



UNIVERSITY OF MINNESOTA

Medical School

The Medical School

Board of Regents
Subcommittee on the AHC
November 29, 2007

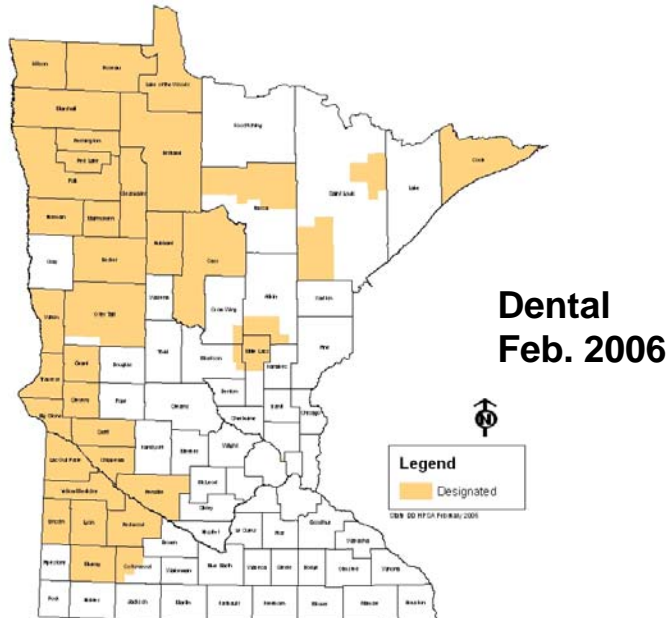
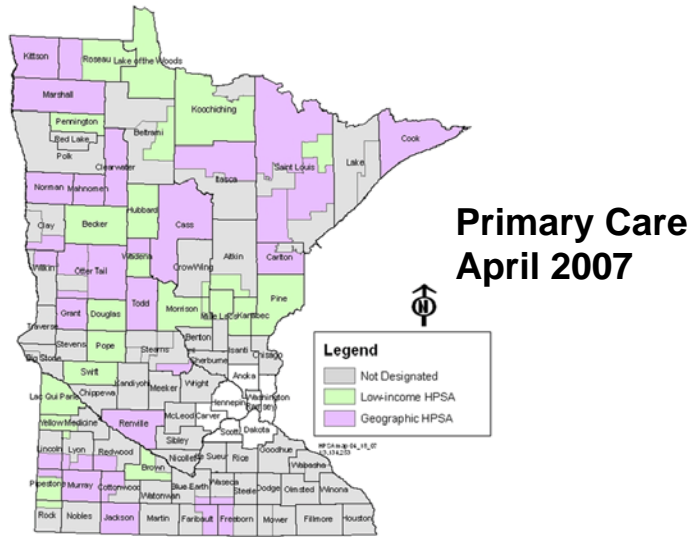
The Medical School

- Features the Twin Cities and Duluth Campuses
- Enrolls 880 students in the MD degree program
- In 2007, received 3093 applicants of which 774 were in-state
- Employs 875 full-time faculty; 618 faculty at affiliated teaching hospitals; and 2076 preceptor faculty at practice sites throughout Minnesota
- Educates and trains nearly 70% of the physicians in Minnesota
- Charges the second highest public medical school tuition with an average debt per graduating student of \$141K
- Delivers 102 specialty residency and fellowship training programs with over 900 trainees, including the largest Family Practice residency in the US
- Has the second largest medical group practice in the state with UMPPhysicians

The Medical School

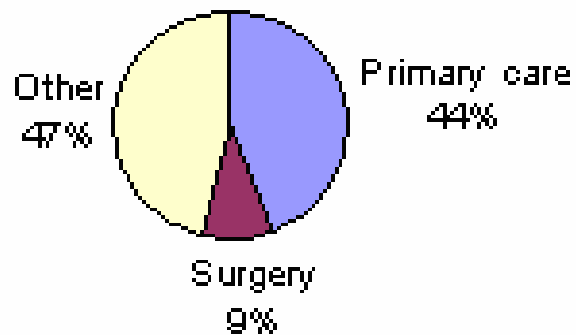
- Sponsors 242 CME courses and grand rounds annually
- Is a national leader in the development of new models of medical education
- Has multiple international programs in countries such as India, Israel, South Korea, Peru, and the Karolinska in Sweden
- Provides six Ph.D. graduate programs with 370 graduate students; and an NIH funded MD/PhD program with 49 students
- Ranks 27th out of 126 US Medical Schools with \$179M in research expenditures in 2006, 78% of which were from NIH awards
- Features world-class research programs in a number of areas, including stem cell biology, imaging, neuroscience, infectious disease, cancer, transplantation, cardiovascular/pulmonary, pediatrics and translational sciences

Minnesota's Health Professional Shortage Areas

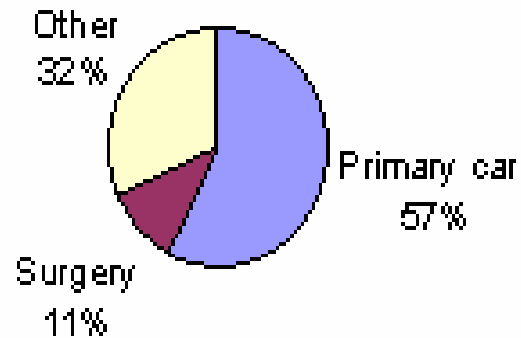


Physician Workforce

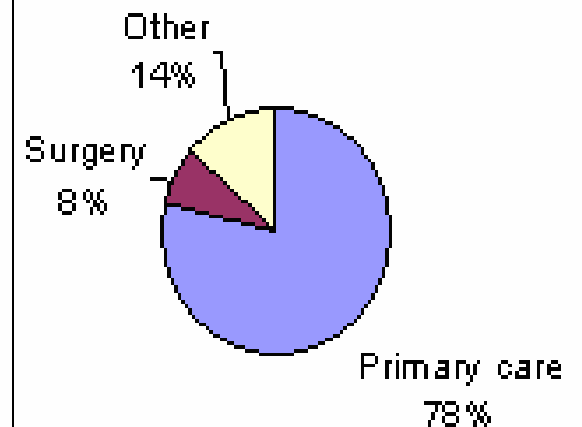
Metropolitan Counties



Micropolitan Counties



Rural Counties



Greater Minnesota Strategy

Recruit from Greater Minnesota +

- Area Health Education Center programs

Educate in Minnesota +

- Duluth, Rochester, Twin Cities campuses

Provide rotations in rural areas and small towns +

- RPAP, Pharmacy, etc.

