Review of the available data supports the evidence of a pervading lack of accountability. The absence of a formal policy of faculty performance expectations and evaluation criteria has resulted in a disproportionate number of under-performing faculty that negatively affects the academic and financial standing of the School of Medicine. As shown in Figure 3, there is now a bipartite split in faculty performance levels.

Approximately 27% of the faculty support 0% of their salary through extramural research funds, 7% of the faculty do not meet a 20% level of extramural salary support, 23% provide between 20-49% funding, and almost 37% faculty meet and/or exceed the current benchmark of 50%, with 27% of these faculty providing greater than 60% salary support through extramural funds (Figure 3). For this reason, the School of Medicine currently achieves only a 40% level of overall faculty extramural salary support. If most faculty were to achieve a 60% benchmark of salary support drawn from a typical NIH grant of $250,000/year (direct costs, assuming NYUSM federal indirect rate), total grant revenues for the School of Medicine would increase, as would the NIH standing and overall standing of the School of Medicine. Moreover, there would be a significantly decreased burden of operational expenditures directed to salary support of faculty that do not meet expectations. This money would be available for investment in the research enterprise. At a minimum (taking the 0-20% extramural salary support group), this corresponds to approximately one-third of basic research faculty salaries, or $8 million a year, of a total of almost $24 million (Figure 3).

Figure 3



Basic Science Research Faculty	0%	1-10%	11-20%	21-30%	31-40%	41-50%	51-60%	61-70%	71-80%	81-90%	91-100%	Total
	47	3	10	9	17	26	13	8	12	7	26	178
Total Faculty Salary	$5,871,140	$ 519,857	$1,234,732	$1,595,402	$2,609,711	$3,451,864	$2,292,719	$1,324,476	$1,548,596	$1,007,226	$1,841,255	$ 23,496,178
% of Total Faculty Salaries	25%	2%	5%	7%	11%	15%	10%	6%	7%	4%	8%	100%

[1] *Faculty from 11 Basic Science Depts. and Institutes excluding Chairs, new hires as of 1/1/05, faculty with salaries < $50,000, and any faculty reporting clinical effort from Jan., 2007 effort survey.*

* *Note: Approximately $1.0M of faculty salary out of the total $23.5M is committed to supporting education effort above the Artman II requirement (n=39 faculty with incremental education effort).*

The majority of private medical schools have already adopted academic faculty performance criteria (Virginia Commonwealth University analysis, see Appendix). They have defined the base salary component of compensation, identified metrics and mechanisms for the assessment of faculty performance, and established incentive and reward programs for surpassing performance benchmarks. Furthermore, a process for dealing with faculty that cannot reasonably meet standard expectations is in place (Virginia Commonwealth University analysis, see Appendix). A frequent benchmark for faculty performance and productivity is the expectation that an established percentage of the

Figure 4: Faculty Performance Criteria by Extramural Salary Support

- Among the research productivity measures present in the industry, a salary coverage benchmark is one of the most frequently used measures
- Research salary coverage requirements for peer organization are as follows

Institution	Salary Coverage Requirement 2006-2007
University of Pennsylvania	75-80%
Duke University	50%
Vanderbilt University	75%
Washington University	75%
Harvard University	80%
Columbia University	65%
Cornell University	Legacy 60 – 65% New 75 – 80%
Mount Sinai	65 – 70%
Yale University	60 – 75%

Source: PwC Survey Data

salary corresponding to the research effort is covered by extramural sources of support (i.e., not from the institution's operating budget). All three peer medical schools in New York City have adopted such measures (Figure 4), as have regional medical schools in the tri-state area. Noticeably, the NYUSM expectation of 50% extramural salary support, which is presently not being met, is considerably lower than any of the other regional medical schools, which average 65-80%.

In the fall of 2007, Dean Grossman convened two Strategic Initiatives Commissions charged to develop a plan to guide the School of Medicine for the next decade, with the overarching goal of once again achieving a position as one of the top 20 medical schools in the U.S.. One of these, the Academic Excellence Commission (AEC), co-chaired by Dr. Robert J. Schneider and Dr. Silvia C. Formenti, consisted of a group of highly respected faculty (clinicians and basic scientists) that are widely representative of the many different programs and interests of the School of Medicine. The AEC has met weekly for a period of almost three months with the ambitious agenda of learning how our peers manage their faculty resources and recommending metrics and benchmarks in order to equitably define expectations for full-time faculty at NYUSM. The overarching aim has been to create a culture of accountability that would enable and reward excellence in an academically viable and financially sustainable manner.

Their charge was to:

- Develop and implement productivity criteria for basic and clinical research faculty
- Develop a program for evaluation, implementation and accountability of performance metrics
- Develop a definition of full-time, part-time and private practice service
- Develop expectations for the level of external funding
- Develop criteria and guidelines for allocation of research space
- Develop criteria and guidelines for faculty and departmental incentives and rewards for surpassing expectations
- Develop recommendations for the replacement of faculty that cannot meet performance criteria after a reasonable transition period (glide path)

The methods, process, analysis and discussion of the AEC can be found later in this document, as well as more specific recommendations. Outlined here is a summary of the recommendations and conclusions of the Commission for the first phase of their study.

Education and teaching standards and metrics. The AEC unanimously endorsed the previous recommendations of the NYUSM Committee on Expectations Regarding Teaching (Artman II), which will therefore not be described in depth here. However, the AEC also recommended specific changes that would establish greater contact hour value for directors of Residency and Fellowship programs that was less tied to the number of individuals in the program. The AEC also recommended greater contact hour value for graduate student program advisor positions. Finally, the AEC feels strongly that all faculty must fulfill the Artman teaching standards when asked. Teaching as defined by the Artman report includes but is not limited to delivering lectures, preparing lectures, participating in thesis committees for students not in the PI's lab, teaching conferences, and participating in journal clubs. It was recommended that faculty who

will not fulfill their teaching obligations when asked to do so, at a minimum, will be asked to assume additional extramural salary support. Specific recommendations were provided.

