

# AAMC MANAGEMENT EDUCATION PROGRAMS

## Executive Development Seminar

Hawk's Cay Resort  
Marathon, Florida

November 10 - 15, 1989

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### AGENDA

#### FRIDAY, NOVEMBER 10, 1989

- 3:30 p.m. Registration and Coffee
- 3:45 p.m. Introduction and Welcome *Joseph Keyes*
- 4:15 p.m. GOVERNANCE *Steven Ruma*
- This session will focus on the issues shaping academic medical center governance, and exploration of overlapping and conflicting governance and management, structures within medical centers, and an examination of planning and management decision making relationships between all levels of medical center hierarchy.
- 4:45 p.m. Discussion
- 5:45 p.m. Break
- 6:00 p.m. GOVERNANCE *Steven Ruma*  
(Continued)
- 6:30 p.m. Discussion
- 7:30 p.m. Reception
- 8:00 p.m. Dinner
- 9:00 p.m. Adjourn

#### SATURDAY, NOVEMBER 11, 1989

- 7:00 a.m. Breakfast
- 7:30 a.m. PERSONAL STYLES IN MANAGEMENT *Charles Seashore*
- This session will stimulate an introspective examination of personal temperament and explore the relevance of individual styles and their impact on organizational management.

- 8:00 a.m. Discussion
- 9:00 a.m. Coffee Break
- 9:30 a.m. **PERSONAL STYLES IN MANAGEMENT** *Charles Seashore*  
(Continued)
- 10:00 a.m. Discussion
- 11:00 a.m. Lunch on Your Own and Afternoon Break
- 3:00 p.m. Coffee Break
- 3:15 p.m. **PERSONAL STYLES IN MANAGEMENT** *Charles Seashore*  
(Continued)
- 3:45 p.m. Discussion
- 4:45 p.m. Coffee Break
- 5:00 p.m. **LEGAL ISSUES IN HIGHER EDUCATION** *Andrew Schaffer*
- These sessions will focus on issues relating to the evaluation of medical students and residents as they might affect litigation or potential litigation. In addition, we will explore the legal aspects of faculty and employee relations. Finally, we will discuss how to make effective use of lawyers -- both in-house counsel and those external to the organization.
- 5:30 p.m. Discussion
- 6:30 p.m. Reception
- 7:00 p.m. Dinner
- 8:00 p.m. Evening Open

**SUNDAY, NOVEMBER 12, 1989**

- 7:00 a.m. Breakfast
- 7:30 a.m. **LEGAL ISSUES IN HIGHER EDUCATION** *Andrew Schaffer*  
(Continued)
- 8:00 a.m. Discussion
- 9:00 a.m. Coffee Break
- 9:30 a.m. **ISSUES IN HOSPITAL & PHYSICIAN** *Robert Zelten*  
**REIMBURSEMENT**

These sessions will discuss the principles and procedures used by third party payers to reimburse hospitals and

physicians for medical services. Significant attention will be focused on changing reimbursement policies with detailed discussion of HMO, PPO, and other "managed health care" system payment rules. A number of payment methods will be examined from the viewpoint of the risks inherent in the payment methodology.

- 10:00 a.m. Discussion
- 11:00 a.m. Lunch on Your Own and Afternoon Break
- 3:00 p.m. Coffee Break
- 3:15 p.m. **ISSUES IN HOSPITAL & PHYSICIAN REIMBURSEMENT** (Continued) *Robert Zelten*
- 3:45 p.m. Discussion
- 4:45 p.m. Coffee Break
- 5:00 p.m. **PLANNING AND CONTROL** *Steven Ruma*
- This session will analyze the design of planning and control systems at the strategic and management control levels.
- 5:30 p.m. Discussion
- 6:30 p.m. Reception
- 7:00 p.m. Dinner
- 8:00 p.m. Evening Open

**MONDAY, NOVEMBER 13, 1989**

- 7:00 a.m. Breakfast
- 7:30 a.m. **FINANCIAL DIMENSIONS OF ACADEMIC MEDICAL CENTERS** *David Bray*
- The financial relationships among Medical Schools, hospitals, and Universities will be reviewed and discussed. In addition, the major financial characteristics of each entity and the unavoidable interdependence, co-mingling, etc., of each of the units in a Medical Center will be explored. Be sure to bring along a copy of a personally relevant budget, i.e. Department, School, or Hospital, for the discussion.
- 8:00 a.m. Discussion
- 9:00 a.m. Coffee Break

9:30 a.m.      **STRATEGIC FINANCIAL MANAGEMENT**  
**Part I**      *David Bray*

This initial session will focus on the decision making involved in the resource allocation and budgeting process. This will include operational capital spending decisions as well as control and monitoring. Strategies used by each entity in the Medical Center (Hospital, Medical School, and academic department) and the overlapping and sometime conflicting nature of the respective systems will be discussed.

10:00 a.m.      Discussion

11:00 a.m.      Lunch on Your Own

3:00 p.m.      Coffee Break

3:15 p.m.      **STRATEGIC FINANCIAL MANAGEMENT**  
**Part II**      *David Bray*

The key aspects of financial planning will be reviewed including long range, operational, program and capital planning. We will discuss the management information systems required to support such planning. Attention will be given to the implications for the management of research, to fundraising, and to the use of incentives.

3:45 p.m.      Discussion

4:45 p.m.      Coffee Break

5:00 p.m.      **DEALING WITH THE MEDIA**      *Roland Wussow*

In these sessions, we will discuss media mechanics and operations and explore the ways in which a healthy balance between cooperation and adversity can be established with the press.

5:30 p.m.      Discussion

6:30 p.m.      Evening Open

**TUESDAY, NOVEMBER 14, 1989**

7:00 a.m.      Breakfast

7:30 a.m.      **ORGANIZATION DESIGN**      *Steven Ruma*

In this session, we will examine the multiple organizational forms needed for effective and efficient achievement of the multiple tasks and roles of academic medical centers.