Develop residency options throughout Minnesota =

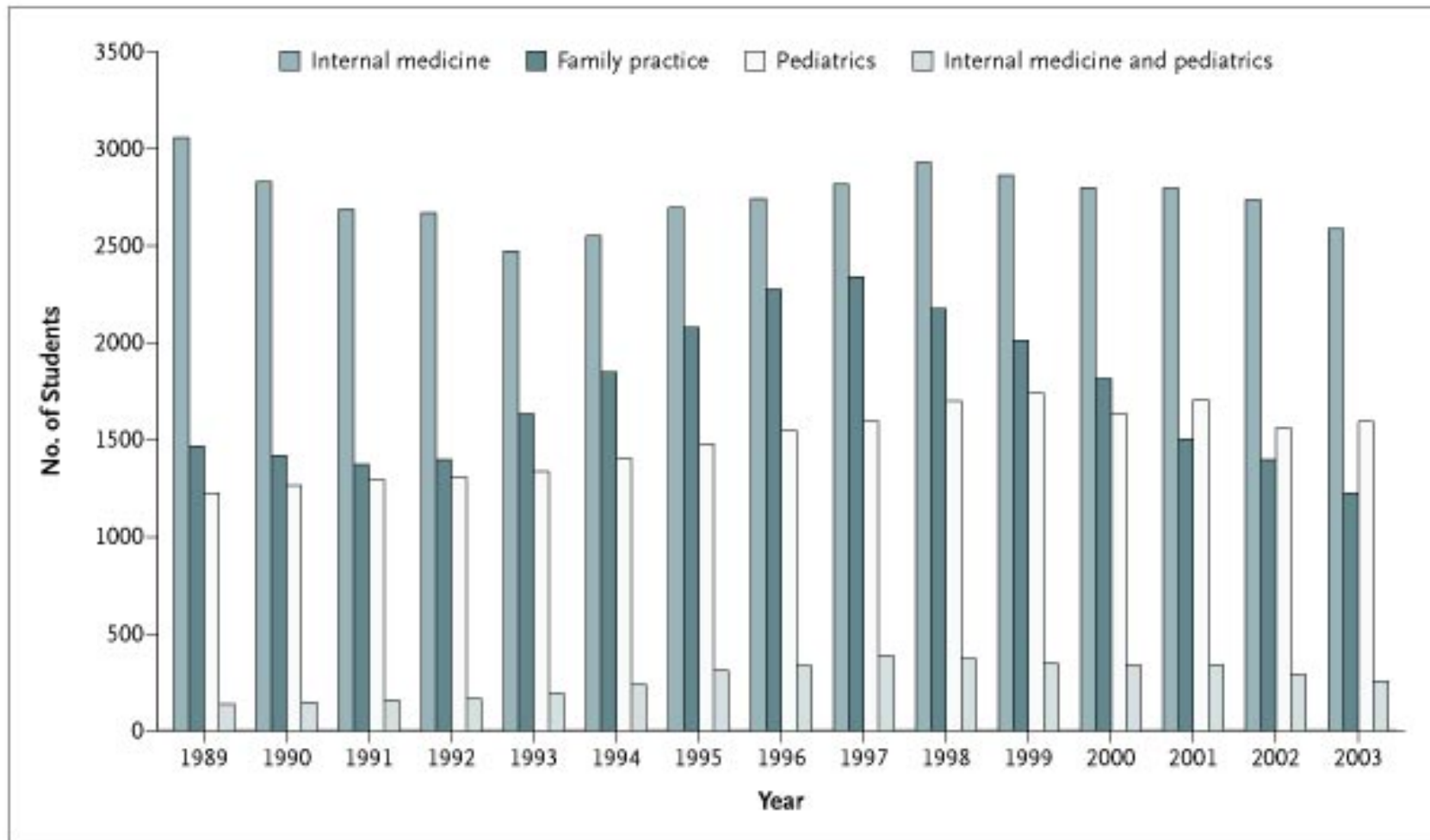
- Partnering with 1,500 hospitals and clinics

Greater MN Strategy

Rural Physician Associate Program

- Program started 36 years ago
- 9 month program for 3rd year Med Students
- 1,127 students in 110 communities
- 575 physicians who participated in the program are now practicing in MN with 63% in rural communities

National Primary Care Trends



Serving Minnesota

Residency Sites for Primary Care

- Hennepin County
- North Memorial
- St. Cloud
- St. John's
- St. Joseph's Hospital
- Smiley's - UMMC
- Methodist
- Duluth
- Mankato

Nearly 75% remain in Minnesota.

Factors Affecting Physician Practice Site Choice

- Student's hometown; where student went to school; where student did residency.
- Cost of medical school and amount of debt
- Economic considerations
- Life style aspirations: family time, leisure time, personal development, hours worked
- Spousal considerations
- Geographic aspirations