Research space standards and metrics. The AEC assessed the current level of research financial support of laboratory space at NYUSM in comparison to peer institutions and with respect to the cost of doing business in an expensive urban setting. Research dollar densities can be calculated and assessed in a variety of ways, evaluating only indirect costs, combined indirect and direct costs, or using a weighted system that adds greater value to extramural funds that recover full indirect costs. Given that NYUSM is presently a predominantly NIH and Federal grant based institution, and therefore typically recovers full indirect costs, the AEC unanimously recommended that a dollar density of $450 per square foot (combined direct and indirect total funding) was a reasonable expectation for "wet bench" research, with reevaluation in three years time. Intramural support that provides no indirect cost recovery and extramural grants that pay less than 10% indirect costs cannot be used in assessment of dollar density, nor can patient/practice revenues. Recognizing that achieving new programmatic goals may also involve periods in which individual faculty cannot meet the expectation for dollar density, the AEC recommended a metric and a glide path for implementation, periodic evaluation and individual and departmental accountability for maintaining research space standards and reassignment of research space.

Research productivity standards and metrics for extramural support. The AEC dedicated a considerable amount of time to analytic discussion and study of the issue of extramural salary support. Different models were evaluated and projections developed in reference to regional and peer standards. The AEC unanimously recommended that: (1) all full-time faculty immediately meet the present 50% level of extramural salary support; (2) all full-time faculty achieve a 60% level of extramural salary support, pro-rated for research effort and conforming to the present NIH cap of $186,600 per annum. The AEC recommended a glide path of annual 5% incremental increases in extramural salary support by faculty to 60%, as follows: 50% by September 2008; 55% by September 2009; 60% by September 2010. For faculty that will not fulfill Artman teaching obligations when asked, their glide path will be 60%, 65%, 70% for the same period, with the possibility of additional charges. There should be consideration for exceptions for faculty who demonstrate a significant likelihood of achieving the benchmark based on significant progress in obtaining extramural support. (3) extramural salary support benchmarks should apply to each faculty member individually, although Department Chairs, with the consent of the Dean, should have latitude to allow exceptions in the pursuit of programmatic goals. In these instances, Departments must still maintain overall balanced portfolios that achieve the benchmarks; (4) extramural support must be derived from sources other than the NYUSM operating budget (grants, fellowships, endowed chairs); gifts can be used for meeting salary expectations but only if programmatic and available for use as determined by the Chair and the Dean; (5) the Dean holds discretion in application of extramural support benchmarks; (6) the AEC will reevaluate the transition to 60% extramural salary benchmark in one year's time; (7) a policy should be implemented to reduce the research space allocation and/or salary for faculty that consistently fail to achieve, or who cannot demonstrate a significant likelihood of achieving the current 50%

salary benchmark following a reasonable transition period, suggested by the Commission to be September 2008.

Additional specific details and recommendations regarding research productivity standards and metrics are described later in this document.

Prologue

NYU School of Medicine has a established a tradition of academic excellence. Fostering academic excellence is a central component of the vision of the current leadership of the School of Medicine, as demonstrated by the many new initiatives to strategically facilitate faculty and programmatic growth and increase competitive achievements. A first step in this direction is a frank assessment of the present state of the School of Medicine, how we compare with other institutions and what makes NYUSM "different" and, in this context, how to best encourage and sustain excellence.

To this aim, the Dean has appointed the Academic Excellence Commission, a faculty-based body charged to develop a series of relevant metrics, to apply them in the existing context of NYUSM and to establish specific recommendations and procedures for fostering and sustaining excellence.

The issues addressed by the Commission are summarized below. Please see the minutes of the AEC meetings in the Appendix for an in depth description of the issues and questions discussed. To provide full discussion, analysis and thoughtful development, it was decided that the Commission will report its recommendations in two phases:

Phase I will report recommendations for basic research faculty academic productivity standards, implementation and assessment.

Phase II will report clinical faculty academic productivity standards, implementation and assessment. During the second phase, recommendations will also be generated regarding base salary, incentives and compensation for both basic and clinical academic faculty.

Methods and Process

In the fall of 2007, newly invested Dean Grossman appointed a Commission on Academic Excellence. The Commission consisted of a broad spectrum of faculty representing many different interests and experiences at NYU School of Medicine, which collectively provided a balanced and fair representation of the different School of Medicine faculty in basic, translational and clinical research, as well as clinical practice. Following the mandate and mission as outlined earlier, the Commission established a timeline (Appendix) for the study and development of a two phased set of metrics and standards for academic excellence, to be applied

across the entirety of the medical school research faculty: Phase I- academic standards and productivity metrics for basic research faculty; Phase II- academic standards and productivity metrics for clinical research faculty; recommendations for base salary; productivity incentives and rewards.

The Commission met bi-weekly, and when necessary weekly, for prolonged and intense analysis and discussion of each issue under consideration. The agenda and minutes of meetings can be found in the Appendix. Reliance upon the following information and documentation (Appendix) characterized the process: published reports as indicated in the Appendix; the 2006 Price Waterhouse Coopers (PWC) analysis of NYUSM, comparative research analyses and modeling developed by the Commission's administration group led by Mr. David Church, previous investigative committee findings (Dean's Committee on Institutional Resources, DCIR); the Committee on Expectations Regarding Teaching (i.e., Artman II), interviews and discussions with key information sources at NYUSM (Dr. Andrew Brotman, Senior Vice President and Vice Dean for Clinical Affairs and Strategy, Chief Clinical Officer; Ms. Annette Johnson, Senior Vice President and Vice Dean, General Counsel; Ms. Nancy Sanchez, Senior Vice President and Vice Dean for Human Resources), and substantial discussions with the Commission's external members.

Throughout this process, the Commission strove for transparency, fairness, feasibility, and balance, within the historical context of the traditions and culture of the NYUSM. Before drafting the Phase I report, four Town Hall meetings were held by Dean Grossman, Vice Dean Abramson, Vice Dean and Chief of Staff Litt, and co-Chairs of the Commission, Dr. Formenti and Dr. Schneider. Over the course of several weeks, the Town Hall meetings provided a forum for open discussions of the ongoing findings and potential recommendations of the Commission with the faculty at large. Important feedback was obtained and the concerns of the faculty at large were further discussed by the AEC. The Commission also met with the External Commission Members in two full day retreats in which they discussed in depth their findings and solicited feedback from these members before implementing specific recommendations.