- 8:00 a.m. Discussion
- 9:00 a.m. Coffee Break
- 9:30 a.m. **DEALING WITH THE MEDIA** *Roland Wussow*  
(Continued)
- 10:00 a.m. Discussion
- 11:00 a.m. Lunch on Your Own and Afternoon Break
- 3:00 p.m. Coffee Break
- 3:15 p.m. **DEALING WITH THE MEDIA** *Roland Wussow*  
(Continued)
- 3:45 p.m. Discussion
- 4:45 p.m. Coffee Break
- 5:00 p.m. **NEGOTIATING: THEORY & PRACTICE** *Steven Ruma*
- The initial focus of this session will be a discussion of issues and questions arising from the pre-seminar readings. In addition to understanding practical guidelines in negotiation, the session will discuss issues involved in negotiating with colleagues with whom one must maintain on-going relationships, and cooperative and competitive strategies will be examined.
- 5:30 p.m. Discussion
- 6:30 p.m. Reception
- 7:00 p.m. Dinner
- 8:00 p.m. Evening Open

**WEDNESDAY, NOVEMBER 15, 1989**

- 7:00 a.m. Breakfast
- 7:30 a.m. **NEGOTIATING: THEORY & PRACTICE** *Steven Ruma*  
(Continued)
- 8:00 a.m. Discussion
- 9:00 a.m. Coffee Break
- 9:30 a.m. **ORGANIZATIONAL DIAGNOSIS MODEL** *Steven Ruma*

The final morning includes a description and demonstration of a diagnostic tool designed to facilitate the organization and implementation of plans. A process of priority setting and the assessment of institutional readiness for proposed changes will be described. During the session, participants will be given

the opportunity to work with a model in the context of a "back home" problem.

- 10:00 a.m. Discussion
- 11:00 a.m. Closing Remarks
- 11:30 a.m. Adjourn

**PRE-SEMINAR READING LIST**

**TAB**

**FRIDAY, NOVEMBER 10, 1989**

**Governance**

Roberts, Edward B. & Fusfeld, Alan R. "Staffing the Innovative Technology Based Organization." Sloan Management Review. Spring 1981, 19-34. A

Ruma, Steven J. "Current Context of Governance." B

**SATURDAY, NOVEMBER 11, 1989**

**Personal Styles in Management**

Keirse, David and Marilyn Bates. "The Keirse Temperament Sorter," Please Understand Me: Character and Temperament Types. Del Mar, CA: Prometheus Nemesis Book Co., 1984, 5-12. C

**Legal Issues in Higher Education**

Board of Curators of the University of Missouri, et al. vs. Horowitz, U.S. Supreme Court, 1978 (slip opinion). D

Regents of the University of Michigan vs. Ewing, U.S. Supreme Court, 1985 (slip opinion). E

Goldman, Edward B. "Serving the College/University Client: Defining the Role of House Counsel for the Academic Health Care Provider," NACUA 25th Annual Conference. June 27, 1985. F

Pre-Seminar Legal Diagnostic Test G

**SUNDAY, NOVEMBER 12, 1989**

**Issues in Hospital Reimbursement**

Freidman, Richard B. "Impact of the Evolution in Health Care Delivery on the Academic Medical Center," Journal of Medical Education. Vol. 59, No. 7 (July 1984), 539-545. H

Hsiao, Wm. C., et al. "Resource-Based Relative Values, An Overview" Journal of the American Medical Association, Vol. 260, No. 16 (October 28, 1988), 2347-2353. I

Hsiao, Wm. C., et al. "Results, Potential Effects, and Implementation Issues of the Resource-Based Relative Value Scale," Journal of the American Medical Association, Vol. 260, No. 16 (October 28, 1988), 2429-2438. I

Roper, Wm. Editorial, "The Resource-Based Relative Value Scale: A Methodological and Policy Evaluation," Journal of the American Medical Association. Vol. 260, No. 16 (October 28, 1988), 2444-2446. I

Zelten, Robert A. "Provider Reimbursement Alternatives and Placement of Financial Risk: A Framework for Analysis," Topics in Health Care Financing. Vol. 8, No. 2 (Winter 1981), 61-72. J



MONDAY, NOVEMBER 13, 1989Financial Dimensions of Academic Medical Centers

The speaker asks that participants bring a personally relevant budget, i.e., department, school or hospital from their own institution to help facilitate discussion and an understanding of the topic.

Dealing with the Media

Buerstatte, Gary E. "Hospitals' Public Image Campaign: How to Successfully Court Public Opinion," Trustee. March 1986, 13-15. K

New York Times Marketing Research Department. "Influential Americans and The New York Times," The New York Times. 1983. L

\* Brown, Stephen W. & Morley, Andrew P. Marketing Strategies for Physicians: A Guide to Practice Growth. 1988, Medical Economics Books; Oradell, NJ.

\* French, Christopher W. (Ed.) The Associated Press Stylebook and Libel Manual, Revised Edition, 1989, Addison-Wesley; Reading, MA.

\* Hannaford, Peter. Talking Back to the Media. 1986, Facts on File Publications; NY, NY.

\* Ries, Al & Trout, Jack. Positioning: The Battle for Your Mind. 1986, McGraw-Hill; NY, NY.

TUESDAY, NOVEMBER 14, 1989Negotiating: Theory and Practice

Bacon, Francis. "Essay XLVII of Negotiating," Essays and New Atlantis. New York: D. Van Nostrand Co., 1942, 451-452. M

Ruma, Steven J. "Negotiating -- Selected Research Findings." Mc

Ruma, Steven J. "Negotiation Skills: A Quick Reference Guide." This reading replaces the lecture; therefore, it is essential that this material be read in advance and that participants come prepared to discuss the issues. N

- \* These books will be available in the resource library at the meeting site. Complete references have been provided in the event you wish to purchase copies for your personal library.

CURRENT CONTEXT OF GOVERNANCE

Steven J. Ruma, Ph.D.  
June 1980

ECONOMIC CLIMATE

1. High uncertainty regarding future \_\_\_\_\_
2. Increased external and internal regulation and scrutiny \_\_\_\_\_
3. Limited and diminishing resources \_\_\_\_\_
4. Increased operating costs \_\_\_\_\_
5. Significant discrepancies between costs and income \_\_\_\_\_
6. Fiscal and Programmatic changes mandated \_\_\_\_\_
7. No major augmentation of resources to subsidize changes \_\_\_\_\_
8. With few additional resources to make changes, organizations are forced to re-allocate existing resources to new priorities \_\_\_\_\_
9. In addition to re-allocation considerable time is being spent to devise ways to cut costs and increase income \_\_\_\_\_
10. Focus is on EFFICIENCY (get the most out of the least) while maintaining EFFECTIVENESS rhetoric \_\_\_\_\_

HISTORICAL/TRADITIONAL NORMS

1. "RIGID" ORGANIZATIONS --- governed by explicit rules and implicit norms designed to maintain and reinforce tradition \_\_\_\_\_
  
2. Institutional norms which focus on maximizing opportunities as they are presented rather than developing in a more systematically planned manner \_\_\_\_\_  

This has resulted not only in anti-planning attitudes, but also in a lack of experience, structures, and processes for planning \_\_\_\_\_
  
3. Basically reactive organizations \_\_\_\_\_
  
4. Governance and decision-making mechanisms that make it difficult and sometimes irrelevant to clarify authority and accountability \_\_\_\_\_
  