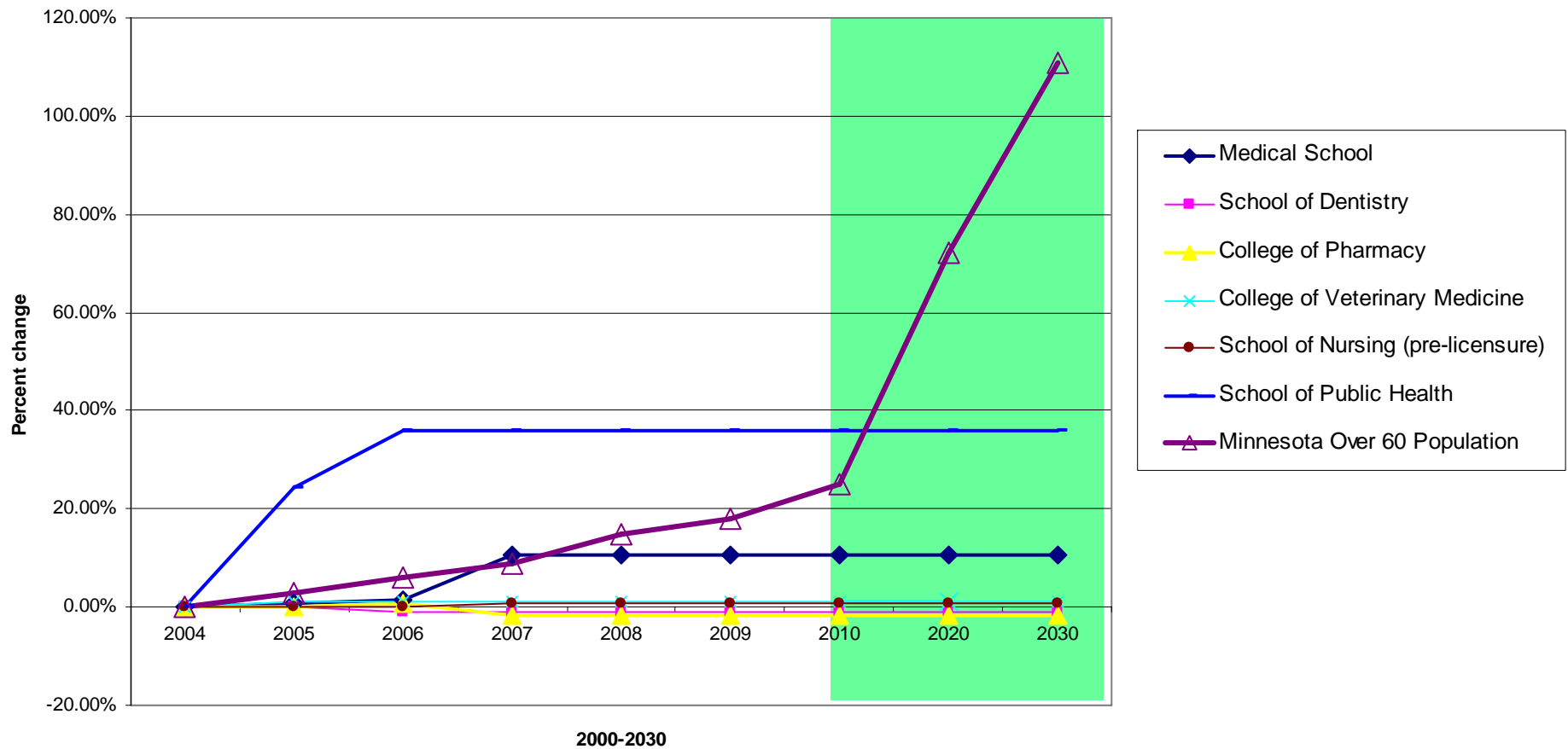
Primary Care Innovation

New Models of Practice

- Patient-centered care model
- Whole person orientation
- Team approach with multiple disciplines
- Eliminating barriers to access
- Information systems
- Redesigned offices
- Focus on quality and safety
- Enhanced practice finance
- Commitment to provide portfolio of services

“Future of Family Medicine”, 2002 report of 7 national family medicine orgs.

Population Growth Challenge v. Growth in Class Size



Challenge

MN can not afford to educate

- more of the same health professionals
- to do the same work
- within the same model.

Same old, same old is not the answer!

Answer Involves Partners

Minnesota's health depends on strategic and distinctive partnerships with:

- other schools;
- hospital and clinic systems;
- insurers;
- employers; and
- the state.

Approach to the Workforce Challenge

- Increase production in areas of need: primary care/family practice, selected specialty areas
- Increase production of other practitioners: nurse practitioners, clinical pharmacists
- Develop and implement new models of team care
- Develop and implement new models of chronic disease prevention and management
- Work with other agencies/systems to enhance incentives for primary care/family practice, mental health and other medical specialty areas
- Enhance community partnerships for recruitment, experiential training and the development of new financial models

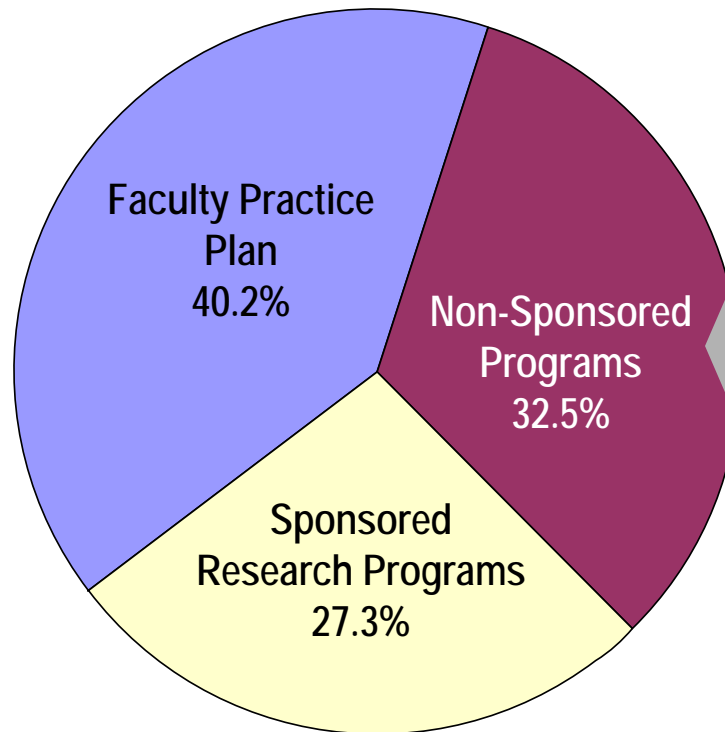
Medical School Goals

- Move into the Top 20 of Medical Schools through innovative research excellence in the targeted areas of neuroscience, infectious disease and immunology, diabetes, cardiovascular and pulmonary medicine, and cancer.
- Be a national leader in innovative medical education, providing learner-centered education for patient-centered care.
- Provide exemplary clinical care delivery by collaborating with faculty and partner hospitals to continually improve excellence and educate students to seek ways to improve care outcomes.

Medical School

Existing Funding Sources of the Medical School Budget = \$574 million (includes UMPHysicians)

Challenges:
Reimbursement rates
Practice margins minimal
Competitive salaries



State	8.6 %
Tuition	4.5%
ICR	3.3%
Affiliated Hospitals	8.3%
Gifts and endowments	4.2%
All Other	3.6%