Key Issues Considered by the Academic Excellence Commission for the Phase I Report

- Current assessment: Develop a shared understanding and appreciation of the current academic standing of NYUSOM, in relationship to peer institutions.
- Expectations: Define realistic expectations for full-time faculty productivity that will result in excellence in an academically viable and financially sustainable way.
- Productivity: Develop and implement faculty productivity criteria in relation to those of peer institutions. Critically analyze the means and paths to achieve the projected increased academic standing NYUSM seeks to achieve for basic and clinical faculty.
- Academic standing metrics: Define a standard for full-time academic, part-time academic and private practice service.
- Financial support: Develop uniform expectations for an external level of financial support for basic and clinical research faculty. Develop mission-based budgeting principles for basic research and clinical faculty.

- Research productivity: Develop expectations for a level of salary support through extramural funding and a means for implementation, adherence at the individual and departmental level and assessment of expectations.
- Research space: Develop metrics for the equitable distribution of research space. Develop metrics for reevaluation of research space assignments and a mechanism for reallocation of research space.
- Educational productivity: Adopt expectations and value for teaching, residency and clinical program administration, clerkship administration and course directorship, student advisorship, administration standards, accommodating Artman II report recommendations.
- Incentives: Develop a program of incentives and rewards available to faculty who exceed expectations. Examples include individual incentives, departmental incentives, institutional capital investment in the research enterprise. Other forms of incentives and rewards consist of access to discretionary accounts, research accounts, departmental allocations, and salary bonuses.
- Base salary: Develop a base salary (minimum salary by rank) and develop a metric for instituting a uniform base salary. Determine whether/how salary increases can be implemented based on performance criteria.
- Evaluation: Develop performance evaluation criteria, benchmarks and policies for basic research and clinical faculty that fairly balances the value of teaching, research and administration.
- Critical evaluation of performance based metrics: Develop policies and procedures for reassessing goals, benchmarks and performance criteria.
- Implementation: Develop suggested guidelines for achievement of goals and sustainable productivity metrics.

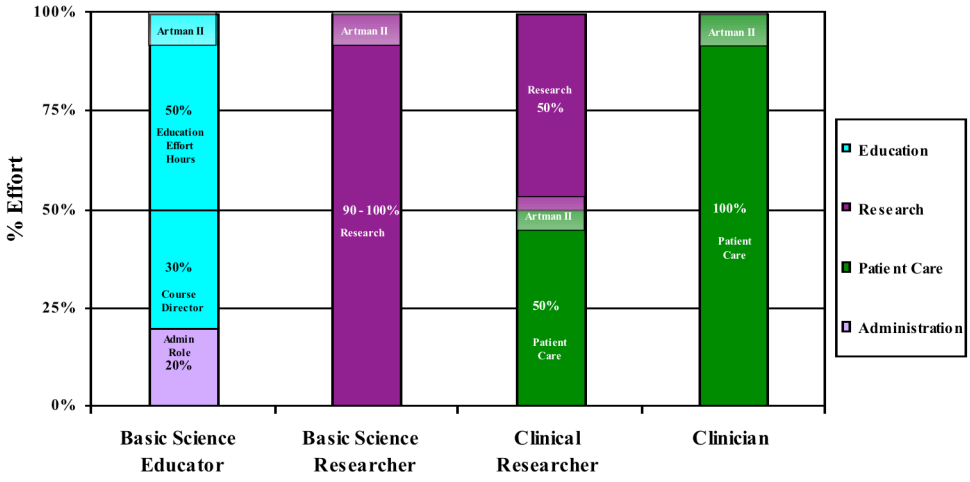
Recommended Productivity Standards, Metrics and Benchmarks

Many public and private Schools of Medicine have now adopted codified performance standards by which to evaluate and reward the basic research faculty (Virginia Commonwealth University analysis, see Appendix). NYUSM is in the minority of schools that we consider our peers in not having done so (Figure 4).

Education and teaching standards and productivity metrics. The NYUSM Committee on Expectations Regarding Teaching (Artman II) established now well accepted requirements, procedures and policies regarding clinical and basic research faculty teaching obligations, tenure and promotion for full time academic tenure-able and non-tenure-able faculty, as well as part-time faculty. These recommendations were discussed at length by the AEC and for the most part endorsed, with several suggested revisions as described below. In particular, it was felt that in retrospect the Artman recommendations and the DCIR study did not provide sufficient recognition of the extent of effort required to direct clinical residency and fellowship programs regardless of size, and graduate student advisorships. It was noted that small programs and large programs are both very demanding of faculty time. It was recommended that the School adopt a more flexible measure for percent effort of directors rather than one based on the number of

residents, fellows or graduate students enrolled in the program (see Figure 5). Four examples are provided in Figure 5, demonstrating the different manifestations of teaching, research, administration and patient care efforts that can be assigned. While these examples are meant for illustrative purposes only, they do represent typical allocations of effort in four major groups of faculty at NYUSM. Clinical Program Directors can be viewed as analogous in profile as the Basic Science Educator. See Table I for further information regarding teaching obligations and faculty salary support recommendations. For most faculty, teaching constitutes only a small percentage of their overall effort.

Figure 5 Faculty Effort Examples



Ranges of percent effort were therefore suggested that will be validated in specific terms for the Director of the program by the Chairs and Section Chiefs involved. Serving as a Director of residency, fellowship, clerkship and graduate programs, unlike course directorships, continues throughout the year and creates a continuous demand for faculty time. Greater value should therefore be placed on these positions and recognized as a greater extent of committed effort. It was also noted that faculty time and effort reports for many faculty members often overstates their percentage of effort engaged in teaching. The specific recommendations for teaching and education activity adopted by the AEC are shown in the table below. In addition, the Commission endorsed with full consensus the Artman II recommendations for full time faculty:

Education

- *Artman II*: up to 50 contact hours for full-time faculty (if requested)
- *Effort Hours*: 4:1 ratio of effort to contact hours (e.g., Artman is the equivalent of 200 effort hours or approximately 10% effort of a full time faculty member)

Table I: Education Productivity Standards

Effort hours: one contact time hour = 4 faculty effort hours

Undergraduate medical education	**Proposed FTE guidelines**
Course Director	**30% (for 80 hour course)**
Clerkship Director	**40%**
Graduate Medical Education	
Program Director- Residency Programs	**<u>Previous recommendations</u>** # residents:

	>50 = 50% 21-50 = 30% <20 = 20% <10 = 10% **New recommendations** # residents: >30 = 50% 15-29 = 20-50% <15 = 10-20%
Program Director- Fellowship Programs	**Previous recommendations** # fellows: >20 = 30% 6-19 = 20% <5 = 5% **New recommendations** # fellows: 6->20 = 20-30% <5 = 5-10%
Program Director- non-accredited Programs	0% School supported effort
Graduate Student Education	
Program Director	**Recommendations** # students: >20 = 20% 6-19 = 10-20% <5 = 5-10%
Course Director	Unchanged. See Artman II

Research performance standards, benchmarks and metrics for extramural salary support. The AEC spent a considerable amount of time discussing, analyzing and modeling standards and metrics for research faculty performance, in comparison to peer institutions and with respect to regional standards. The AEC compared the present NYUSM standards to that of other New York City Medical Schools, as well as those nationally. A comparative analysis of regional medical schools placed NYUSM at the lowest end of faculty extramural support expectations (presently 50%, achieving 39% overall), compared to 65% for Columbia University School of Medicine, 65-70% for Mount Sinai, and 75-80% for Cornell, 60-75% for Yale (see Appendix for a complete listing). Furthermore, at NYUSM only five basic science Departments achieve or almost achieve (>44%) of the benchmark 50% of extramural salary support overall (excluding Skirball faculty), with one Department at 15% aggregate support. The Skirball Institute faculty achieve an aggregate of 62% extramural salary support. The present standards require much too high a commitment from the NYUSM operating budget, they are not sustainable, and they significantly hamper the growth and academic standing of the Medical School. Moreover, there has not been a mechanism for enforcing the current standards. There was considerable discussion of the means by which the School could enforce expectations and what to do about faculty that do not meet those expectations.

The recommendations described below were adopted unanimously by the AEC. With careful consideration and modeling, a glide path was recommended with reassessment by the AEC in one year's time, and with restriction of the expectation of extramural salary support to that of the NIH cap of $186,600. For modeling purposes, it was found that by excluding those

faculty who lack grant support and fail to provide any extramural salary support, the current target of 50% extramural salary support is already achieved overall at the Departmental level. Additionally, many faculty could reach the 60% level individually without undue disruption of their research activities. Moreover, there are negligible differences between tenured/tenure-eligible and non-tenured faculty with regard to meeting the proposed benchmark.

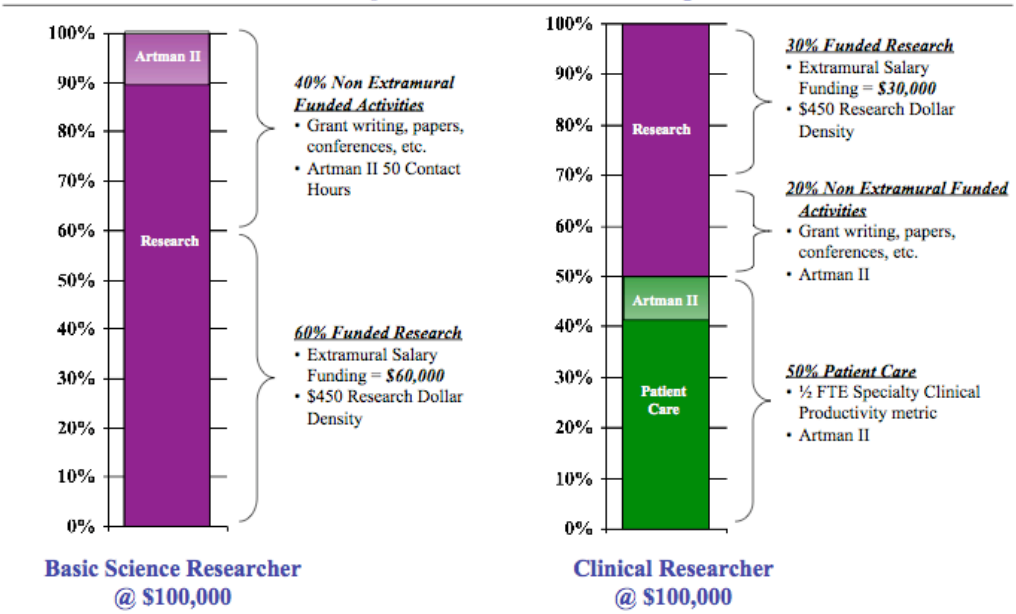
Specific recommendations for extramural salary support of full-time faculty

1. The present benchmark of 50% extramural salary support prorated for research effort should be implemented immediately and applied across all faculty individually. Faculty below this level of support must achieve this level by September 2008 or demonstrate a significant likelihood of achieving it based on a positive trajectory of extramural salary increases and/or a significant increase in expectations based on grant application activity, and quality as reflected in peer-reviewed critique, at the recommendation of the Chair and with the approval of the Dean.
2. Extramural salary support is defined as financial support that is not derived from the NYUSM operating budget. This includes grants (Federal and non-Federal), programmatic philanthropy, research salary support applied from service fees that is not already a part of patient care service, support derived from endowed chairs/professorships, and gifts given programmatically and available for use as determined by the Chair with the approval of the Dean.
3. Faculty members will be held to the following benchmarks. Annual 5% incremental increases in extramural salary support by faculty to 60%, as follows: 50% by September 2008; 55% by September 2009; 60% by September 2010. For faculty that do not fulfill Artman teaching obligations, their glide path will be 60%, 65%, 70% for the same period.
4. Faculty members below the benchmarks for extramural support will need to demonstrate positive, sustainable and likely progress toward this goal. For those faculty that do not meet the benchmarks of extramural support, the Department chair can recommend to the Dean, whether the policy should apply based on the faculty member's scientific achievements of academic excellence. The AEC will reconvene in one year's time to reassess the goals and impact of implementation of increased extramural salary support criteria. See Figure 6 for two models for examples of the typical allocation of support among basic and clinical researchers. As noted in Figure 6, the 40% coverage of faculty salary by the School of Medicine is to support research related activities, school- and departmental- related committee work, as well as those activities related to education as defined by Artman II. Faculty who do not meet Artman II standards will be responsible for, at a minimum, additional salary coverage as described in #3 above.
5. Each individual faculty member should be held accountable for maintenance of the benchmark expectation of extramural salary support. The Dean, in consultation with the Chair, holds discretion in application of individual extramural research support expectations.
6. Metrics and benchmarks should be applied to all faculty regardless of their Departments of primary appointment and location of research enterprise (Medical School, Smilow, Skirball, Bellevue, VA, etc.).
7. A policy should be implemented to reduce research space and/or salary for faculty that consistently fail to achieve, or who cannot demonstrate a significant likelihood of

achieving the present benchmark of 50% extramural salary support or the proposed transition to 60% level of support.

