

# Training Physicians for the 21st Century - Great Challenges

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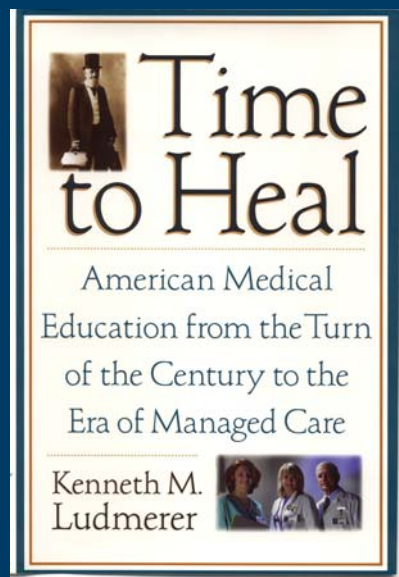


- 1. The case for change*
- 2. New concepts for clinical training*
- 3. Pathways to Discovery*
- 4. The Academy movement*

# *1. The case for change*

## *Components to (the) decline:*

1. Continued expansion of clinical enterprise
2. Atmosphere became **less academic**
3. Decline in clinical **research**
4. Conversion of a **scholarly faculty** to a clinical faculty
5. Marked deterioration in the quality of the learning environment afforded medical students and house officers
6. Growing tendency of medical educators not to defend the notion that medicine is a **university-based profession** with its own internal standards
7. Blurring distinction between **teaching hospitals** and community hospitals



# *The AAMC Project on the Clinical Education of Medical Students*



The AAMC Project on the Clinical  
Education of Medical Students

“Major issues  
of concern...”



## “Major issues of concern...”

- The lack of adequate integration into the third and fourth year clinical experiences of learning exercises that focus on a number of topics related to contemporary issues in medicine
- The lack of attention to creating educational coherence in the design and conduct of the fourth year of the educational program

*“Complaints about the quality and amount of teaching are not new. Medical students have been griping about them for a long time, certainly here at HMS. But, if I have one point today, it’s that we are not just griping, The state of teaching in the hospitals is not just less than ideal, or undesirable...in many ways it is simply unacceptable.”*

Emily Katz '01  
(for the Cannon Students)  
12/99



# The unrelenting expansion of the knowledge-base of medicine

or  
re

# A Decline in the number of Clinician-Scientists in Training

- During the past decade, the percentage of US-MDs interested in significant (>25% time) or exclusive research careers has decreased by approximately 16%
- In 2002, only 0.9% of medical school graduates received combined MD/PhD degrees, down from 2.3% only 5 years earlier
- This decreased interest in research careers has occurred in both sexes but is more notable for female physicians, and for schools with high levels of National Institute of Health funding
- This trend has obvious implications for future research in all fields that integrate clinical and basic sciences.

*Guelich JM et al. J Investig Med. 2002;50:412-418.*

*Rosenberg LE. J Clin Invest. 1999;103:1621-1626*



There is a societal imperative for premier medical schools to promote the learning of the knowledge, skills and attitudes that go beyond the routine practice of medicine into the domains of **leadership, scholarship and discovery.**

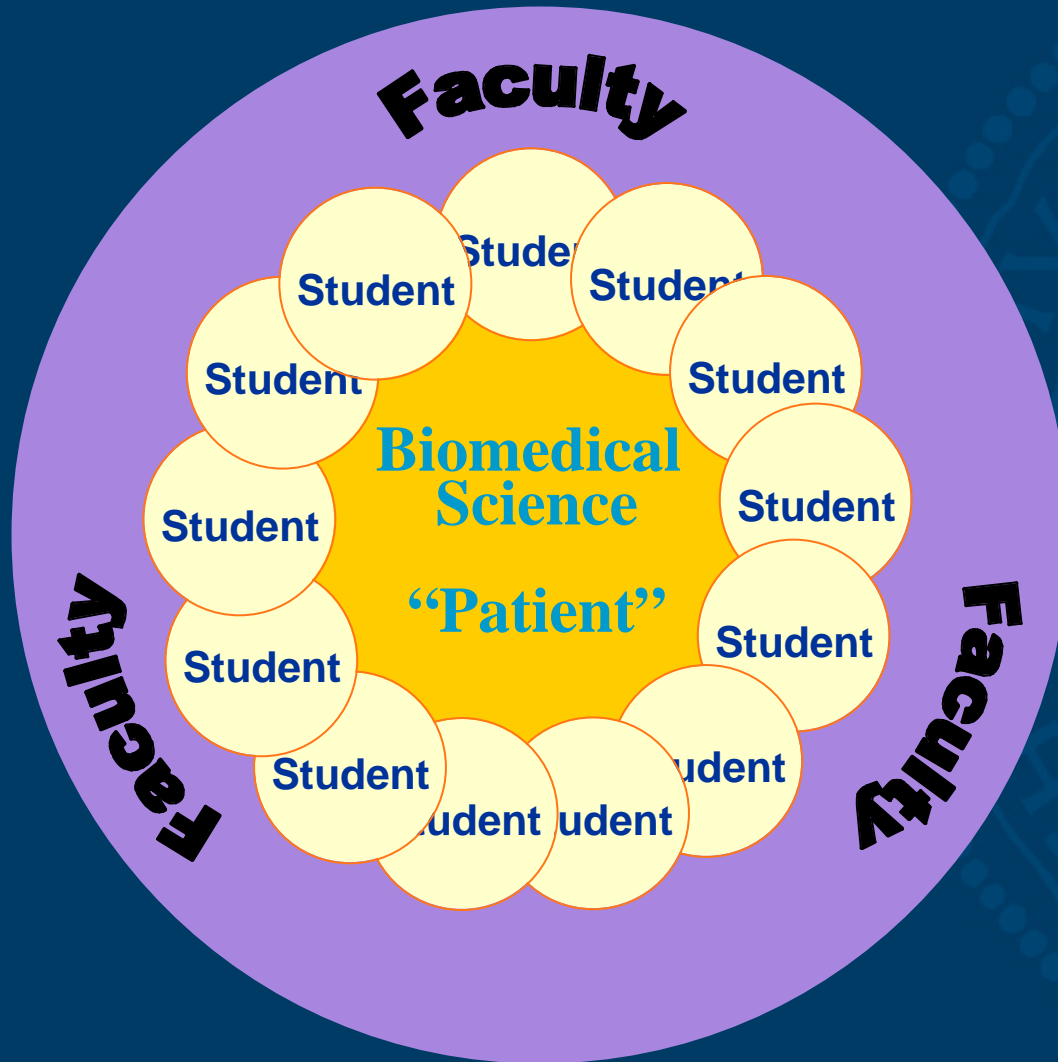
## *2. New concepts in clinical training*