5. Very long and drawn out time needed to bring about change \_\_\_\_\_
  
6. Organizational processes modified explicitly or implicitly to accommodate certain individuals \_\_\_\_\_
  
7. Almost total lack of monitoring regarding the efficiency or effectiveness with which a Department Chairman or Chief of a Hospital Service manages patient care, education, or research programs \_\_\_\_\_
  
8. Socialization processes which fostered legitimacy of vested interests and non-institutional focus \_\_\_\_\_
  
9. Conflict seldom faced openly--often circumvented \_\_\_\_\_
  
10. System almost impotent to deal with incompetence \_\_\_\_\_
  
11. Chairmen not expected to have "managerial" skills \_\_\_\_\_
  
12. Traditional "rubber stamp" involvement by Trustees \_\_\_\_\_

PSYCHOLOGICAL CLIMATE

1. Competitive, protective, apprehensive, rigid, non-cooperative stances regarding the "ownership" and allocation of resources \_\_\_\_\_
2. Immobilized and drawn out decision-making regarding major issues of costs and political deadlocks between multiple and dispersed powerful individuals on whom all segments of the medical center are dependent \_\_\_\_\_
3. Lengthy decision-making times makes the organization unresponsive and reactive in a rapidly changing world and thereby generating anxiety among Trustees and senior management \_\_\_\_\_
4. When forced by deadlines, before conflict has been adequately resolved, decision processes are highly emotional, and basically irrational as a political process takes over that is dominated by the vested interests of specific individuals or coalitions \_\_\_\_\_
5. The outcome of such decision-making processes have a tendency to be mediocre compromises which are neither efficient nor effective \_\_\_\_\_
6. Inordinate vulnerability for the few visible and accountable individuals resulting in constant displacement of anger and unrealistic blame for the organization's current problems \_\_\_\_\_
7. The illusion of change --- there is much participation and talk about change --- but the intention appears to be in making whatever changes are necessary in order to keep things the way they have been \_\_\_\_\_
8. The beginnings of real cooperative and collaborative behavior. Having experienced the mutual destructiveness of competitive, narrow focus -- many are now turning to collaborative behaviors \_\_\_\_\_

## THE KEIRSEY TEMPERAMENT SORTER

Decide on answer A or B and put a check mark in the proper column of the answer sheet. Scoring directions are provided at the bottom of page 11. There are no right or wrong answers since about half the population agrees with either answer you choose. The results of the questionnaire and your "type" will be discussed during the seminar.

## The Keirsey Temperament Sorter

1. **At a party do you**
  - (a) interact with many, including strangers
  - (b) interact with a few, known to you
2. **Are you more**
  - (a) realistic than speculative
  - (b) speculative than realistic
3. **Is it worse to**
  - (a) have your "head in the clouds"
  - (b) be "in a rut"
4. **Are you more impressed by**
  - (a) principles
  - (b) emotions
5. **Are you more drawn toward the**
  - (a) convincing
  - (b) touching
6. **Do you prefer to work**
  - (a) to deadlines
  - (b) just "whenever"
7. **Do you tend to choose**
  - (a) rather carefully
  - (b) somewhat impulsively
8. **At parties do you**
  - (a) stay late, with increasing energy
  - (b) leave early, with decreased energy
9. **Are you more attracted to**
  - (a) sensible people
  - (b) imaginative people
10. **Are you more interested in**
  - (a) what is actual
  - (b) what is possible
11. **In judging others are you more swayed by**
  - (a) laws than circumstances
  - (b) circumstances than laws

12. **In approaching others is your inclination to be somewhat**
  - (a) objective
  - (b) personal
13. **Are you more**
  - (a) punctual
  - (b) leisurely
14. **Does it bother you more having things**
  - (a) incomplete
  - (b) completed
15. **In your social groups do you**
  - (a) keep abreast of other's happenings
  - (b) get behind on the news
16. **In doing ordinary things are you more likely to**
  - (a) do it the usual way
  - (b) do it your own way
17. **Writers should**
  - (a) "say what they mean and mean what they say"
  - (b) express things more by use of analogy
18. **Which appeals to you more**
  - (a) consistency of thought
  - (b) harmonious human relationships
19. **Are you more comfortable in making**
  - (a) logical judgments
  - (b) value judgments
20. **Do you want things**
  - (a) settled and decided
  - (b) unsettled and undecided
21. **Would you say you are more**
  - (a) serious and determined
  - (b) easy-going
22. **In phoning do you**
  - (a) rarely question that it will all be said
  - (b) rehearse what you'll say
23. **Facts**
  - (a) "speak for themselves"
  - (b) illustrate principles

24. **Are visionaries**  
(a) somewhat annoying  
(b) rather fascinating
25. **Are you more often**  
(a) a cool-headed person      (b) a warm-hearted person
26. **Is it worse to be**  
(a) unjust      (b) merciless
27. **Should one usually let events occur**  
(a) by careful selection and choice  
(b) randomly and by chance
28. **Do you feel better about**  
(a) having purchased      (b) having the option to buy
29. **In company do you**  
(a) initiate conversation      (b) wait to be approached
30. **Common sense is**  
(a) rarely questionable      (b) frequently questionable
31. **Children often do not**  
(a) make themselves useful enough  
(b) exercise their fantasy enough
32. **In making decisions do you feel more comfortable with**  
(a) standards      (b) feelings
33. **Are you more**  
(a) firm than gentle      (b) gentle than firm
34. **Which is more admirable:**  
(a) the ability to organize and be methodical  
(b) the ability to adapt and make do
35. **Do you put more value on the**  
(a) definite      (b) open-ended
36. **Does new and non-routine interaction with others**  
(a) stimulate and energize you  
(b) tax your reserves
37. **Are you more frequently**  
(a) a practical sort of person  
(b) a fanciful sort of person
38. **Are you more likely to**  
(a) see how others are useful  
(b) see how others see
39. **Which is more satisfying:**  
(a) to discuss an issue thoroughly  
(b) to arrive at agreement on an issue
40. **Which rules you more:**  
(a) your head      (b) your heart
41. **Are you more comfortable with work that is**  
(a) contracted      (b) done on a casual basis
42. **Do you tend to look for**  
(a) the orderly      (b) whatever turns up
43. **Do you prefer**  
(a) many friends with brief contact  
(b) a few friends with more lengthy contact
44. **Do you go more by**  
(a) facts      (b) principles
45. **Are you more interested in**  
(a) production and distribution  
(b) design and research
46. **Which is more of a compliment:**  
(a) "There is a very logical person."  
(b) "There is a very sentimental person."