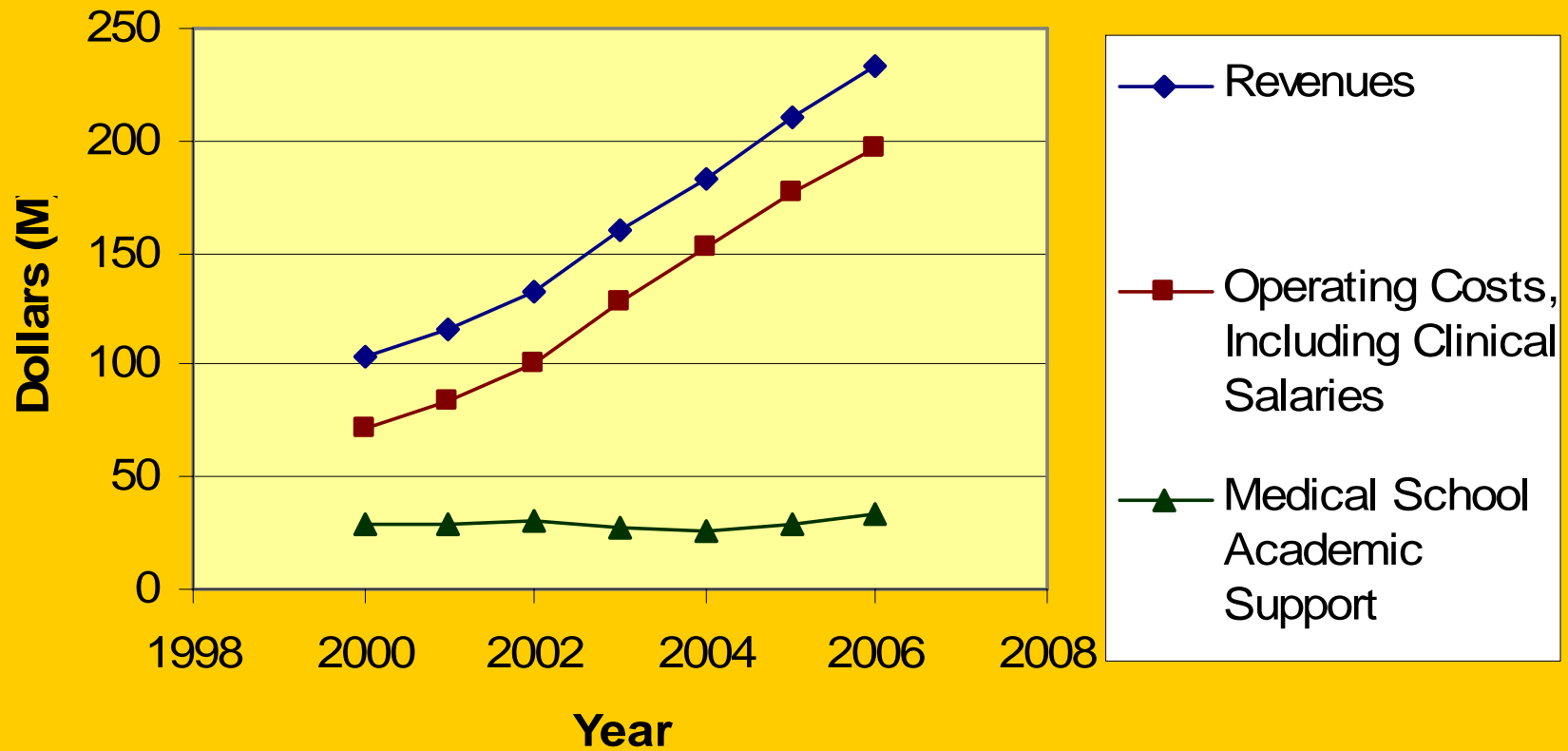
Challenges:
Flat
Top 2 in nation
NIH dependent
Resident stipends
Flat

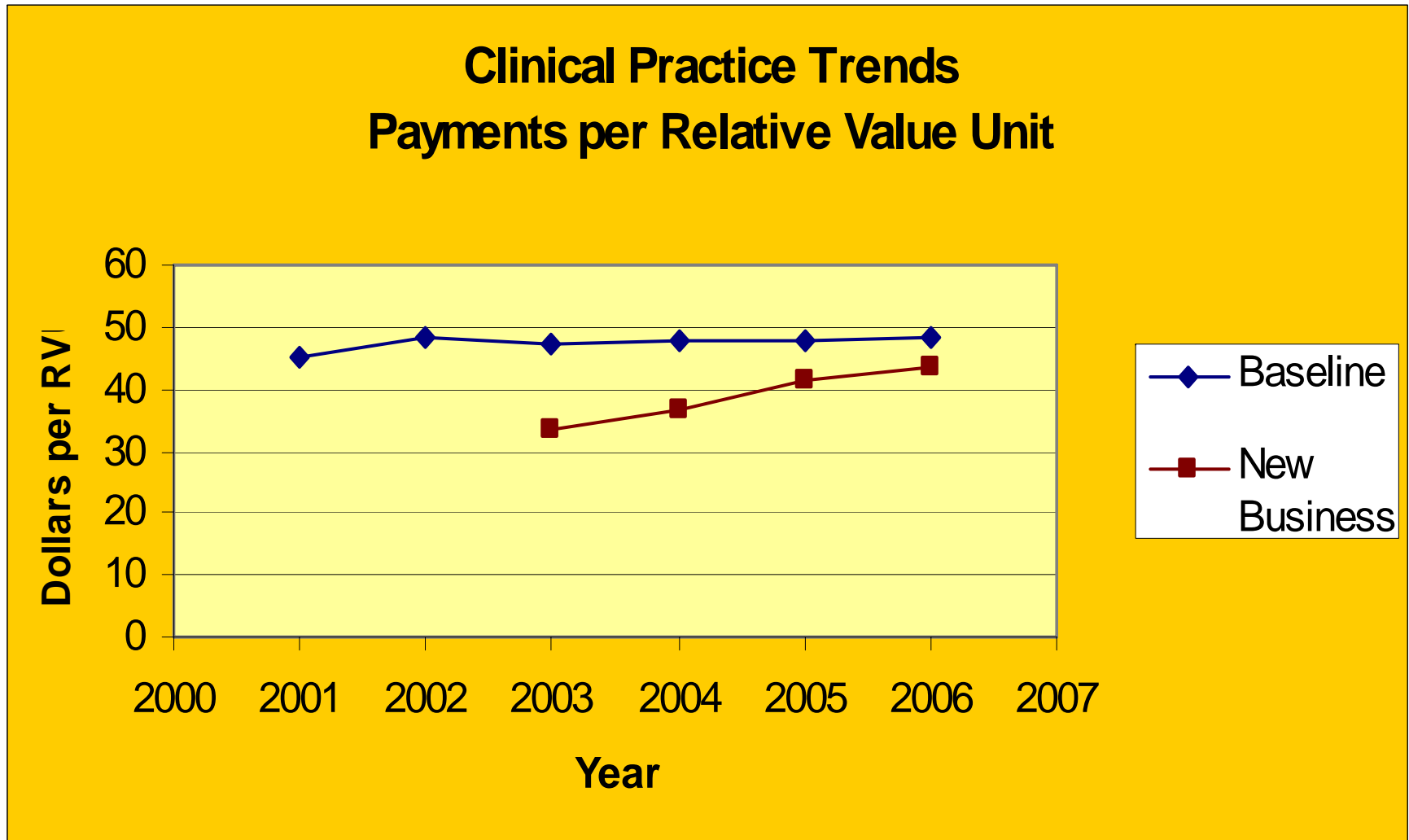
Challenge: Federal funding declining

Stress on Funding from Clinical Practice

- Financial margins for clinical practice have decreased nationally
 - Minnesota leads the trend.
- Practice plan needs increasing number of clinical faculty to just remain competitive and meet patient care demands.
- Practice revenues no longer sufficient to underwrite research and education