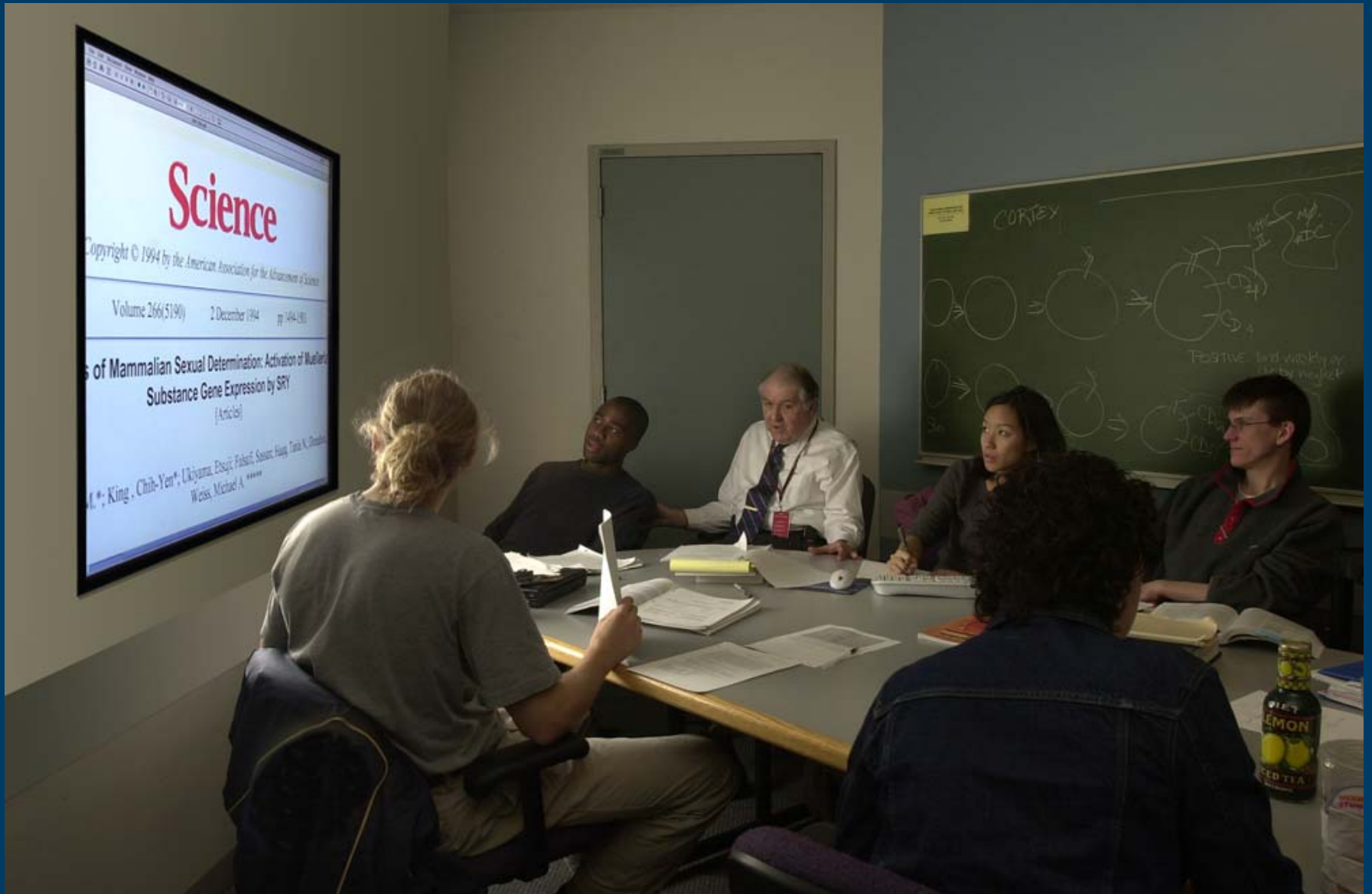
# Current Core Clinical Curriculum

One year: Six 8-week blocks

- Four weeks of Intersession
  - Clinical Decision Making, Ethics, Health Systems, Advances in Medical Science, Professional development
- Longitudinal clinical experience
  - Ambulatory, 1/2 day per week
- Clinical skills assessment
  - Centralized and integrated
  - Progresses from formative to summative