47. Do you value in yourself more that you are  
(a) unwavering (b) devoted
48. Do you more often prefer the  
(a) final and unalterable statement  
(b) tentative and preliminary statement
49. Are you more comfortable  
(a) after a decision (b) before a decision
50. Do you  
(a) speak easily and at length with strangers  
(b) find little to say to strangers
51. Are you more likely to trust your  
(a) experience (b) hunch
52. Do you feel  
(a) more practical than ingenious  
(b) more ingenious than practical
53. Which person is more to be complimented: one of  
(a) clear reason (b) strong feeling
54. Are you inclined more to be  
(a) fair-minded (b) sympathetic
55. Is it preferable mostly to  
(a) make sure things are arranged  
(b) just let things happen
56. In relationships should most things be  
(a) renegotiable  
(b) random and circumstantial
57. When the phone rings do you  
(a) hasten to get to it first  
(b) hope someone else will answer
58. Do you prize more in yourself  
(a) a strong sense of reality (b) a vivid imagination

59. Are you drawn more to  
(a) fundamentals (b) overtones
60. Which seems the greater error:  
(a) to be too passionate (b) to be too objective
61. Do you see yourself as basically  
(a) hard-headed (b) soft-hearted
62. Which situation appeals to you more:  
(a) the structured and scheduled  
(b) the unstructured and unscheduled
63. Are you a person that is more  
(a) routinized than whimsical  
(b) whimsical than routinized
64. Are you more inclined to be  
(a) easy to approach (b) somewhat reserved
65. In writings do you prefer  
(a) the more literal (b) the more figurative
66. Is it harder for you to  
(a) identify with others (b) utilize others
67. Which do you wish more for yourself:  
(a) clarity of reason (b) strength of compassion
68. Which is the greater fault:  
(a) being indiscriminate (b) being critical
69. Do you prefer the  
(a) planned event (b) unplanned event
70. Do you tend to be more  
(a) deliberate than spontaneous  
(b) spontaneous than deliberate

# Answer Sheet

Enter a check for each answer in the column for a or b

1		2		3		4		5		6		7	
a	b	a	b	a	b	a	b	a	b	a	b	a	b
1		2		3		4		5		6		7	
8		9		10		11		12		13		14	
15		16		17		18		19		20		21	
22		23		24		25		26		27		28	
29		30		31		32		33		34		35	
36		37		38		39		40		41		42	
43		44		45		46		47		48		49	
50		51		52		53		54		55		56	
57		58		59		60		61		62		63	
64		65		66		67		68		69		70	

1	2	3	4	5	6	7	8
E I	S N	T F	J P				

## Directions for Scoring

1. Add down so that the total number of "a" answers is written in the box at the bottom of each column (see next page for illustration). Do the same for the "b" answers you have checked. Each of the 14 boxes should have a number in it.

2. Transfer the number in box No. 1 of the answer sheet to box No. 1 below the answer sheet. Do this for box No. 2 as well. Note, however, that you have two numbers for boxes 3 through 8. Bring down the first number for each box beneath the second, as indicated by the arrows. Now add all the pairs of numbers and enter the total in the boxes below the answer sheet, so each box has only one number.

3. Now you have four pairs of numbers. Circle the letter below the larger number of each pair (see answer sheet below for illustration). If the two numbers of any pair are equal, then circle neither, but put a large X below them and circle it.

1		2		3		4		5		6		7	
a	b	a	b	a	b	a	b	a	b	a	b	a	b
1	✓	2	✓	3	✓	4	✓	5	✓	6	✓	7	✓
8	✓	9	✓	10	✓	11	✓	12	✓	13	✓	14	✓
15	✓	16	✓	17	✓	18	✓	19	✓	20	✓	21	✓
22	✓	23	✓	24	✓	25	✓	26	✓	27	✓	28	✓
29	✓	30	✓	31	✓	32	✓	33	✓	34	✓	35	✓
36	✓	37	✓	38	✓	39	✓	40	✓	41	✓	42	✓
43	✓	44	✓	45	✓	46	✓	47	✓	48	✓	49	✓
50	✓	51	✓	52	✓	53	✓	54	✓	55	✓	56	✓
57	✓	58	✓	59	✓	60	✓	61	✓	62	✓	63	✓
64	✓	65	✓	66	✓	67	✓	68	✓	69	✓	70	✓

1	2	3	4	5	6	7
82	91	82	010	19	100	13

1	2	3	4	5	6	7
82	173	19	179			

You have now identified your "type." It should be one of the following:

- |      |      |      |      |
|------|------|------|------|
| INFP | ISFP | INTP | ISTP |
| ENFP | ESFP | ENTP | ESTP |
| INFJ | ISFJ | INTJ | ISTJ |
| ENFJ | ESFJ | ENTJ | ESTJ |

If you have an X in your type, yours is a mixed type

## LEGAL PRETEST

### Evaluation and Dismissal of Medical Students

1. At the end of several clinical rotations, a student receives the following evaluations: 1 honor, 3 passes, 2 not satisfactory. The faculty review committee, on a three to two vote, decides to place the student on probation and notifies her that if improvement is not forthcoming, she will be dismissed. Discovering the diversity of opinion, she sues, alleging arbitrary and capricious action on the part of the faculty. The court finds for:
  - a. The student.
  - b. The school.
2. A student with deficiencies in clinical performance is dismissed after multiple committees review her case, although she did not appear before any of the committees. Upon dismissal the student sued claiming that her right to due process was violated by the lack of a hearing in which she could present her side of the case. In relation to the student's "property interest" (foreclosure of future employment opportunities as a physician), the court ruled that:
  - a. A hearing was essential to provide due process.
  - b. A hearing was not required as a part of due process.
3. Although a student's scholastic performance has been satisfactory, the student is dismissed (after repeated warnings) for inadequacies in interpersonal relationships, personal hygiene and the ability to accept criticism. The student sues, arguing that noncognitive factors (such as attitudes, interpersonal relationships, and personal hygiene are not part of academic performance and therefore not grounds for dismissal. The court found that noncognitive factors are:
  - a. Part of academic performance and thus grounds for dismissal.
  - b. Not part of academic performance and therefore not sufficient grounds for dismissal.
4. A student has received marginal but passing clinical evaluations on several rotations. As coordinator of clinical programs you become concerned about the student when you hear informally that she has more serious problems than have been documented in the evaluations. You decide to conduct a more thorough evaluation of her performance than any other student in the program. When the student learns about this she sues, alleging that the school has discriminated against her. The court supports:
  - a. The student.
  - b. The school.