8. With the approval of the Dean, Chairs can be allowed to maintain flexibility to permit faculty salary coverages below target when in support of specific programmatic objectives and needs, but Chairs will be held accountable to manage overall Departmental targets. It is therefore the Chair's responsibility to achieve individual faculty accountability and to manage the portfolio of mission responsibilities within their Departments, since the manner by which they may meet expectations for extramural salary support of their faculty is likely to vary in different Departments and/or at different times.

Figure 6: Faculty Effort & Productivity Examples



Investment in Research Infrastructure. It is a necessity that the School simultaneously invest in the research infrastructure as it carries out implementation of academic performance criteria. The faculty cannot achieve these benchmarks and maintain these metrics in the absence of significant and concurrent investment in core facilities, services and research infrastructure such as IT, medical informatics, molecular imaging, animal imaging, and other basic research components that are found at top tier medical schools. It will not be possible to obtain and maintain a greater share of extramural funding in the absence of this investment.

These elements include:

- Development and investment in adequate core facilities and shared resources for research.
- Development of grant funding resources: readily available access to grant funding sources, grant writing workshops and evaluation tools, pilot seed money for development of collaborative research grants, reliable financial reports for existing grant expenditures.

- Reliable and efficient pre- and post-grant award management
- Reliable financial management and projections of grant expenditures
- Increased capital investment in the research enterprise and infrastructure
- A uniform and accountable system for mentoring of young faculty and clinicians transiting to research careers
- Targeted efforts to increase solicitation of non-Federal funding for investigators, particularly junior investigators who have a more difficult time obtaining NIH and other Federal support.

Research space standards, benchmarks and metrics for extramural support. The AEC considered a variety of metrics by which different institutions assess adequate extramural support for research space, which generally applies to laboratories and facilities used in research. Expectations for research space support vary widely by region and reflect a significantly increased pressure of real estate costs and maintenance of services (electricity, telephones) in expensive urban areas like New York City, and within an institution containing a broad range of young and old facilities.

The AEC assessed the current level of research support per square foot of laboratory space at NYUSM (i.e., dollar density) and in comparison to peer institutions and regional medical schools. They arrived at a dollar density that was felt to be fair given the dollar densities achieved at other institutions. Some institutions calculate dollar density for research space based entirely on indirect costs recovered, many consider the combined direct and indirect costs, and others apply a scale that provides greater weight to Federal grants that recover full indirect costs compared to Industry sponsored grants that typically provide 50% indirect costs, and Foundation and other grants that typically provide from 10% to 30% indirect cost rates. Some institutions disallow investigators from accepting grants that do not pay at least 10% indirect cost rates. Because NYUSM is presently largely an NIH and other Federal grant based institution, for the time being the AEC adopted a metric that considered all means of support that pay at least 10% indirect costs in the calculation of dollar density for laboratory and other research space. This issue should be revisited in two year's time after the implementation of AEC standards.

Specific recommendations for research space support of full-time faculty.

1. Dollar density: A NYUSM university wide standard of $450 per square foot was determined to be a reasonable expectation.
2. Source of financial support: Total Direct and Indirect research revenue, excluding grants and other means of support that fail to recover 10% or more indirect costs.
3. Intramural support: Financial support must be generated from extramural sources, and cannot be generated from fees, patient revenues and other means that do not pay indirect costs.
4. Evaluation of metrics: The metric is correlated with extramural support, and like extramural salary support, should be evaluated over a composite period of 3 years to average fluctuations in times of uncertain grant support expectations.
5. Implementation: Dollar density should be considered individually, but with the flexibility of Chairs with approval of the Dean, to assess targets at the Departmental level. Chairs are therefore responsible for meeting Departmental targets.

6. Chairs, with approval of the Dean, have discretion in re-allocating space when necessary. The quality of the space (renovated, un-renovated) should be taken into account.

PHASE II EXPECTATIONS

Clinical Productivity Standards. Clinical productivity standards will be provided in the Phase II report. The AEC has spent time analyzing both the structure and culture of the NYU clinical enterprise. They identified its limitations and strengths. In particular, the existing structure/culture does not sufficiently encourage clinical investigation and clinical translational research. Because of its complexity and the necessity to converge findings of the AEC with that of the Structure Commission, it was decided to divide the endeavor of the AEC into two parts. The second phase of the AEC report will provide specific recommendations for the clinical enterprise and clinical productivity standards. In this ongoing effort, there are a number of crucial issues under assessment by the AEC. These include but are not limited to the following elements.

- What is an academic clinician investigator versus private practice physician?
- How do we protect the time of clinical investigator and enable their development?
- How do extramural salary support and research space metrics apply to clinical faculty?
- How are current clinical salary and research standards consistent with the NYUSM research standards and what will be the impact of projected changes?
- Can a goal of academic excellence in clinical and translational medical research be achieved in the unusual matrix of faculty group practices and private practitioners at NYUSM? How should it be changed?
- Can the FGPs accommodate greater expansion and protection of academic clinical investigators? How can this be enacted?

Incentives and Rewards for Surpassing Productivity Expectations

Discussion and analysis is ongoing regarding incentives and rewards for faculty that surpass recommended benchmarks and metrics. These will be provided in the Phase II Report.

Base Salary

To be described in the Phase II Report.