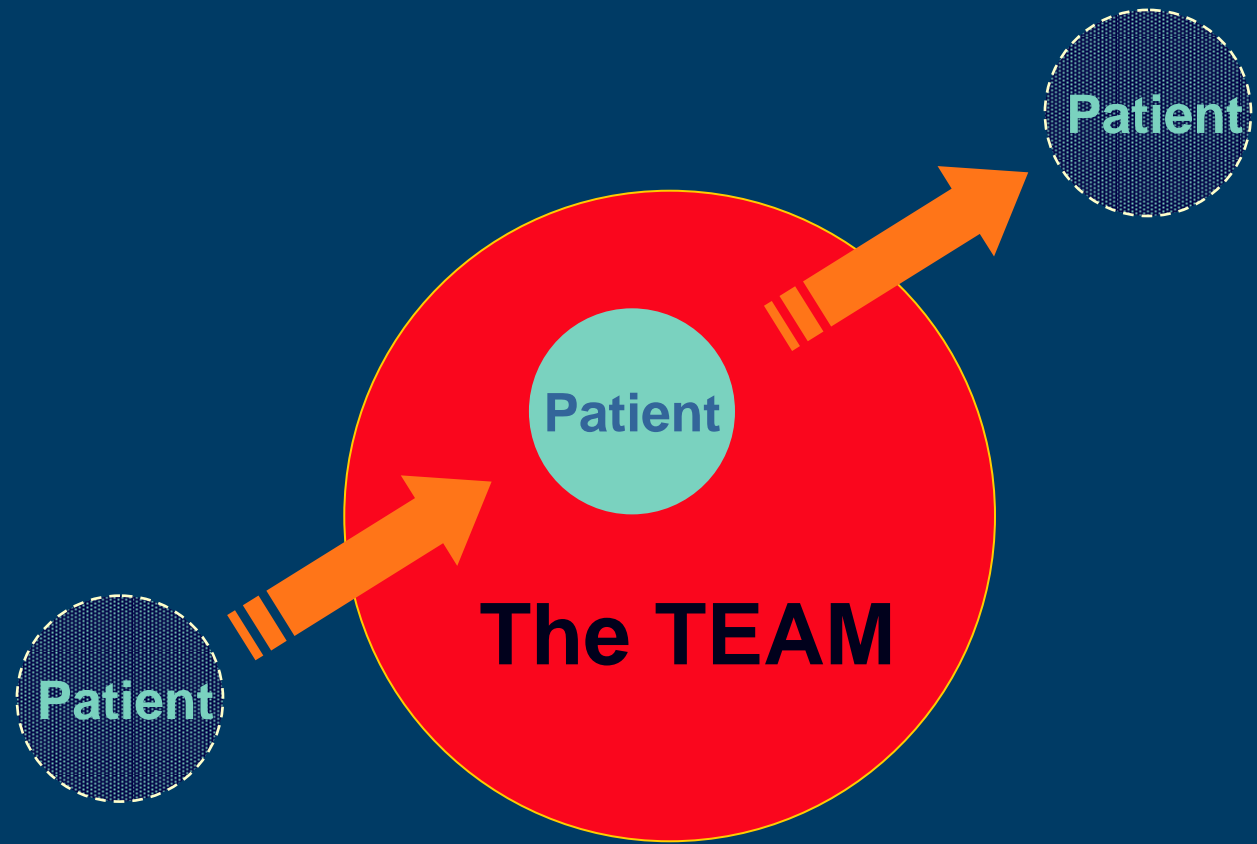
# “Pre-clinical” Education



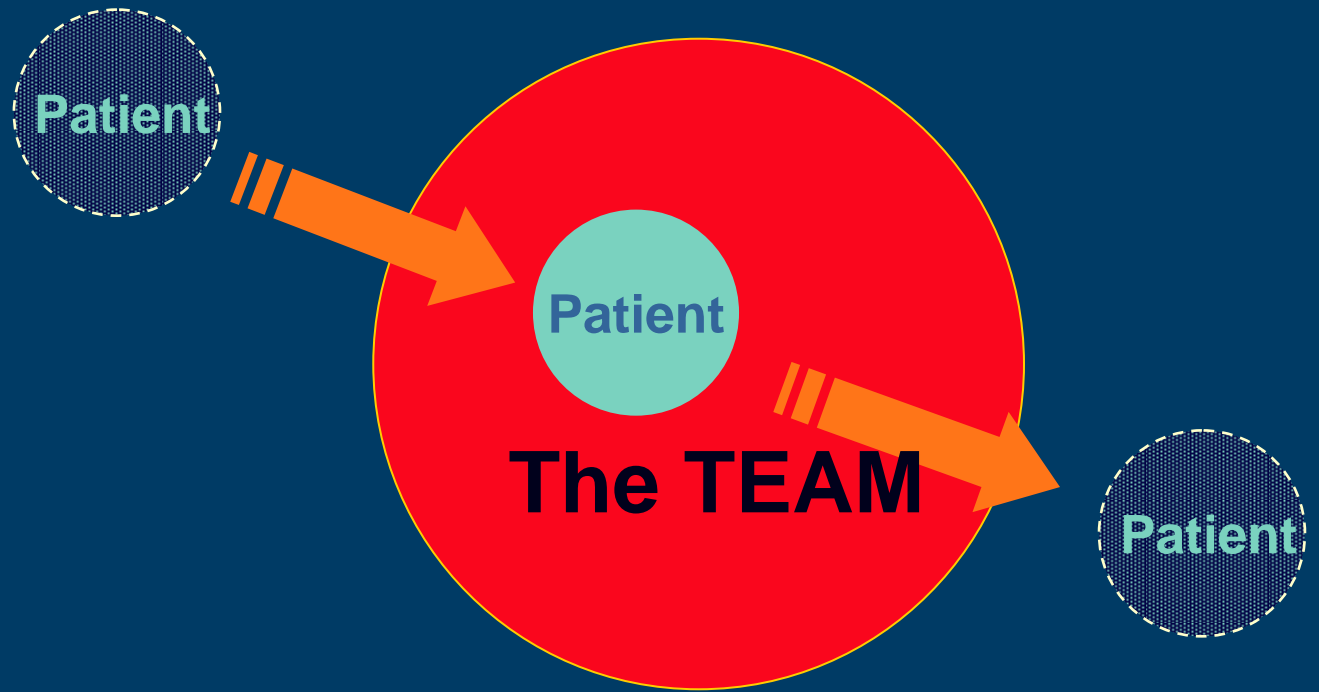




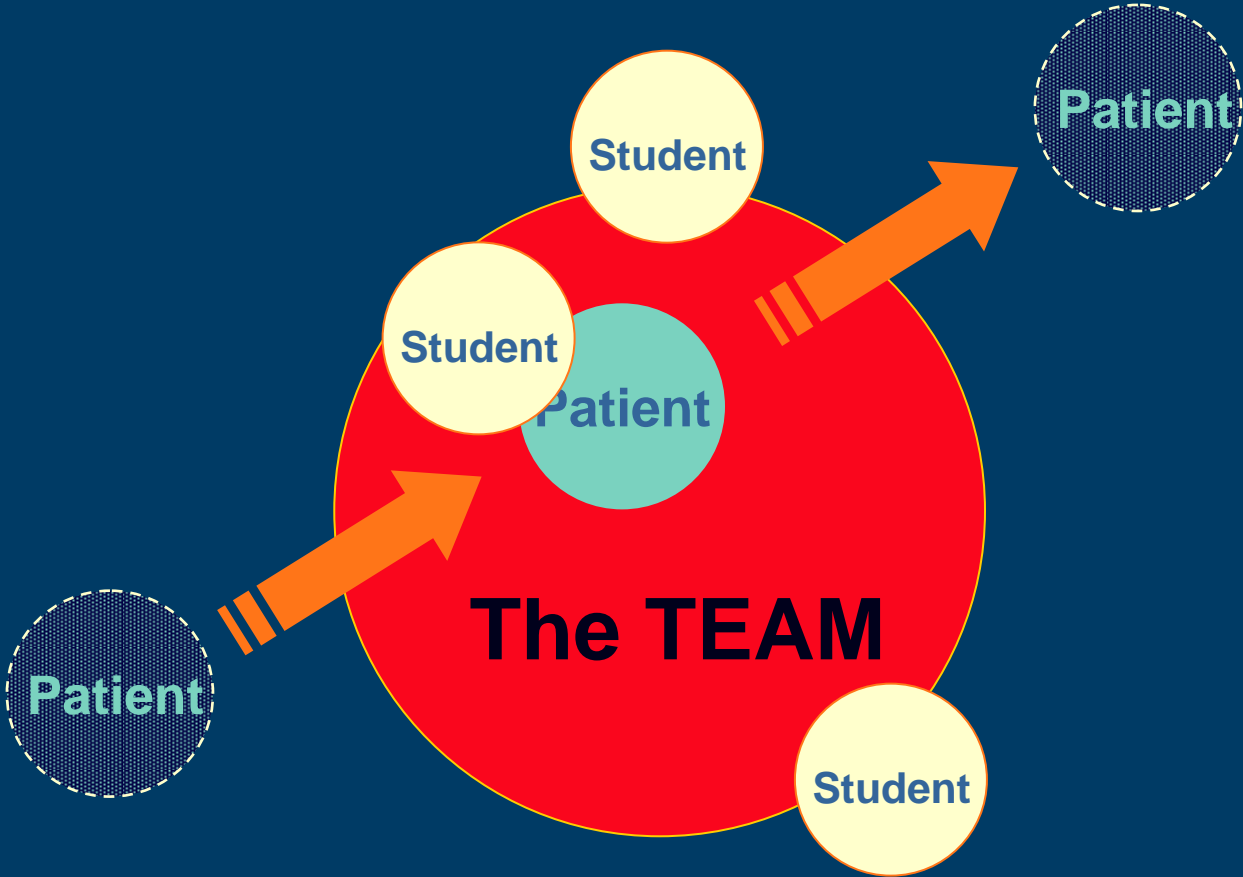
# “Clinical” Education



# “Clinical” Education



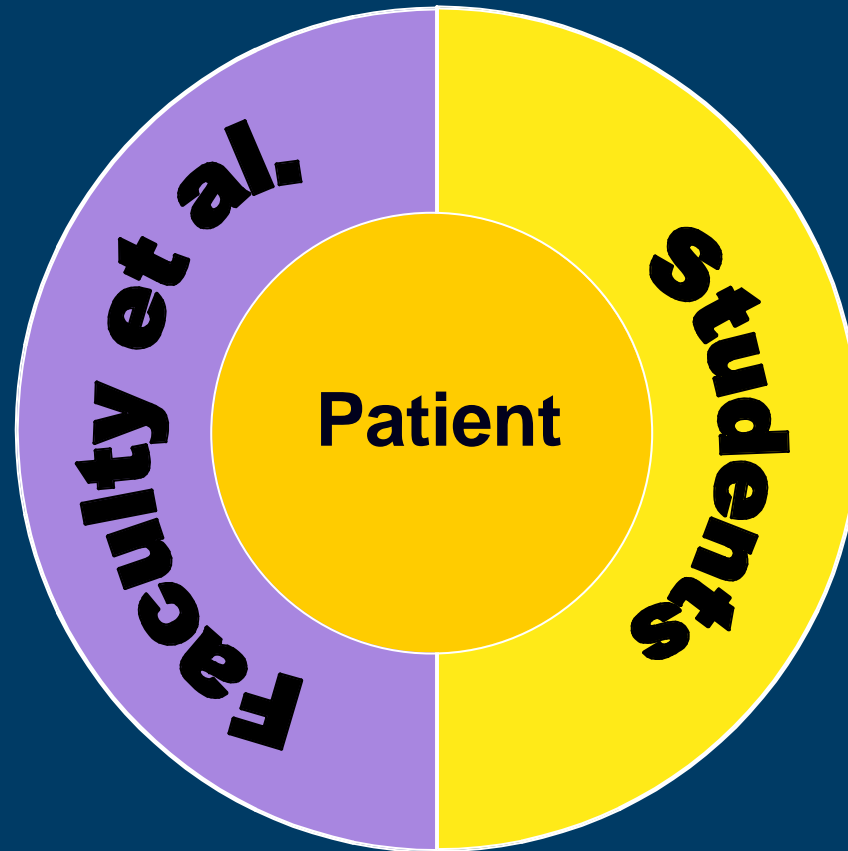
# “Clinical” Education



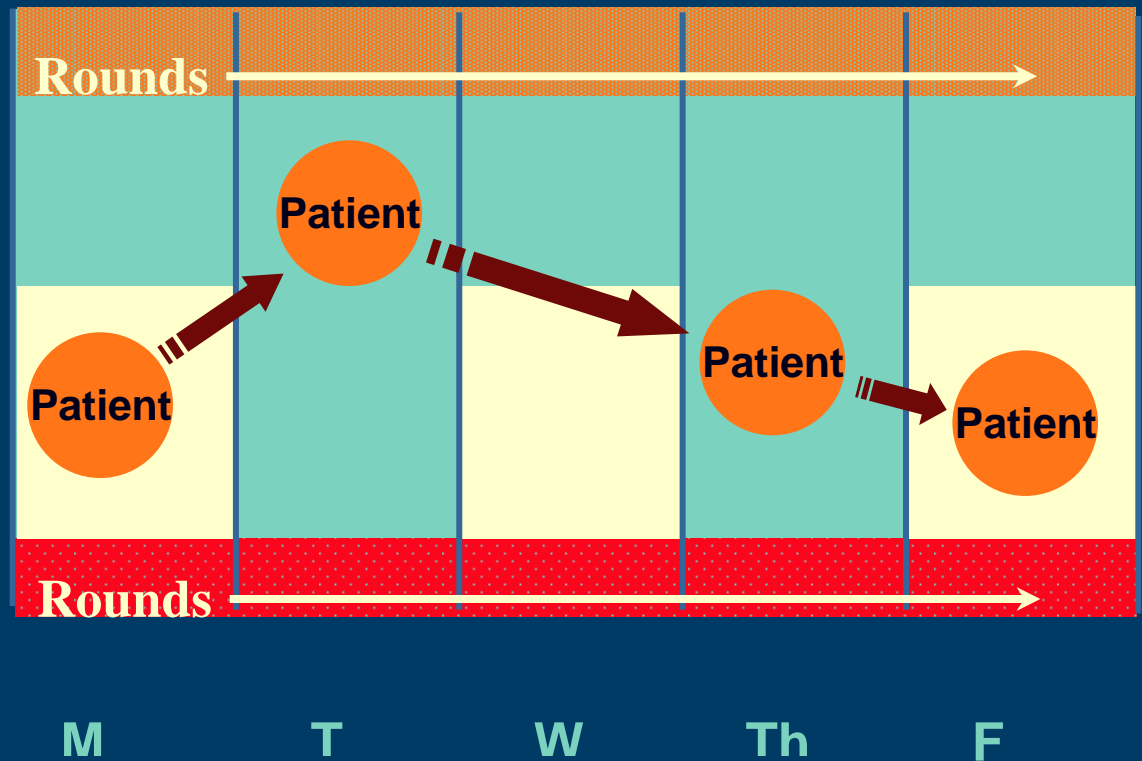
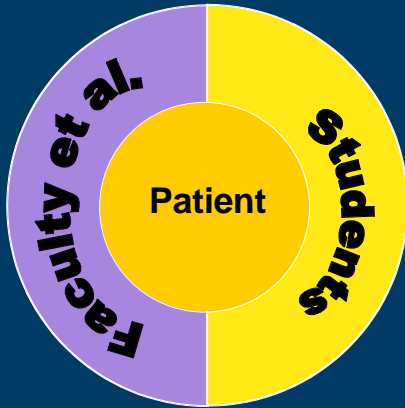
# Challenges in Current Models of Clinical Training

- Erosion of relationship with the patient, the inpatient team, faculty and the course of illness.
- Loss of ownership of patient care.
- Lack of exposure to undiagnosed patient.
- Increasing transitions in medical care (e.g. inpatient/outpatient, specialty clinics/services, 80 hour work week, shorter attending rotations).
- Limited observation of skills, professionalism, communication.
- Lack of continuity between rotations regarding skills development across third year.

# A new model for clinical training: The “Clinical Core”



# A new model for clinical training: The “Clinical Core”



# PISCES

- Parnassus Integrated Student Clinical Experiences
- One-year integrated longitudinal clerkship
- 8 students will spend the clerkship year at our core academic site
- Launch date April 2007

## Mission

To educate medical students to practice medicine in a new world that includes evolving healthcare delivery systems, demographic shifts, patient-centered illness models, new health information systems, and changes in graduate medical education in an academic setting.



## Integrated Disciplines

- Anesthesiology
- Family and Community Medicine
- Internal Medicine
- Neurology
- Obstetrics and Gynecology
- Ophthalmology
- Orthopedic Surgery
- Otolaryngology
- Pediatrics
- Psychiatry
- Surgery
- Urology