5. A medical student missed several days of a clerkship because of a friend's illness and was assigned a failing grade. Upon receiving the grade the student formally appealed to the appropriate committee which recommended by a two to one majority that the student be given an "Incomplete" and allowed to finish the course. Student manuals outlining the grade appeals process provide that a recommendation of the Grade Appeals Committee is advisory to the Dean. However, the Dean overruled the committee and the student received an "F" for the clerkship and was consequently dropped from the school. The action of the Dean was viewed by the courts as:
- a. Inconsistent with the views of the recommending committee and thus arbitrary and capricious toward the student.
  - b. Within his/her authority and thus legal and binding.
6. As Course Coordinator for a third year clerkship in a public university you rely on written evaluations from attendings and residents to assess the clinical competence of your students. Subsequent to the preparation of the official grade for the clerkship, evaluations of students from attendings and house officers are placed in departmental files. One student, protesting his grade in your clerkship, requests access to all evaluations of him in your possession. You decline to provide the individual evaluations but offer to assist the student to improve upon his clinical skills. Is the student entitled to have access to the individual evaluations of his performance made by attendings and residents?
- a. Yes
  - b. No
7. A student, in the fourth week of his psychiatric clerkship and having academic difficulties, approaches the coordinator, and shares a variety of personal and psychiatric problems. The coordinator decides to use this information to buttress his negative evaluation of the student's clinical performance and to recommend dismissal. The student, upon learning of the coordinator's intent, asserts that he had a physician/patient relationship with the coordinator and that none of the disclosed information may be used as a basis for evaluating his performance.
- A. Was a physician/patient relationship established by the student with the clerkship coordinator?
    - 1) Yes
    - 2) No
  - B. May the information obtained by the clerkship coordinator during the discussion with the student be considered in evaluating the student's performance and in making recommendations regarding academic dismissal?
    - 1) Yes
    - 2) No

8. During an examination in gross anatomy you observe a student repeatedly referring to a piece of paper with notes on both sides. The most appropriate course of action is to:

- a. Remove the student from the exam with as little commotion as possible, confiscate the notes, and assign a zero for the exam.
- b. Confront the student with your observations at the end of the exam, confiscate the notes, and advise the student that he/she failed the course.
- c. Confiscate the notes, take the student to the Dean's office and advise him/her that he/she has received a zero for the exam.
- d. Confiscate the notes and advise the student that you will be requesting a Disciplinary Review Board hearing to review the matter and to decide on an appropriate course of action.

## SELECTED RESEARCH FINDINGS...

### RELATIONSHIP BETWEEN ASPIRATION LEVEL AND SUCCESS-

1. Persons with higher aspiration level achieve higher settlements.
2. Skilled negotiators with high aspiration levels "win" more regardless of whether they have power.  
  
A combination of ability and high aspirations appears to lead to success.
3. Persons with high aspirations will achieve more in every case where they oppose low aspirants. It does not matter whether they are unskilled or have less power.
4. The more skilled the negotiator without power, the lower the aspiration level.

---

### CONCESSION BEHAVIOR-

1. Large initial demands improve the probability of success.  
  
Those who give themselves room to compromise are more successful than those who open with a reasonable demand.  
  
(Backlash in state capitals and cost containment mandates represents high demands in the other direction)
  2. Losers make the largest concession in a negotiation.  
Winners almost never make the largest single concession.
  3. People who make small concessions during negotiations fail less.  
  
Interestingly enough this finding finds a place in the sun for the obstinate and rigid. As negotiators, with very low concession rates, they either deadlock or win.
  4. Losers tend to make the first compromise.  
Successful bargainers force the opponent to offer the first concession.
  5. Skilled negotiators make lower concessions as the deadline approaches.
  6. A very high unexpected initial demand tends to lead to success rather than failure or deadlock.
-

Research Findings...continued-

EXPLOITATION OF POWER-

Question- Does the skill of a negotiator determine outcome under equal power?

Findings- The larger the differences in the amount of skill between opponents the more skilled person will win against an adversary of equal power. Under equal power bargaining skill is a critical factor in determining outcome.

ESTIMATING RESULTS-

1. Skilled and unskilled negotiators estimate the wants of an opponent poorly. Both usually estimate the wants of an opponent on the basis of their own wants, not the opponents.

The correlation between what a negotiator wants and what they think the opponent wants is usually very high.

The fable among negotiators that a good person knows what the opponent really wants has not been confirmed in the research.

SETTLEMENT TIME-

1. Extremely quick settlements usually result in extreme outcomes.
2. Settlement occurs shortly before deadline.

A significant number of settlements occur in the very last stages of bargaining. The establishment of time limits seems to force agreement.

3. Extremely quick settlements seem to favor skilled negotiators.

DEADLOCK-

1. Persons with extremely high aspirations fail less. They succeed or deadlock more often than those who want less.
  2. Persons with extremely high aspirations who possess power succeed very well if they don't deadlock.
  3. Where one or both parties have extremely high aspiration the probability of a deadlock is higher than if neither party has high aspirations.
-

## RESEARCH FINDINGS...SUMMARY

### S U M M A R Y

1. Skilled negotiators are very successful when they have high aspirations or are lucky enough to face unskilled opponents with equal power:
2. Unskilled negotiators are losers except when they have power and high aspirations.
3. Successful negotiators:
  - Make high initial demands
  - Avoid making first concessions
  - Concede slowly
  - Avoid making as many large concessions as their opponents.
4. Successful negotiators use concession in a dynamic way. Constantly test the validity of their assumptions and the intent of their opponents.



NEGOTIATION SKILLS:

A QUICK REFERENCE GUIDE

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# NEGOTIATION-----THEORY AND PRACTICE.

## INTRODUCTION

NEGOTIATIONS ARE ONE OF THE BEST WAYS TO RESOLVE CONFLICTING INTERESTS. THEY COMBINE COERCION WITH COMPROMISE, HARD BARGAINING WITH JOINT PROBLEM-SOLVING. BOTH COMPETITION AND COOPERATION ARE NECESSARY. YOU MUST STRIVE FOR THE BEST OUTCOME WITHOUT CREATING SO MUCH RESISTANCE THAT YOU GET NO OUTCOME AT ALL.

NEGOTIATIONS ARE AN INESCAPABLE PART OF LIFE, YET MANY PEOPLE AVOID THEM. SOME IGNORE CONFLICTS BETWEEN INTERESTS AND PRETEND THAT ALL DISPUTES CAN BE SETTLED IN A FRIENDLY, COOPERATIVE WAY. THIS ATTITUDE OFTEN MAKES THE OTHER PARTY GREEDY, AND IT CAN WEAKEN A BARGAINING POSITION.

OVEREMPHASIZING THE COMPETITIVE AND COERCIVE ASPECTS OF NEGOTIATIONS CAN BE EQUALLY DISASTROUS. IF YOU LET YOUR DESIRE TO BEAT THE 'OPPONENT' DOMINATE YOUR TACTICS, YOU MAY END UP WITH NO DEAL AT ALL.

THE FOCUS OF THE NEGOTIATION SKILLS REFERENCE GUIDE IS TO DESCRIBE HOW TO BALANCE COMPETITION AND COOPERATION. HOPEFULLY IT WILL HELP YOU TO CREATE AND USE POWER WHEN NECESSARY, TO CREATE AND USE TRUST WHEN IT IS ESSENTIAL. THIS BALANCE IS THE HEART OF NEGOTIATIONS.