Clinical Practice Activity

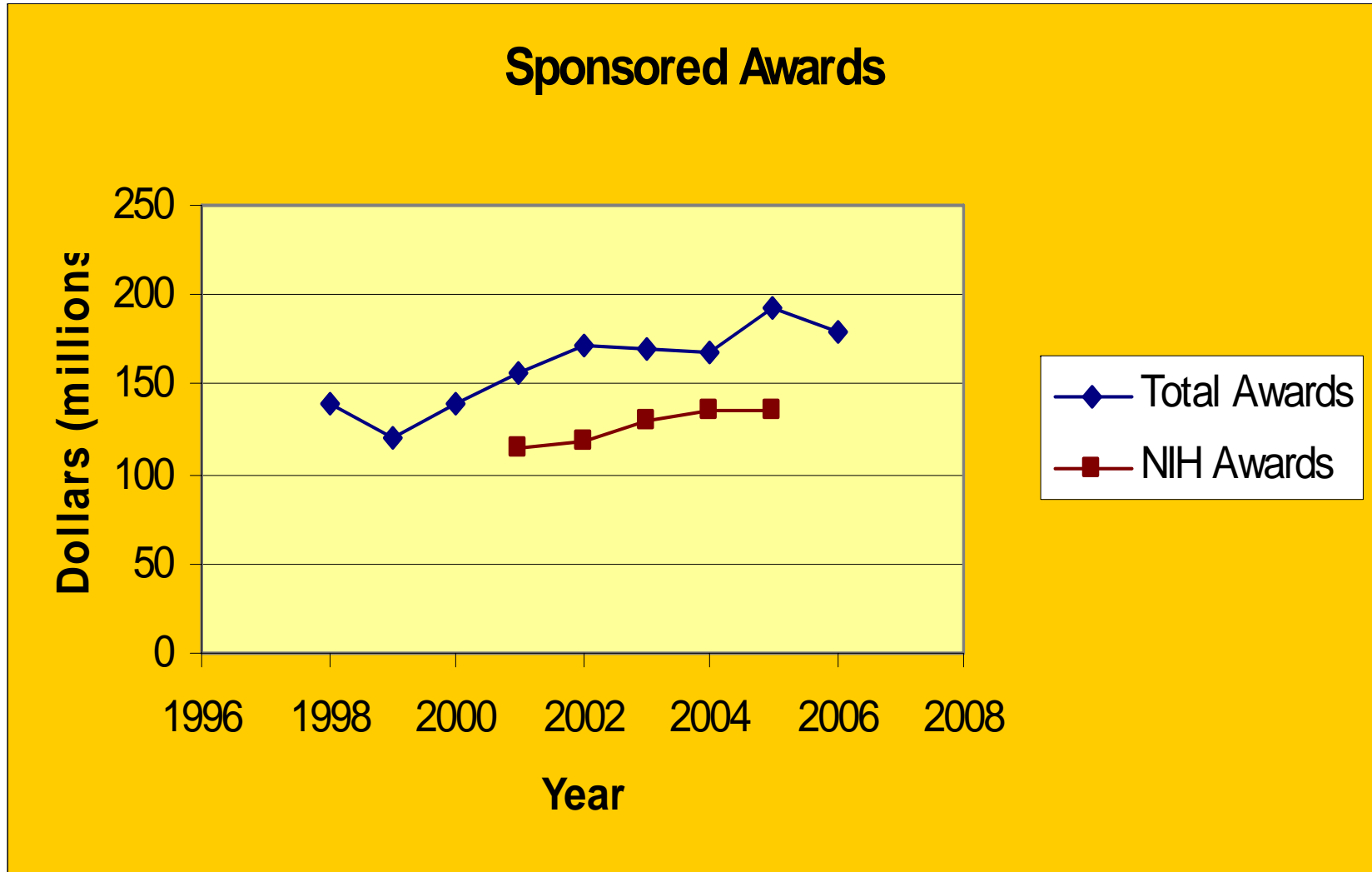




* RVU is a standard unit of clinical work

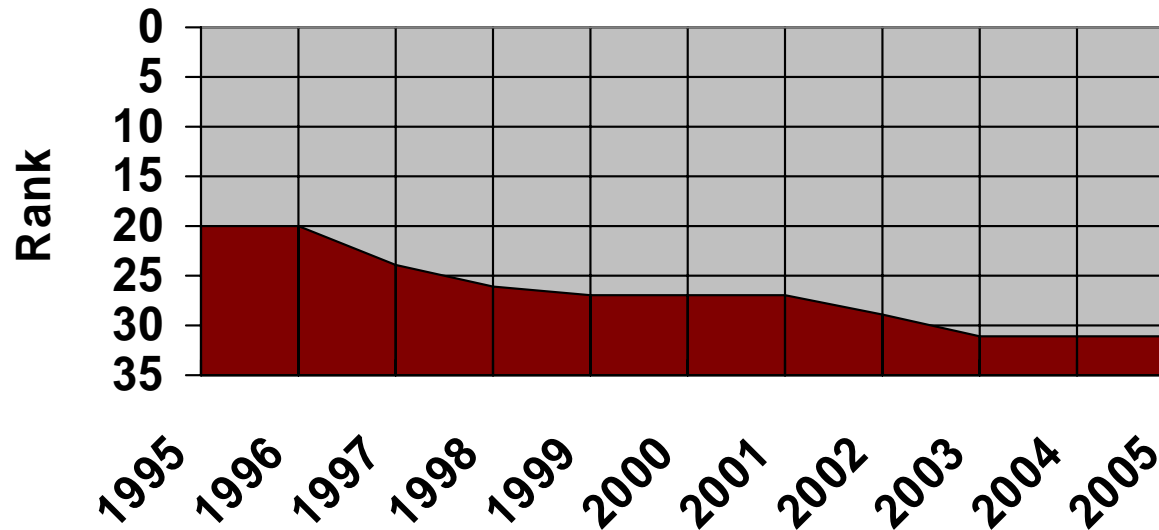
Stress on Funding for Sponsored Research