# Patient Cohort

- Students acquire their own cohort of patients (50-100) via acute care sessions, call and preceptorships
- Students follow their patients wherever they go
- A pager system notifies students when their patients come to emergency room, labor and delivery, hospital admissions, OR
- Patients selected to target core competencies for each discipline and for continuity

# Sample Student Schedule Week 1

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Surgery Rounds 7-8am	If students have a patient in their cohort or who they are following after a surgical procedure, they will round with the team/chief resident in the morning.						
Medicine Rounds 8-9am	If students have a patient in their cohort or who they are following who is in the hospital, they will round with the team/chief resident in the morning.						
AM Clinic 9 - 12	Internal Medicine	OB/GYN	Surgery Clinic	Neurology	Pediatrics	One weekend day per month, students will take call with Emergency Department or Pediatric ER/Urgent Care for 8 hours.	
PM Clinic 1-5	Self Directed & Cohort Learning	PISCES School	Self Directed & Cohort Learning	Emergency Department	Self Directed & Cohort Learning		
Evening/ Night 6p - 7a	One evening per week, students will take call in the evenings with Emergency Department or Pediatric ER/Urgent Care for 4 hours.						

# PISCES Advisor

- Active preceptor who serves mentoring role
- Meets one student regularly during the year
- Monitors longitudinal progress and reviews performance data
- Provides and helps interpret feedback
- Helps student develop learning plans
- Ensures that the recommended number and type of patients are in the student cohort
- Advocates for student as necessary and appropriate