STEVE RUMA

PURE BARGAINING (SHARE BARGAINING)

THIS IS A PROCESS BY WHICH THE PARTICIPANTS SHARE OR RATION THE SETTLEMENT RANGE BETWEEN THEMSELVES. IF ONE GETS MORE, THE OTHER GETS LESS.

MOST RELEVANT FORM OF BARGAINING WHEN THERE IS A FIXED AMOUNT.

PURE OR SHARE BARGAINING IS A WIN-LOSE PROCESS. EACH GAIN FOR ONE SIDE IS BALANCED BY AN EQUAL LOSS FOR THE OTHER.

SINCE INTERESTS DIRECTLY CONFLICT, PURE BARGAINING IS ALWAYS COMPETITIVE AND BASED ON POWER. YOU CANNOT CONVINCED MOST PEOPLE TO LOSE FOR YOUR GAIN, BUT YOU MAY BE ABLE TO "FORCE" THEM TO DO SO.

EXAMPLES: IF THE DEAN RECEIVES \$25,000.00 MORE FROM THE FACULTY PRACTICE INCOME (AS A RESULT OF NEGOTIATION)--THE DEPARTMENT OR FACULTY HAS \$25,000.00 LESS.

PRICE NEGOTIATIONS ARE ALMOST ALWAYS ENTIRELY SHARE BARGAINING BECAUSE LOSSES EQUAL GAINS.

## JOINT PROBLEM SOLVING

THE PROCESS BY WHICH BOTH PARTIES WORK TOGETHER TO SOLVE EACH OTHER'S PROBLEMS.

IF YOU CAN SOLVE JOINT PROBLEMS, BOTH GAIN AT THE SAME TIME. IT IS A WIN-WIN SITUATION.

JOINT PROBLEM SOLVING REFERS TO COMMON INTERESTS AND IS A COOPERATIVE ACTIVITY.

THE GOALS OF THE PARTICIPANTS ARE USUALLY SO LINKED THAT ANY PARTICIPANT CAN ATTAIN HIS GOAL IF, AND ONLY IF, THE OTHERS WITH WHOM HE IS LINKED CAN ATTAIN THEIR GOALS.

IT IS BASED ON TRUST AND OPEN COMMUNICATION, WHICH ALLOWS YOU TO DEFINE AND SOLVE PROBLEMS IN A MUTUALLY SATISFACTORY MANNER.

EXAMPLES: THE DELICATE NEGOTIATION BETWEEN THE DEAN, INDIVIDUAL POWERFUL FACULTY MEMBERS, KEY DEPARTMENTAL CHAIRMEN, THE HOSPITAL DIRECTOR, AND SOME FACULTY ORGANIZATION AROUND THE SELECTION OF MEMBERS FOR A SEARCH COMMITTEE FOR A NEW CHAIRMAN OF MEDICINE.

THE DEVELOPMENT OF AMBULATORY CARE PROGRAMS WHICH DEAL WITH THE NEEDS OF THE DEAN FOR INCREASED OPPORTUNITY FOR PRIMARY CARE EXPERIENCE FOR MEDICAL STUDENTS; THE NEEDS OF THE HOSPITAL DIRECTOR FOR INCREASED USE OF THE OUTPATIENT FACILITIES; THE NEEDS OF THE COMMUNITY FOR THE MEDICAL SCHOOL TO PROVIDE MORE SERVICES.

PURE BARGAINING vs JOINT PROBLEM SOLVING

THE CONTRAST

- |    |                          |                     |
|----|--------------------------|---------------------|
| 1. | WIN - LOSE               | WIN - WIN           |
| 2. | CONFLICTING INTERESTS    | COMMON INTERESTS    |
| 3. | BASED ON POWER           | BASED ON TRUST      |
| 4. | DISTORTED COMMUNICATIONS | OPEN COMMUNICATIONS |

SELECTING THE RIGHT APPROACH

PURE BARGAINING

JOINT PROBLEM SOLVING

INTERESTS CONFLICT

COMMON INTERESTS

MUCH MORE POWERFUL

WEAKER OR POWER IS EQUAL

DO NOT NEED A LONG-TERM  
HARMONIOUS RELATIONSHIP

NEED A CONTINUING AND  
HARMONIOUS RELATIONSHIP

OTHER PARTY IS USING  
PURE BARGAINING TACTICS

OTHER PARTY IS USING  
JOINT PROBLEM SOLVING TACTICS

FIXED AMOUNT

VARIABLE AMOUNT

## PURE BARGAINING

### DETERMINING THE BARGAINING RANGE

THE KEY QUESTION IS ALWAYS, "WHAT IS THE OPPONENT'S MSP (MINIMUM OR MAXIMUM SETTLEMENT POINT)?"

A DEAN, FOR EXAMPLE, NEEDS TO KNOW THE MAXIMUM PERCENTAGE A FACULTY PRACTICE WILL CONTRIBUTE. FACULTY PRACTICE "LEADERS" NEED TO KNOW THE MINIMUM PERCENTAGE THE DEAN WILL ACCEPT.

THE DIFFERENCE BETWEEN YOUR MSP'S IS THE BARGAINING RANGE.

IF THERE IS NO OVERLAP, IF THEY ARE UNWILLING TO GO TO YOUR MSP, THERE IS NO BARGAINING RANGE, AND THERE SHOULD BE NO DEAL.

IF THERE IS A BARGAINING RANGE, YOUR JOB IS TO GET AS MUCH OF IT AS POSSIBLE.

EXAMPLE: IF THE LOWEST PERCENTAGE OF FACULTY PRACTICE INCOME THE DEAN WILL ACCEPT IS 10% (\$500,000.) AND THE HIGHEST PERCENTAGE THEY WILL "CONTRIBUTE" IS 12% (\$600,000.), THE BARGAINING RANGE IS \$100,000.

\$100,000 BARGAINING RANGE

---

\$500,000.

YOUR MSP

\$600,000.

THEIR MSP



THE MOST IMPORTANT TASKS:

- A. SETTING A FIRM MSP
- B. CONCEALING YOUR MSP
- C. ESTIMATING THEIR MSP

## A. SETTING A FIRM MSP.

THE MOST SERIOUS NEGOTIATING ERROR IS TO BEGIN NEGOTIATIONS WITHOUT AN ABSOLUTELY FIRM MSP. ABSOLUTELY FIRM MEANS THAT UNDER NO CIRCUMSTANCES WILL YOU ACCEPT LESS. IT IS THE POINT AT WHICH YOU WILL NOT ACCEPT THE DEAL. IT SHOULD BE BASED ON A COLD-BLOODED ANALYSIS OF YOUR "ECONOMICS."