Figure 1: Why now? Declining Position Among Academic Medical Centers

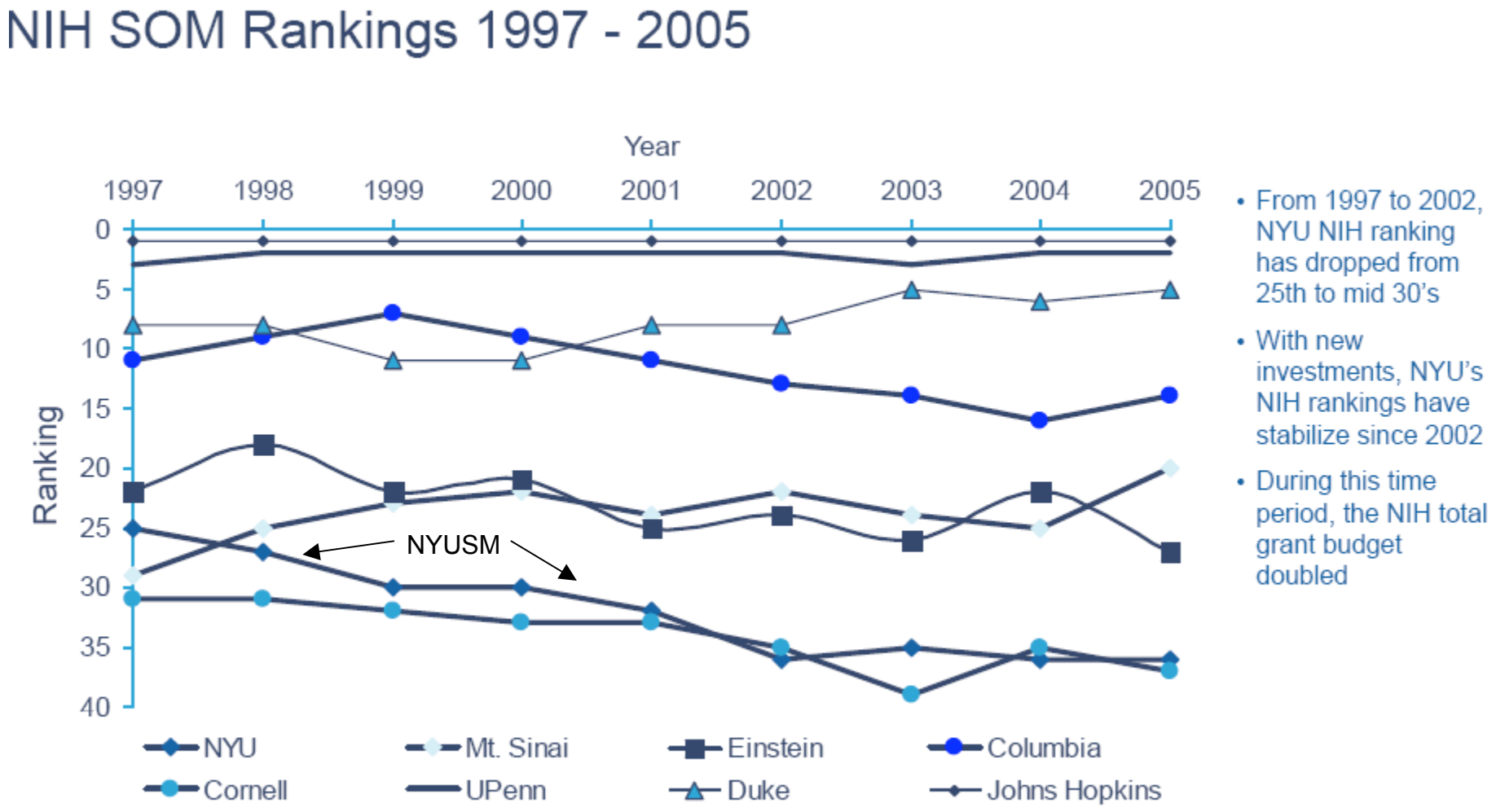
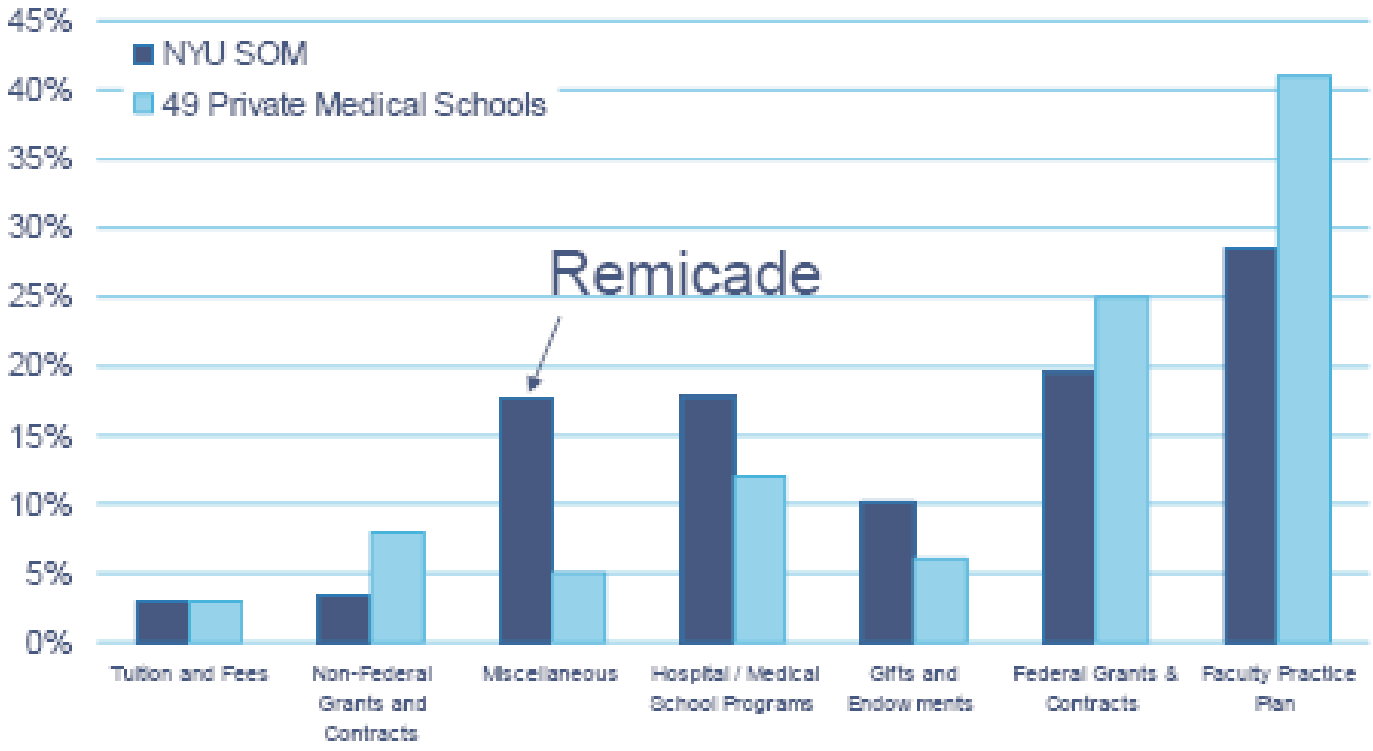