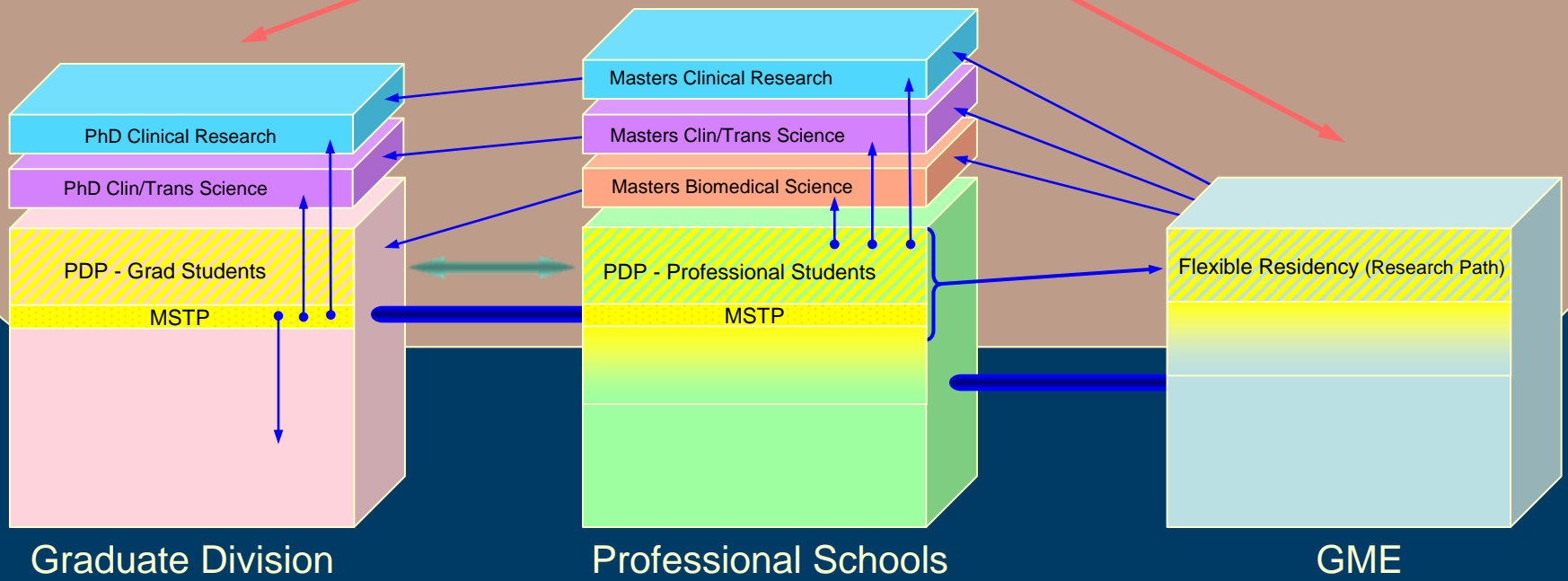
# 3. Pathways to Discovery

# Motivation for the creation of PTD

## 2006 SOM Leadership Retreat

- “Creating a Culture of Inquiry, Innovation, and Discovery”
- What can we do even better?
- Goal: Every graduate from UCSF integrates inquiry, innovation, and discovery into his or her career

# The UCSF "Pathway to Discoveries" Program



- v Pathways to Discovery Subcommittees
  - Global Health
  - Medical Education
  - Health Systems and Leadership
  - Community Health, Social Advocacy, and Disparities
  - Basic Science
  - Clinical and Translational Research
  - Medical Humanities and Social Sciences



# Goal

- ✓ Foster the pursuit of discovery, inquiry, and innovation as part of the career of every physician.

# Principles

- All pathways will emphasize the advancement of discoveries, inquiries, and innovations that lead to improvements in human health.
- Each pathway will include a rigorous course of study and require a serious commitment from trainees.
- Successful completion of a pathway should lead to academic recognition in the form of a certificate or masters degree.

## Principles (con't.)

- There should be multiple entry points into the pathways, but an emphasis will be placed on early entry points.
- PTD must free up time from the existing curriculum to allow for didactic and other forms of learning at both the UME and GME levels.
- PTD should minimize financial hurdles for participation

## Principles (con't.)

- All parts of the program that are implemented will be appropriately resourced.
  - Faculty time (teaching and mentoring)
  - Student financial burden
  - Administrative support
- Role-modeling and early exposure to positive experiences are important and will be incorporated into each pathway.
- Efforts should be made to streamline the pathway so that it requires minimal additional time in training.

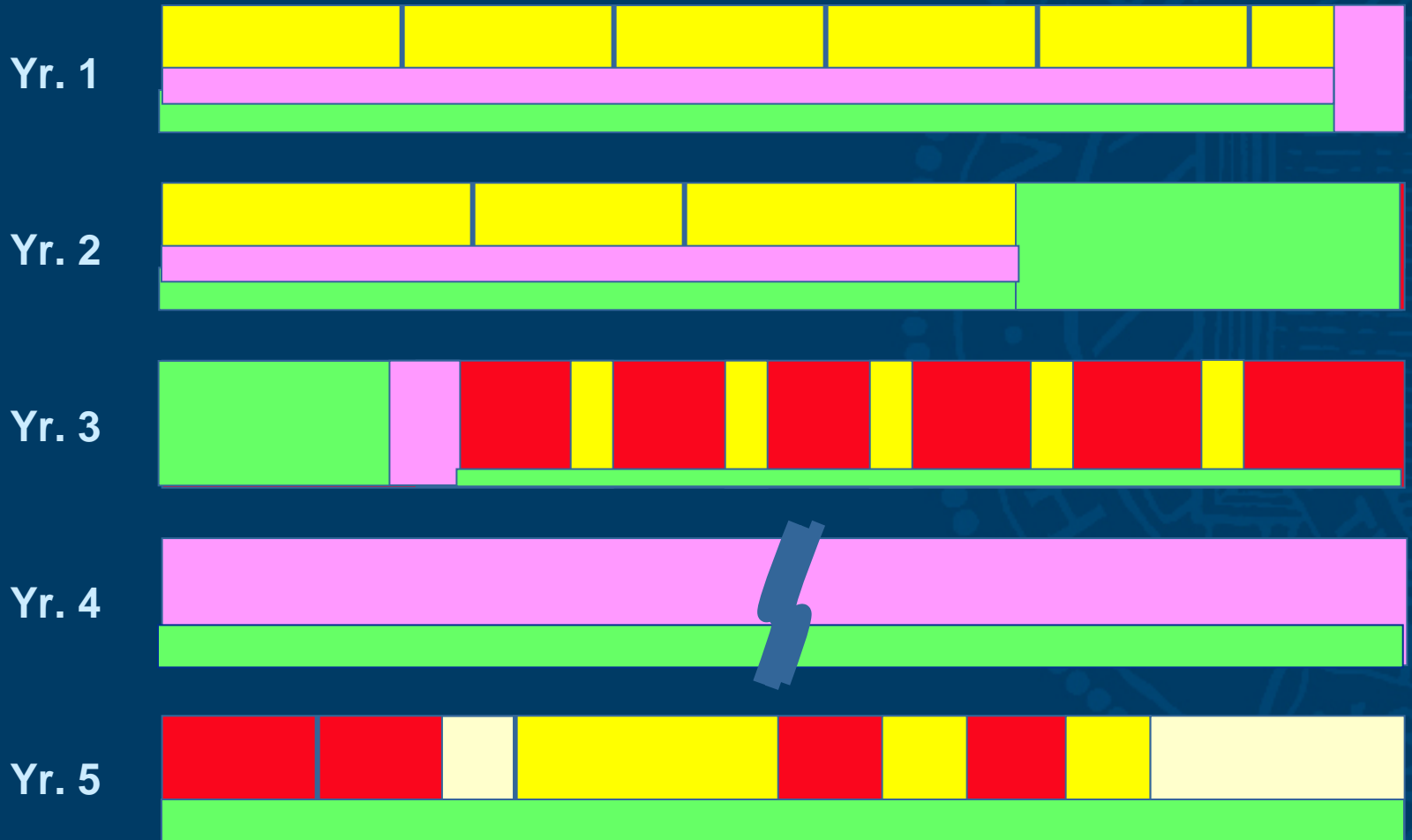
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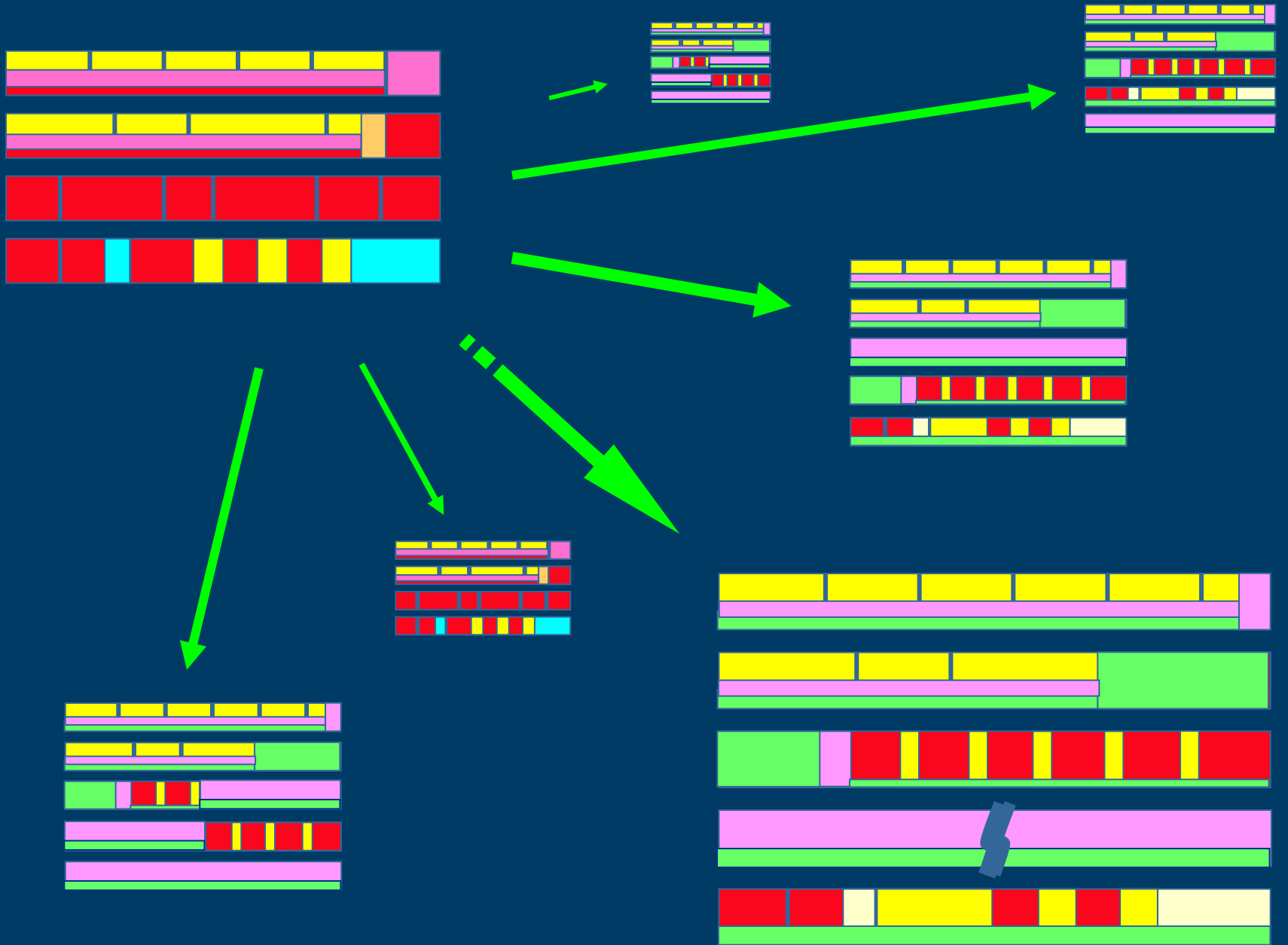
- - Basic science
- - Clinical
- - Self-directed