MANY WITHIN A MEDICAL CENTER ARGUE THAT THEY CANNOT SET A FIRM MSP BECAUSE THERE ARE TOO MANY VARIABLES, "WE JUST TRY TO GET THE BEST POSSIBLE DEAL." THAT APPROACH IS THE EQUIVALENT OF ORGANIZATIONAL OR MANAGERIAL SUICIDE. IT IS ASKING TO LOSE.

IF YOU BEGIN NEGOTIATIONS WITHOUT A FIRM MSP, YOU RISK MAKING A BAD DEAL. ONCE YOU START NEGOTIATING, YOUR NATURAL DESIRE TO MAKE A DEAL INFLUENCES YOUR JUDGMENT.

YOU NATURALLY FEEL THAT A DEAL IS A "VICTORY", AND A DEAD-LOCKED NEGOTIATION IS A "DEFEAT." YOU MAY THEREFORE MAKE ONE "LITTLE" CONCESSION AFTER ANOTHER, HOPING TO PULL OUT A VICTORY.

A FIRM MSP ALSO INCREASES YOUR POWER. SINCE YOU WILL NOT ACCEPT A DEAL BELOW IT, YOU HAVE ALL THE PSYCHOLOGICAL POWER WHEN THE POTENTIAL DEAL IS AT YOUR MSP.

ESTIMATING THEIR SETTLEMENT POINT

U R G E N C Y

A L T E R N A T I V E S

P O L I T I C A L S I T U A T I O N

A P P R O A C H T O N E G O T I A T I O N S

MAXIMIZING YOUR SHARE OF THE RANGE

1. THE NAME OF THE GAME ---  
POWER RELATIONSHIPS
  
2. THREATS
  
3. MUTUAL CONCESSION RITUALS
  
4. SPLITTING THE DIFFERENCE
  
5. SAVING FACE

## ANALYZING POWER RELATIONSHIPS

1. GOVERNANCE PROCESSES
2. POWER:
  - . POSITION
  - . REPUTATION
  - . SUPPORT SYSTEMS
  - . RESOURCE
  - . ACTUAL COMPETENCE
3. INTEGRAL CONSTITUENCIES
  - . INDIVIDUALS
  - . COALITIONS
4. PUBLICLY COMMITTED POSITIONS
5. FINAL DECISION-MAKING MODE
6. PRESENT PERSONAL AND PROFESSIONAL RELATIONSHIPS
7. HISTORY OF PREVIOUS "NEGOTIATIONS"

## THE MUTUAL CONCESSION RITUAL

MUTUAL CONCESSIONS ARE THE ESSENCE OF NEGOTIATIONS.

A REFUSAL TO COMPROMISE IS REGARDED AS A SIGN THAT ONE IS NOT "NEGOTIATING IN GOOD FAITH."

YOU MUST THEREFORE LEAVE YOURSELF LOTS OF ROOM TO MAKE CONCESSIONS, EVEN IF THEY ARE MEANINGLESS.

IN MULTIPLE ISSUE NEGOTIATIONS, LEAVE YOURSELF PLENTY OF ROOM ON EVERY ISSUE.

GIVE A LITTLE AT THE END.

SAVE A LITTLE TO OFFER AS A FINAL CONCESSION.

IF YOUR ORIGINAL OFFER IS TOO CLOSE TO YOUR MSP, OR IF YOU MOVE TOO RAPIDLY TO YOUR MSP, YOU MAY BE UNABLE TO MAKE ENOUGH CONCESSIONS TO CONVINCe THEM THAT YOU ARE BARGAINING IN GOOD FAITH.

## CONCESSION BEHAVIOR

A VERY HIGH UNEXPECTED INITIAL DEMAND TENDS TO LEAD TO SUCCESS RATHER THAN FAILURE OR DEADLOCK.

LARGE INITIAL DEMANDS IMPROVE THE PROBABILITY OF SUCCESS.

GIVE YOURSELF ROOM TO COMPROMISE.

LOSERS TEND TO MAKE THE FIRST COMPROMISE.

SKILLED BARGAINERS FORCE THE OPPONENTS TO OFFER THE FIRST CONCESSION.

PEOPLE WHO MAKE SMALL CONCESSIONS DURING NEGOTIATIONS FAIL LESS.

SKILLED NEGOTIATORS MAKE LOWER CONCESSIONS AS THE DEADLINE APPROACHES.

LOSERS MAKE THE LARGEST SINGLE CONCESSIONS IN A NEGOTIATION.

## SPLITTING THE DIFFERENCE

RESEARCH INDICATES THAT THE FINAL SETTLEMENT IS GENERALLY CLOSE TO THE MIDPOINT OF THE HARD BARGAINING RANGE (THE RANGE ESTABLISHED WHEN BOTH PARTIES DIG IN THEIR HEELS AND GET TOUGH). YOU THEREFORE CANNOT AFFORD TO MAKE EASY CONCESSIONS IN THE EARLY STAGES.

## SAVING FACE

UNDERLYING THE FINAL CONCESSION RITUALS IS THE NEED FOR EVERYONE TO SAVE FACE.

SOME COMMON PHRASES ARE PARTICULARLY DANGEROUS. THE AUTOMATIC REACTIONS TO "TAKE IT OR LEAVE IT" OR "IS THAT YOUR FINAL OFFER?" USUALLY ARE----"I'LL LEAVE IT." OR, "OF COURSE IT'S MY FINAL OFFER."

SOME PEOPLE FEEL THAT THEY MUST THEN BACK UP THEIR WORDS BY REFUSING TO BUDGE ANOTHER INCH. YOU CANNOT AFFORD TO MAKE YOUR OPPONENTS RIGID. DON'T LET THEIR EGO BECOME ATTACHED TO THEIR BARGAINING POSITION.



SUCCESSFUL NEGOTIATORS:

- MAKE HIGH INITIAL DEMANDS
- AVOID MAKING FIRST CONCESSIONS
- CONCEDE SLOWLY
- AVOID MAKING AS MANY LARGE CONCESSIONS AS OPPONENTS

## JOINT PROBLEM SOLVING

UNLESS THE ISSUES ARE COMMON AND INTERDEPENDENT AND DEMAND COOPERATION TO SOLVE EACH OTHER'S PROBLEMS, THERE IS NO OPPORTUNITY FOR JOINT PROBLEM SOLVING.

DURING YOUR PREPARATION YOU SHOULD CLASSIFY ISSUES INTO THREE TYPES: PURELY COMPETITIVE, PRIMARILY COOPERATIVE, AND MIXED.