- Decline in NIH rankings, despite increase in total dollars
- Flattening of NIH budget
- Cross-subsidy required to support sponsored research
- Loss of research-intensive faculty
- Costs of remaining competitive
 - Faculty retentions and recruits
 - Facility construction and renovation



Cross-subsidy for doing research: NIH 20%;
all others, 30%

NIH Rankings UMN Medical School



- Largest decline among medical schools that were in the top 30 in 1996, despite increased NIH revenues.
- Ranking movement by competitive institutions since 1996:
 - Vanderbilt (from 24 to 15)
 - Mount Sinai (from 30 to 20)
 - Oregon (over 30 to 24)
 - Maryland (over 30 to 25)
 - Colorado (stayed at 22)
 - Wisconsin (from 25 to 28)
 - Iowa (from 26 to 30)

Loss of research-intensive faculty

	<u>1994</u>	<u>1999</u>	<u>Current</u>
Tenured & Tenure Track Faculty	539	448	486
Non-tenure Track Clinical Faculty	99	169	312
Total Full-time Faculty	638	617	798

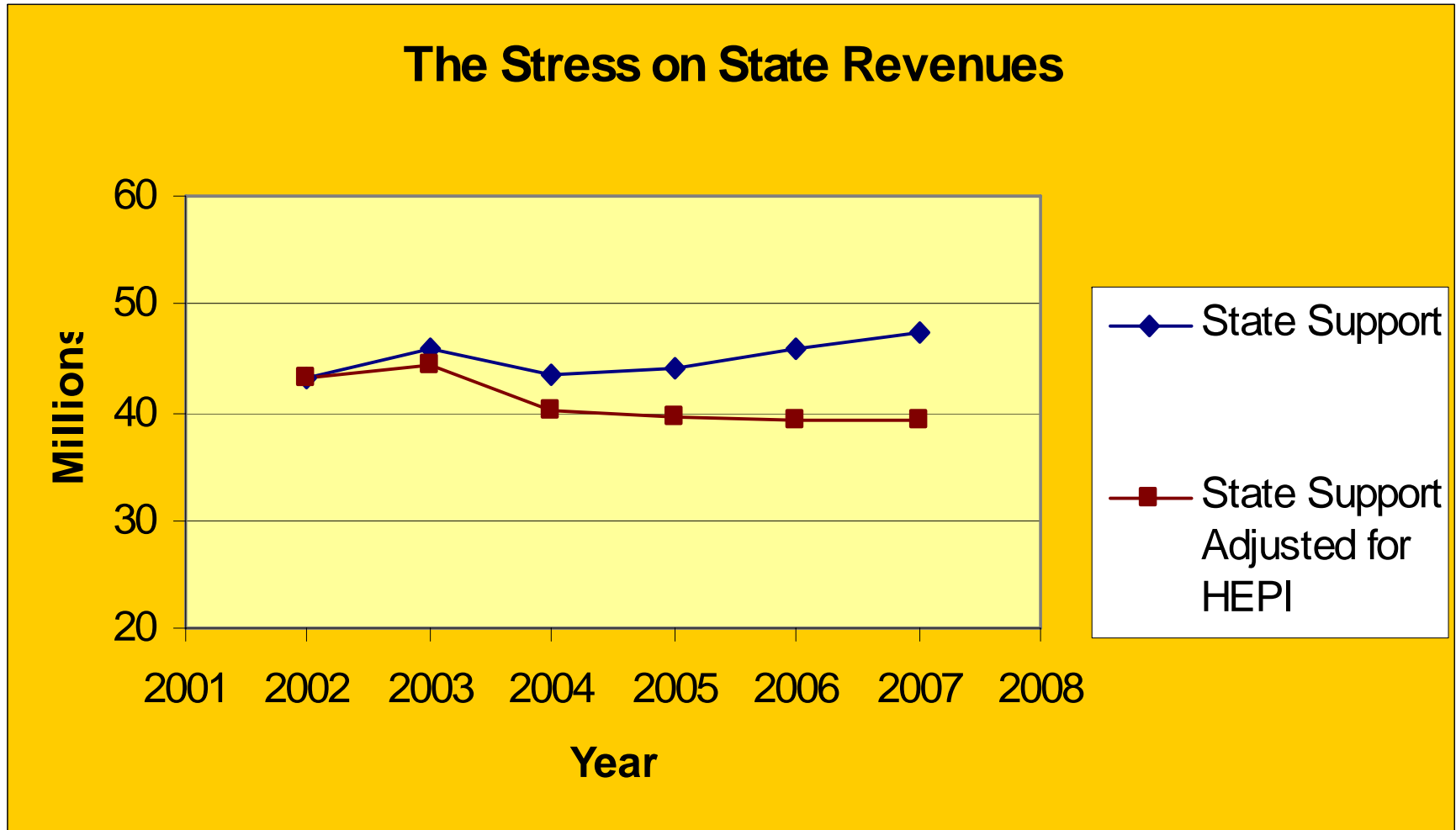
The Stress on Tuition Revenue

- Tuition elasticity is very limited
- Tuition pays for a degree and is set for each student at the time of admission
- Each medical student is incurring increasing debt; 2006 graduates, \$135,000 average debt
- The increasing student debt is affecting student career choices, e.g., family practice
- Not possible to increase tuition to offset the structural challenge

Medical Student Tuition

- Ranked #2 in tuition for public medical schools
 - To remain competitive, implemented “guaranteed,” cost-of-degree tuition plan
 - Starting in 2004, the tuition rate for each incoming class is fixed
- Tuition remains less than 5% of overall revenue
 - Impact on revenue if tuition rate is increased:

• 0%	\$481,000
• 3%	574,000
• 5%	636,000
• 10%	791,000



2002 as the base year

O&M, specials & tobacco (not recruitment piece)

Increasing costs to be competitive

- Recruiting department heads
- Recruiting and retaining faculty
- New and remodeled facilities
- Compensation
- Increasing University administrative costs
- Educational costs

Increasing Costs: Department/Unit Heads

<u>Department/Unit</u>	<u>Total MS Commitment</u> (in millions)
Pediatrics (Schreiber)	\$ 20.5
Surgery (Vickers)	21.6
Anesthesiology (Prielipp)	6.4
Cardiology/LHI (Garry)	19.0
Stem Cell Institute (Slack)	6.0 +
Assoc. Dean for Clinical Research (Ahluwalia)	4.2
Stroke Center (Qureshi)	5.6 +