# New formats:

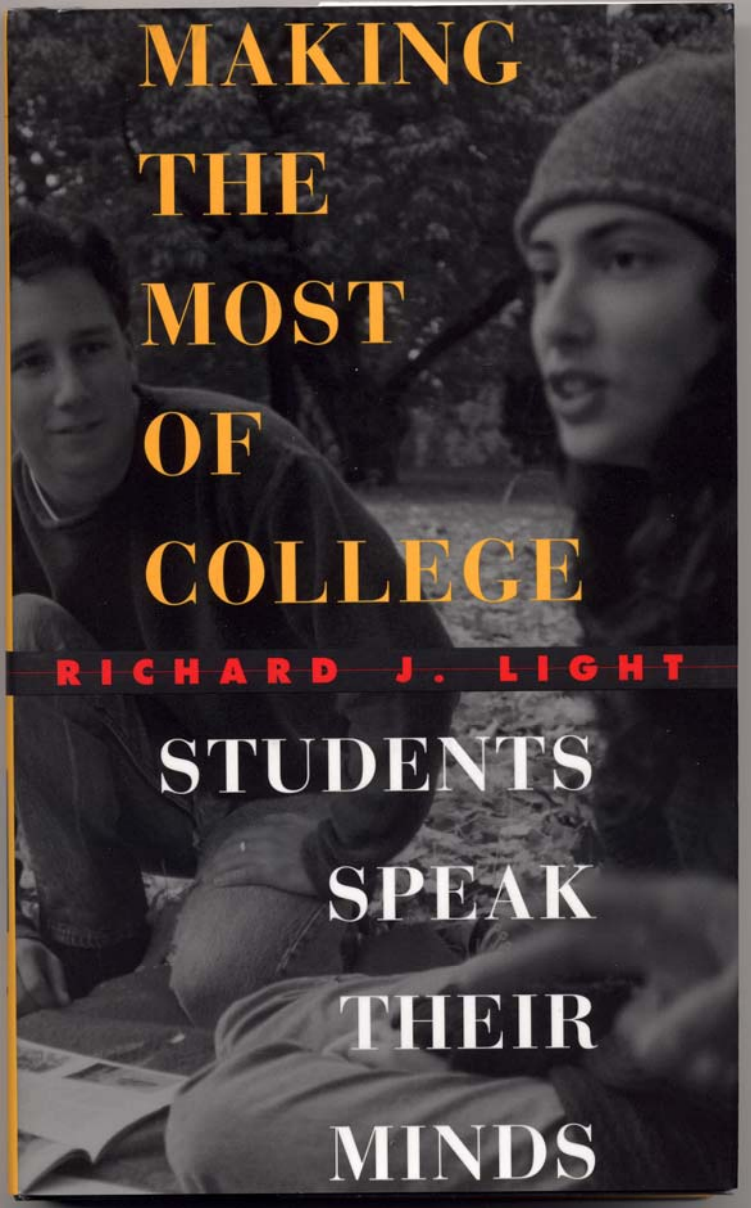
- - Biomedical Science
- - Clinical
- - Self-directed
- - Clinical Core





# 4. The Academy Movement

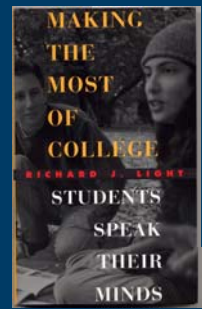




**MAKING  
THE  
MOST  
OF  
COLLEGE**

**RICHARD J. LIGHT**

**STUDENTS  
SPEAK  
THEIR  
MINDS**



1. Learning outside of the classroom
2. Courses that are highly structured, with relatively many quizzes and short assignments
3. Collaborative homework
4. **Mentorship** and learning in small groups
5. Diversity
6. **Involved in activities with faculty**, or with several other students, focused on accomplishing substantial academic work
7. **Writing**
8. Outside activities
9. Language study

*“It is at the bedside in close association with mature physicians that the student can truly learn that medicine is not an intellectual game but a caring profession. Similarly it is in the laboratory working with mature investigators that one learns the value systems of scientific inquiry. Personalities and personal interactions color one’s development as a physician and a scholar far more than do lecture notes or the configuration of the current curriculum.”*

Holly Smith, M.D.  
Allan Gregg Lecture, 1985

*“We should, therefore, be deeply concerned that many students finish medical school without truly knowing or being known by any member of the faculty.”*

# PERSPECTIVE

BECOMING A PHYSICIAN

## Learner-Centered Medical Education

Kenneth M. Ludmerer, M.D.

Medical students occupy a curious position in the history of the American medical school. Before World War II, the education of medical students was the central mission of medical schools, and undergraduate medical education remains their one unique mission. Yet after World War II, as medical faculties expanded their activities in graduate-level teaching, research, and patient care, the education of medical students became no more than a byproduct of the operation of academic health centers.<sup>1</sup>

The diminishing visibility of the medical student is not in itself harmful for medical education, provided that faculties take students and teaching seriously. However, from the early 1900s to the present, there has been a persistent concern among medical educators that medical education has ceased to be an invigorating intellectual experience. During this time, a score of reports from foundations, educational bodies, and professional task forces have criticized curricula for rigidity, an excessive use of lectures, and an overemphasis on rote memorization.<sup>2</sup> A century of curriculum reform has resulted in the introduction of new subjects, the elimination of antiquated ones, and the development of new instructional methods. However, medical education has a history of tinkering with the curriculum endlessly without realizing larger educational objectives. Schools have yet to create a true learner-centered environment that makes active, self-directed learning under the close tutelage of interested faculty members the core of the experience.