Figure 2:

Medical School Revenues
NYU SOM versus 49 Private Medical Schools

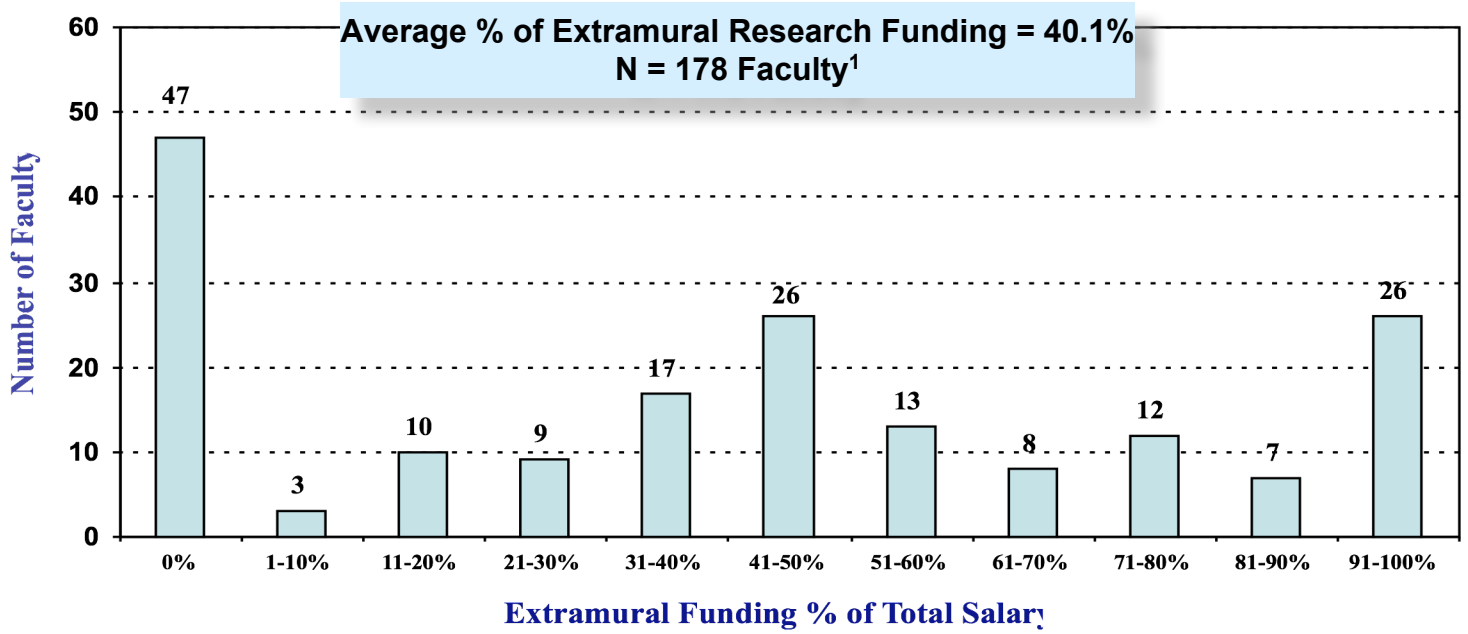


- NYU SOM has higher percentages in Gifts / Endowment, and lower percentages in Federal and Non-Federal Research and Faculty Practice
- NYU SOM's large "miscellaneous" revenues reflect licensing revenues and royalties
- NYU SOM Hospital/Medical School Programs includes Bellevue and Tisch

Sources and Notes:
2005 NYU SOM LCME Education Resources Committee Report
2005 AAMC LCME Annual Medical School Financial Questionnaire
Gifts and Endowments Includes Net Assets Released for Smilow

Figure 3

Basic Science Research Faculty Extramural Funding



	0%	1-10%	11-20%	21-30%	31-40%	41-50%	51-60%	61-70%	71-80%	81-90%	91-100%	Total
Basic Science Research Faculty	47	3	10	9	17	26	13	8	12	7	26	178
Total Faculty Salary	$5,971,140	$ 519,857	$ 1,234,732	$1,595,402	$2,609,711	$ 3,451,064	$2,292,719	$1,324,476	$ 1,548,596	$1,007,226	$1,941,255	$ 23,496,178
% of Total Faculty Salaries	*25%*	*2%*	*5%*	*7%*	*11%*	*15%*	*10%*	*6%*	*7%*	*4%*	*8%*	*100%*

[1] *Faculty from 11 Basic Science Depts. and Institutes excluding Chairs, new hires as of 1/1/05, faculty with salaries <$50,000, and any faculty reporting clinical effort from Jan., 2007 effort survey.*

** Note: Approximately $1.0M of faculty salary out of the total $23.5M is committed to supporting education effort above the Artman II requirement (n=39 faculty with incremental education effort).*

Figure 4: Faculty Performance Criteria by Extramural Salary Support

- Among the research productivity measures present in the industry, a salary coverage benchmark is one of the most frequently used measures
- Research salary coverage requirements for peer organization are as follows

Institution	Salary Coverage Requirement 2006-2007
University of Pennsylvania	75-80%
Duke University	50%
Vanderbilt University	75%
Washington University	75%
Harvard University	80%
Columbia University	65%
Cornell University	Legacy 60 – 65% New 75 – 80%
Mount Sinai	65 – 70%
Yale University	60 – 75%

Source: PwC Survey Data

Figure 5:

Faculty Effort Examples

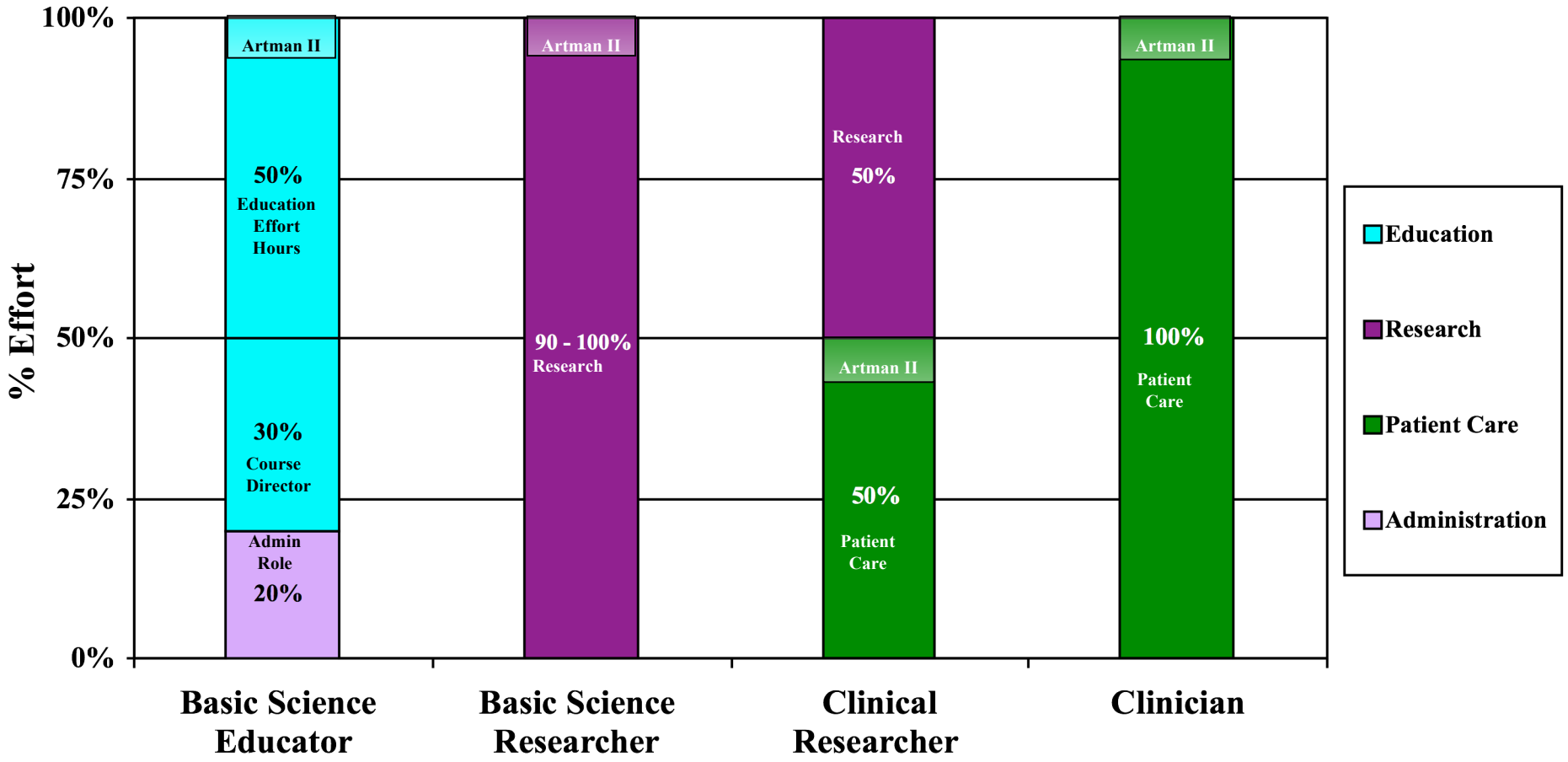
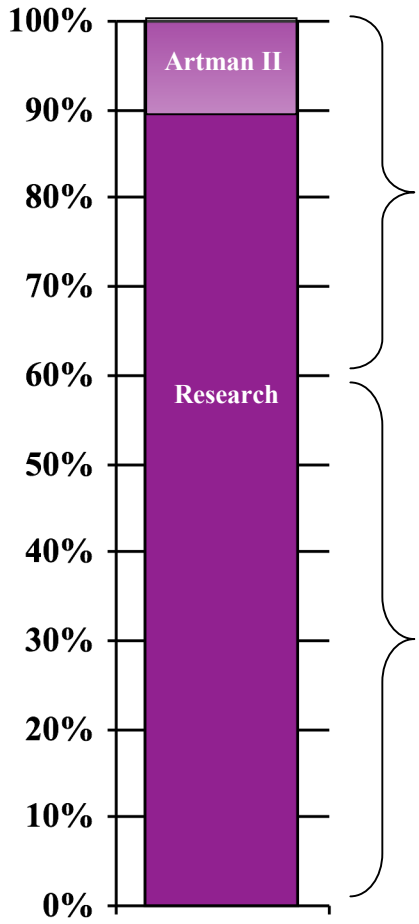


Figure 6:

Faculty Effort & Productivity Examples

Expected Productivity



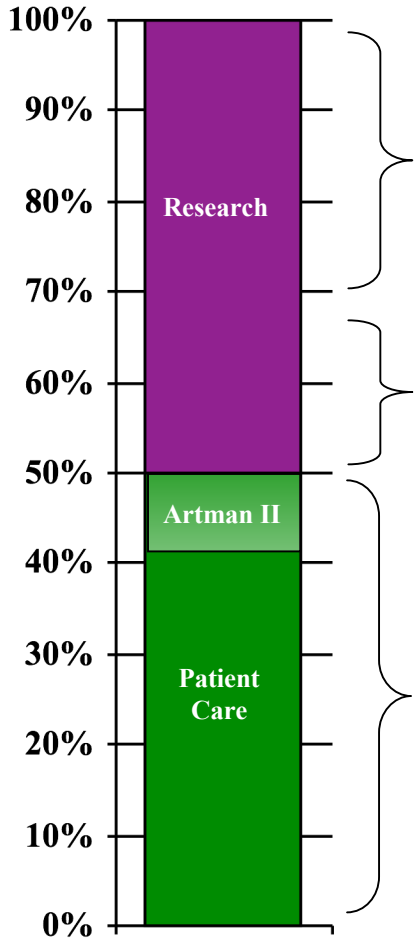
40% Non Extramural Funded Activities

- Grant writing, papers, conferences, etc.
- Artman II 50 Contact Hours

60% Funded Research

- Extramural Salary Funding = ***$60,000***
- $450 Research Dollar Density

Basic Science Researcher @ $100,000



30% Funded Research

- Extramural Salary Funding = ***$30,000***
- $450 Research Dollar Density

20% Non Extramural Funded Activities

- Grant writing, papers, conferences, etc.
- Artman II

50% Patient Care

- ½ FTE Specialty Clinical Productivity metric
- Artman II

Clinical Researcher @ $100,000