Growing Cost of Individual Faculty Recruitments and Retentions

1997	(Ravdin Recruitment) Individual Faculty Packages	\$ 475,000
2002	("Tobacco" Initiatives) Individual Faculty Packages	\$ 750,000
2007	(Garry Recruitment) Individual Faculty Packages	\$ 1,300,000
2007	Wagner/Blazar Retention	\$ 2,400,000
2007	Largaespada Retention	\$ 3,300,000

Increasing Costs: New and Remodeled Facilities

<u>Facility</u>	<u>Medical School Cost</u>
MCB	\$ 3.8 M
Cancer Center	5.2 M
CMRR	3.6 M
Vascular Biology	2.0 M
Surgery	3.7 M
Simulations Center	2.0 M
717 Delaware	10.7 M

Increasing costs: Compensation

- 60% of the faculty are paid less than the 50th percentile of their AAMC peers. This includes clinical salaries.
- The practice plan pays the clinical salaries, the Dean's tax, and supports some academic salaries
- Central allocations, including tuition, for compensation provide 25% of faculty salaries

Medical School

Impact of Compensation Increases

<u>Funding Source</u>	<u>Fiscal 2006 Total Salaries & Fringe Cost</u>	<u>Impact of 3.5% Mandate</u>
O&M/Tuition	\$ 43,745,000	\$ 1,531,000
Tobacco/ICR	30,537,000	1,069,000
Other Non-sponsored	<u>59,744,000</u>	<u>2,091,000</u>
Total Non-sponsored	<u>\$ 134,026,000</u>	4,691,000
2007 Central Allocation for Compensation Increases		< <u>820,000</u> >
Unfunded Mandated Salary Increase		<u>\$ 3,871,000</u>

Notes:

- Impact on sponsored programs is additional cost of \$2,658,000, which is not totally recoverable on grants
- Medical School “subsidy” of the University fringe benefit pool is ~ \$1,900,000 annually

Increasing Costs: Education

- GME Administrative Expenses
- Developing the new paradigm of medical education: MED 2010, simulations, interdisciplinary education, workforce
- Graduate student costs

Uncompensated Administrative Costs of Graduate Medical Education

Faculty Administrative Costs	\$2,845,000
Department Non-faculty Personnel	2,590,000
Department Non-personnel Costs	1,588,000
Dean's Office Costs	<u>1,081,000</u>
Total Cost of GME Administration	<u>\$8,104,000</u>

The Challenges: Investment Needs

- Investment is required in faculty, facilities, and the infrastructure that supports them
- Partnership is needed among the Medical School, UMPPhysicians, University, State, Fairview, and the business and health communities
- A multi-year plan of focused, affordable growth needs to be developed in the next few months

Investments Needed to Achieve Goals

1. Investment in Facilities

- CMRR Research Expansion
- Heart Research Building
- Cancer Research Building
- Clinic facilities renewal
- Renovation of existing research space

2. Department Head Recruitments

3. Recruitment of Research-intensive Faculty

Need 53 faculty to return to 1994 level; need 175 to achieve Medical School and University goals

4. Competitive Faculty Salaries

5. Funding to Address Structural Imbalances

- GME Administration
- Graduate Student Stipends
- Budget Model Adjustments

Financial Challenges & Draft Solution Map

A) Base Structural Problem - \$11M Recurring

Medical School* \$ 2M

University/State additional** \$ 4M

Fairview \$ 2M

* Through cost reductions and internal reallocations

** University added \$3M new recurring to Medical School in FY08

Medical School

Financial Problem & Draft Solution Map

B) Investment Needs - \$600 Million/7 years outer bookend

NEED	PARTNER	INVESTMENT
Facilities	State	\$310M
New Chairs	University State Fairview UMPhysicians Philanthropy	\$192M
New Faculty	University State Fairview UMPhysicians Philanthropy	\$84M

Research Growth - Financial Model

- Revenue Side Assumptions
 - Ave. Fed. Grant Productivity \$400K
 - Ave. Non-Fed. Research Productivity \$100K
 - 7 Year Average Ramp Up to Full Productivity
 - F&A recovery assumed at current federally negotiated rate on federal grants only
- Model reflects above assumptions; revenue increases incrementally as productivity increases

Research Growth – Financial Model

- Expense Side Fully Loaded to Include
 - Salaries and fringe benefits
 - Direct research supplies and services @ 55% of salaries and fringe
 - Average start-up package \$750K (Basic PI) and \$1M (Clinical PI) paid over 4 years
 - Average annual capital cost / PI ~ \$100K
 - Average facilities operating cost / PI ~ \$66K
 - Average incremental central cost pool allocations ~ 10% of total expenditures
 - Model assumes annual inflation of 3.5%