To medical educators, this lack of a learner-

centered curriculum is cause for concern. Since the late 19th century, in addition to instilling high professional standards, medical education has been aimed primarily at helping medical students develop the power of critical reasoning, the capacity to generalize, the ability to acquire and evaluate information, and the intellectual tools to become lifelong learners.

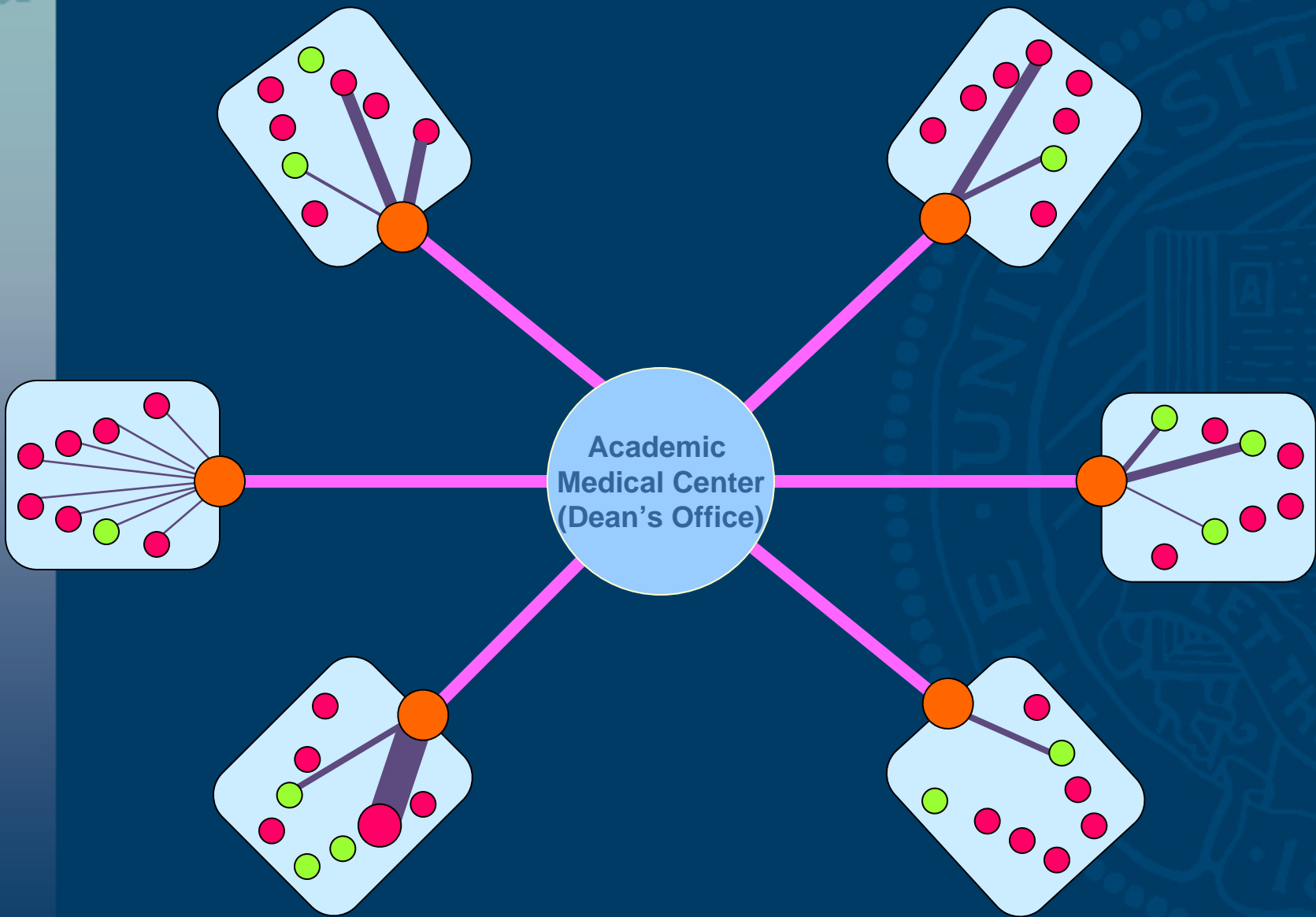
*“An academical system without the personal influence of teachers upon pupils, is an Arctic winter.”*

William Osler

Accomplishing these goals requires thoughtful and personalized teaching. Instructors must generalize and synthesize, not just provide the view from their particular specialty. Students need seminars, tutorials, and individualized instruction, not lectures alone, for their reasoning powers to be developed fully. Students also need close interactions with experienced, mature physicians in the work of patient care — and the opportunity to talk with them about that work.<sup>3</sup> Such a curriculum can be constructed only if a medical faculty sufficiently values teaching to take the time to do it well. Here, medical schools have typically fallen short of their potential.

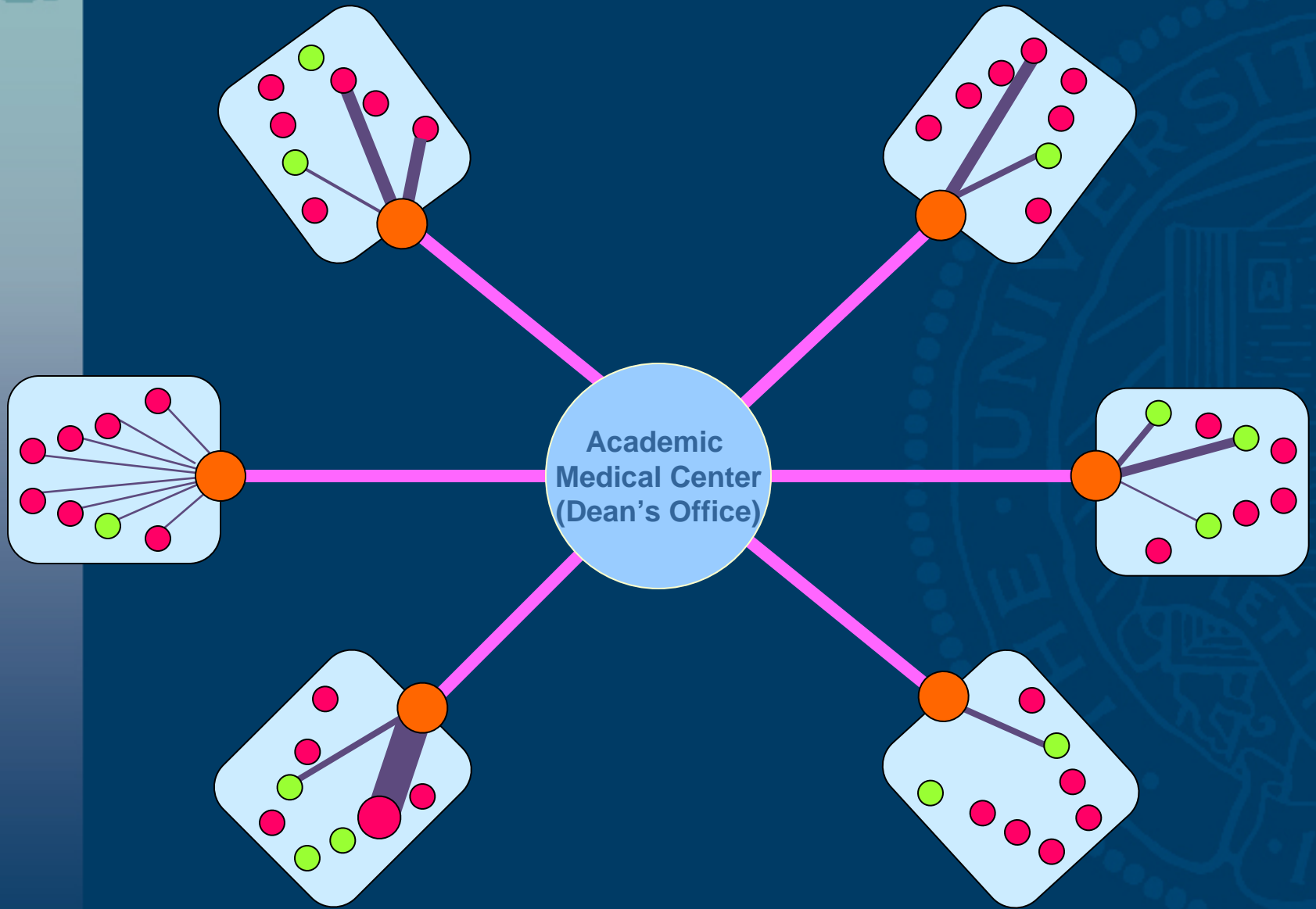
A recent visit I made to a prominent medical school illustrates the low value placed on student affairs by contemporary medical schools. The instructor who once gave the most lectures in the physiology course had stopped teaching because he knew it was unimportant to his department chairperson. In many of the basic science departments, teaching laboratories had been converted into faculty research laboratories. In the department of medicine, with more than 300 full-time faculty members, the director of the third-year clerk-

*“The time-honored wisdom in medical education (which has been reinforced by studies in educational psychology) is that meaningful, ongoing relationships between faculty and students are essential for the development of true professionals”*



# The Academy - Original Concept

- Singular purpose - support of the teaching mission
- Members are faculty who are outstanding, passionate, committed and innovative teachers
- Provides salary support via endowed professor-ships and stipends
- Advocacy in promotions process
- Forum for discourse and activities, stimulus for innovation

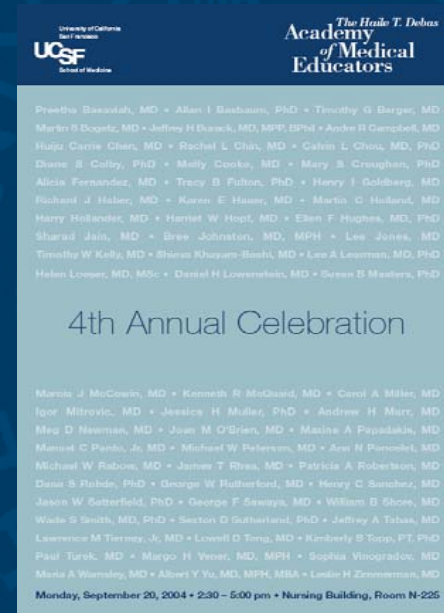






# The UCSF Academy was established in 2000

- Idea originated in the “Blue Skies” curriculum task force
- Endorsed by department chairs at leadership retreat January 1999
- Dean Debas announced financial support for operations and matched chair program March 1999
- Molly Cooke appointed director August 2000
- Inaugural group of Academy members inducted September 2001
- Dean Kessler committed funding for Phase II (2007-2017) July 2007



# Missions of the UCSF Academy

- To promote excellence in teaching in the School of Medicine
- To support and reward teachers of medical students
- To foster innovation in the curriculum
- To advance scholarship in medical education at UCSF

# Membership in UCSF's Academy

- Open to salaried and volunteer faculty members who are outstanding teachers of medical students or whose role with residents significantly impacts medical student education
- Renewable term of membership
- Renewal contingent on continued outstanding educational contributions and good Academy service
- Review follows the academic advancement (merit and promotion) cycle

# Selection of Members

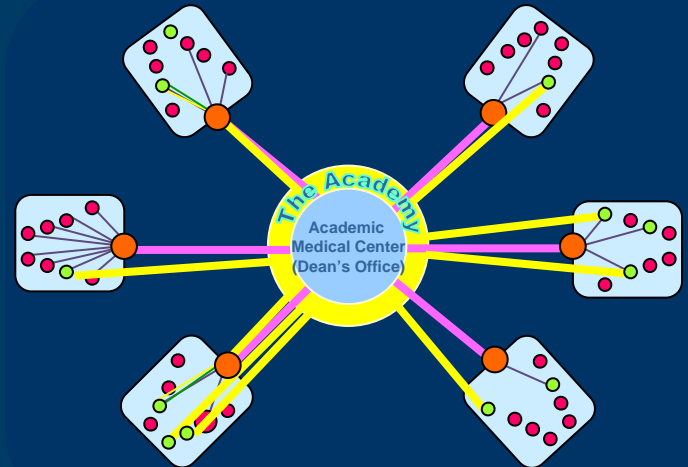
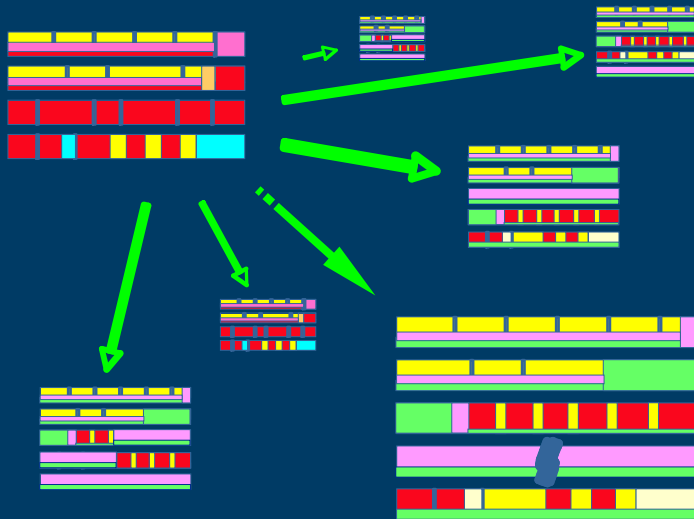
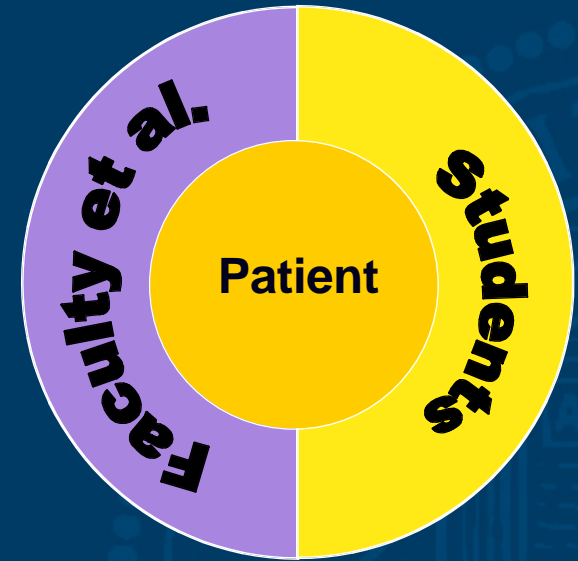
- Annual call in March or April
- Candidate submits Educator's Portfolio
  - Five areas of educational activity: direct teaching; curriculum design and program innovation; advising and mentoring; educational administration and leadership; educational research
  - Impact statements
- Internal screening; external review; final selection by Membership working group

# The Academy has 72 members from a faculty of 1600 plus

- Academy members come from five core teaching sites: Fresno, Mt. Zion, Parnassus, SFGH, VAMC
- 21 of 26 departments represented
  - 28 Medicine; 8 FCM; 6 Ob/Gyn; 5 Peds; 3 Neurology
  - 2 each in Anatomy; Anesthesia; CMP; Psychiatry; Otolaryngology; Radiology; Surgery
  - 1 each in BioChem; Dermatology; Epi & Biostats; Ophthalmology; Pathology; Physical Therapy; Physiology; Urology
- 6 members are from basic science departments

# Matched Endowed Chair Program

- Department provides at least \$250,000; Dean's Office matches up to \$250,000
- Joint search with representation of department, Academy and Office of Medical Education
- Chair holder must be an Academy member or must qualify for Academy membership
- Income stream “on top” of departmental support to provide time for new/additional work in teaching education







*The single most important element of a program in medical education are the people who are in the room.*