Research Growth – Financial Model

Potential Incremental Funding Strategies

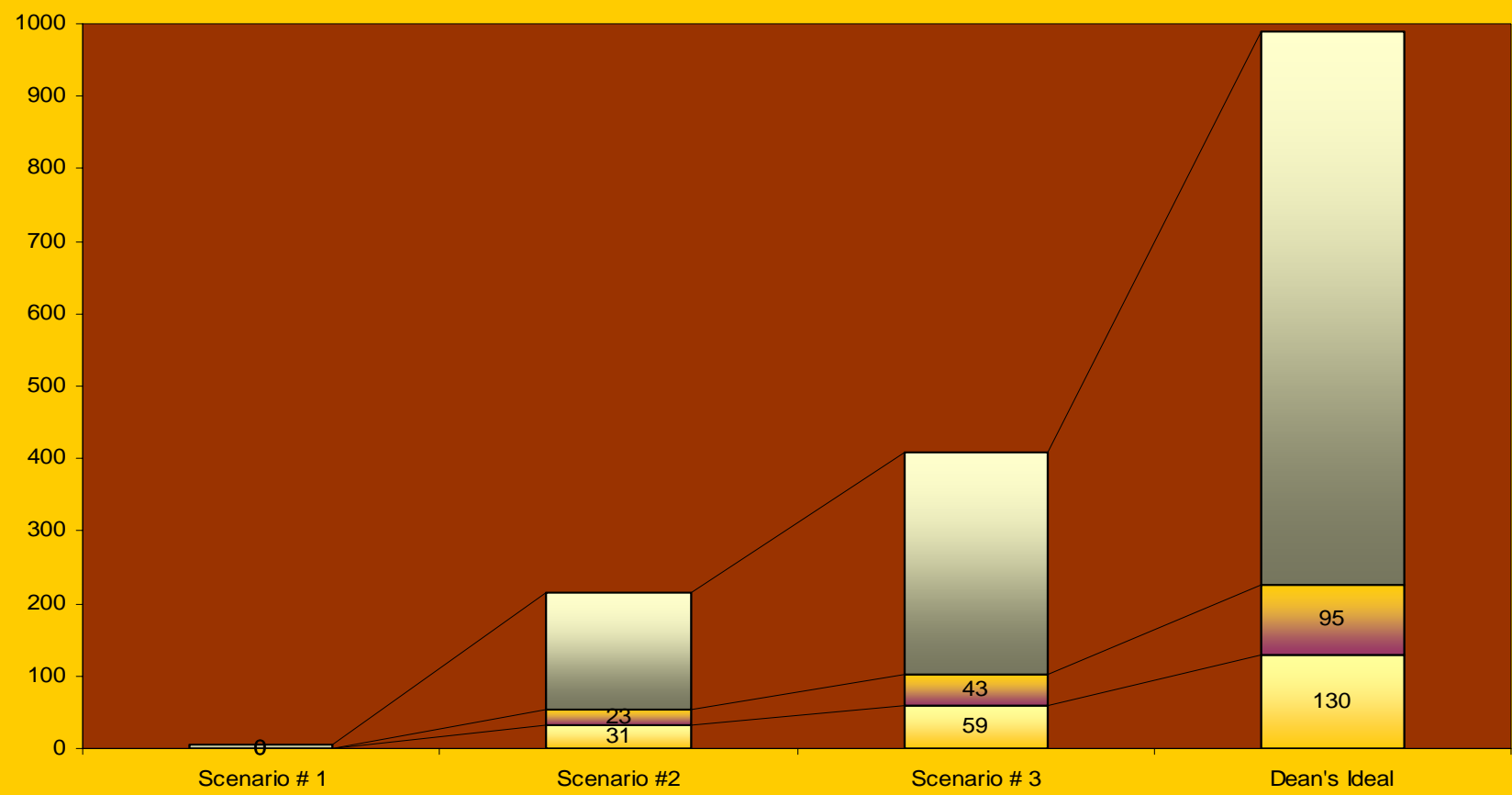
- University internal reallocation of existing O&M
- New state special for Medical School
- New annual philanthropy dollars
- New practice plan academic support

- Key Assumptions

- Medical School baseline ~ \$8 M structural issue previously resolved
- “Facilities Authority” initiative successful around bonding of capital facilities needed to support increased PI hires

Research Growth Model Funding Comparisons

O&M Reallocation	\$ 0 M	\$ 2 M	\$ 4 M	Estimate
Facilities Authority	Unsuccessful	Successful	Successful	Annual
New State Special	\$ 0 M	\$ 10 M	\$ 20 M	Resources
Practice Plan	\$ 1.25 M	\$ 1.25 M	\$ 2.5 M	
Philanthropy	\$ 1.2 M	\$ 1.2 M	\$ 2.4 M	\$ 100 M+



Basic Research Scientists
 Clinical Research Scientists
 Support Staff @ 3:1 Ratio

Medical School: Moving to the Top 20

Core Questions

- How are the mission and direction of the Medical School and UMP aligned to maximize clinical excellence to produce academic excellence, and to maximize the partnership with Fairview Health Services?
- What areas of research and programmatic opportunities and priorities should the Medical School focus on, and what levels of investments are needed to acquire pre-eminence in these areas?
- How will interdisciplinary efforts be leveraged within the Medical School and among other Health Sciences and University schools, colleges and programs?
- How can the structural imbalance in the Medical School's finances be corrected, and how will we develop the investment resources that will enable the Medical School to move into the Top 20?

Moving to Top 20: Performance

- Increased productivity and accountability for faculty, staff and administration
 - Performance Metrics:
 - Research: sponsored funding, space use, quality/impact analysis
 - Clinical: develop based on best practices
 - Education: develop
 - Information transparency:
 - Resources
 - Budgets
 - Financial commitments
 - Incentives:
 - Recognition and rewards: interdisciplinary work, dedicated research time, infrastructure support, resources
 - Consequences:
 - Promotion Process:
 - Greater emphasis on quality

Moving to Top 20: Clinical Enterprise

- Expand the clinical enterprise in a manner that creates an integrated, branded service line across FHS
- Improve the operations, management and culture of UMP to promote and enable clinical excellence and achievement in high performance, best practice models
- Promote mutual respect and equity across the spectrum of faculty, including support for interdisciplinary teams
- Facilitate the shared commitment by:
 - Joint planning and coordination
 - Endorsement of governing boards
 - Establishing an AMC Leadership Team

Moving to Top 20: Faculty

- Increase research capacity by increasing the number of research intensive faculty
 - 200 more research intensive faculty are needed over the next 10 years
- Strengthen research within the clinical departments through recruitment of clinical scholars
- The clinical trials capacity, and the efficiency of the clinical research process, must be substantively improved
- Necessary resources are needed for faculty salaries, start-up packages and infrastructure support
- Major investments in space that supports research are necessary.(can delete – repetitive with next slide)
- Alignment must be achieved for the clinical-research priorities agreed upon by the Medical School, UMP and FHS

Moving to Top 20: Facilities

- A shortage of space exists, particularly in the clinical departments, that is restricting the recruitment and retention of faculty
- At least another 250,000 sq ft of space that supports basic, translational and clinical research will be needed over the next 10 years
- The use of existing research space must be maximized through a rigorous research space management plan
- Requirements for education space need to be better defined

Moving to Top 20: Finances

- Investments must be strategic, focused and have a reasonable return
 - Commitments must align with strategic priorities
 - More structured and collaborative budgeting and investment process to align mission, strategies and priorities
 - MMF efforts should focus on the broad strategic priorities
 - Define, focus on, fund and hold accountable the core research facilities and infrastructure
 - Leverage resources more effectively
- There must be an ongoing review of expenses
 - Set higher expectations with greater accountability for use of resources
 - Establish and implement performance metrics for departments, centers, institutes, and administration
 - Reduce overhead costs; undertake internal reallocations
 - Reduce the number of departments, centers and institutes
 - Improve financial transparency to promote healthy competition and better alignment between resources and strategic priorities

Moving to Top 20: Fundamental Changes

- Maximize the use of present resources in a relentless focus on improving research productivity and stature
- Create transformational change in the relationships between the Medical School, UMP and FHS
- Invest in research facilities and research infrastructure, particularly in the clinical departments
- Undertake a major recruitment in research intensive faculty