EXAMPLE: IN A DEAN-FACULTY PRACTICE ASSOCIATION NEGOTIATION THE DEAN'S PERCENTAGE WOULD PROBABLY BE PURELY COMPETITIVE; ESTABLISHING A MORE EFFECTIVE PROCESS FOR PARTICIPATION IN DECISION-MAKING BY FACULTY PRACTICE REPRESENTATIVES COULD BE PRIMARILY COOPERATIVE; AND WORKING CONDITIONS IN THE FACULTY PRACTICE OFFICES COULD BE MIXED.

CRITERIA FOR THE SELECTION OF JOINT PROBLEM  
SOLVING AS THE MODE FOR NEGOTIATION

THE ISSUES SHOULD REQUIRE THAT EVERY MEMBER -

- IS AT LEAST PARTIALLY SATISFIED WITH THE OUTCOME
- HAS NO SIGNIFICANT RESISTANCES RE: FINAL DECISION
- FEELS RESPONSIBLE FOR SHARING CONSEQUENCES OF DECISION
- IS COMMITTED TO SUCCESSFUL IMPLEMENTATION

KEY ELEMENTS NECESSARY FOR  
COMMITMENT TO JOINT PROBLEM SOLVING

1. ACUTE DISSATISFACTION WITH THINGS ARE THEY ARE.
2. AROUSAL OF AN APPROPRIATE LEVEL OF MOTIVATION TO WORK COOPERATIVELY --- ON BOTH SIDES.
3. DEVELOPMENT OF CONDITIONS THAT PERMIT THE REFORMULATION OF THE PROBLEM ONCE AN IMPASSE HAS BEEN REACHED.
4. A SOCIAL TRADITION THAT FOSTERS AN OPTIMISTIC VIEW THAT WITH TIME AND EFFORT. CONSTRUCTIVE SOLUTIONS CAN BE DISCOVERED AND INVENTED TO PROBLEMS.
5. APPROPRIATE SIZE PAYOFFS---EITHER TOO LARGE OR TOO SMALL PAYOFFS MAKE COOPERATIVE EFFORTS DIFFICULT.
6. ADEQUATE TIME FOR CONFLICTS AND DIFFERENCES TO BE HONESTLY WORKED THROUGH--NOT THE ILLUSION OF AGREEMENT.

PROCEDURAL GUIDELINES

1. IDENTIFY ISSUES WITH CLEARLY COOPERATIVE ELEMENTS.
2. CHECK FOR AGREEMENT ON DEFINITION OF ISSUES.
3. IF POSSIBLE, TAKE COOPERATIVE ISSUES OUT OF CENTRAL NEGOTIATIONS.
4. GO SLOWLY ON MIXED ISSUES.

## IN - GROUP BARGAINING

THE PROCESS BY WHICH A "NEGOTIATOR" BARGAINS WITH MEMBERS OF HIS OWN "TEAM" AND DECISION-MAKING GROUP TO DERIVE WORKABLE GOALS.

THIS KIND OF BARGAINING IS ESPECIALLY IMPORTANT WHENEVER AN INDIVIDUAL REPRESENTS A CONSTITUENCY.

IN A STRICT SENSE, ORGANIZATIONS DO NOT HAVE OBJECTIVES, BUT PEOPLE WITHIN THEM DO. EACH MEMBER OF A DECISION-MAKING COALITION HAS HIS OWN LEVEL OF ASPIRATIONS AND A PERSONAL DEFINITION OF THE CRITICAL ISSUES. THE NEGOTIATOR IS BUT ONE MEMBER OF THE COALITION THAT ESTABLISHES GROUP GOALS. FURTHERMORE, EACH OF THE MEMBERS HAS AN INDIVIDUAL VALUE SYSTEM AND REPRESENTS A DIFFERENT DEGREE OF POWER, STATUS, AND BARGAINING SKILL.

WHAT WE NORMALLY CALL BARGAINING OBJECTIVES IS REALLY AN OUTCOME OF THE IN-GROUP PROCESS.

IN SUCH CASES THE "NEGOTIATOR" IS FACED WITH THE UNCOMFORTABLE TASK OF RECONCILING A BEWILDERING NUMBER OF IN-GROUP DEMANDS.

## I N - G R O U P B A R G A I N I N G

1. ANTICIPATE, INFLUENCE THE COALITION IN THE FORMATIVE STAGE.
2. DEVELOP ONE-TO-ONE RELATIONSHIPS BEFORE A GROUP RELATIONSHIP.
3. SET YOUR OWN CLEAR MSP FOR THE GROUP'S OUTCOME.
4. IF YOU ARE THE GROUP CONVENER, DECIDE ON FINAL DECISION PROCESS. IF NOT, GET DECISION-MAKING PROCESS CLARIFIED.
5. DECIDE ON BEST WORKABLE RELATIONSHIP (OR NON-RELATIONSHIP) WITH EACH INDIVIDUAL. (I.E. AN MSP WITH EACH INDIVIDUAL)
6. DETERMINE THE DEGREE OF GROUP COHESIVENESS NEEDED TO DEAL EFFECTIVELY WITH THE ISSUE AT HAND. (I.E. A GROUP PROCESS MSP)

DIAGNOSE CURRENT LEVEL OF COHESIVENESS.

DO WHATEVER IS NECESSARY TO GET THE MINIMUM COHESIVENESS.

7. WORK MAJOR VESTED INTEREST AND CONFLICT ISSUES, WHICH DO NOT INVOLVE THE ENTIRE GROUP, WITH INDIVIDUALS AND SUB-GROUPS OUTSIDE OF TOTAL GROUP MEETINGS.
8. CREATE AND MANAGE FUNCTIONAL ILLUSIONS OF PARTICIPATION FOR THE MYRIAD OF INTERESTED OTHERS.

## INTRA - ORGANIZATIONAL BARGAINING

INTRA-ORGANIZATIONAL BARGAINING OCCURS BECAUSE DIFFERENT PARTS OF EACH ORGANIZATION HAVE DIFFERENT GOALS. THIS FORM OF BARGAINING IS PARTICULARLY PREVALENT IN A MEDICAL SCHOOL WITHIN AN ACADEMIC MEDICAL CENTER.

MOST OF THE INTRA-ORGANIZATIONAL ISSUES AT THE PRESENT TIME MUST BE DEALT WITH BY MIXING TOGETHER THE TWO SUB-PROCESSES OF PURE BARGAINING, WHICH IS COMPETITIVE AND POWER ORIENTED-- AND JOINT PROBLEM SOLVING, WHICH IS MUTUALLY COOPERATIVE AND TRUST ORIENTED.

DEANS AND OTHER MEDICAL CENTER ADMINISTRATORS ARE DEALING FREQUENTLY WITH ISSUES WHICH DEMAND MIXED NEGOTIATION STRATEGIES.

EXAMPLES: HIGHLY PRICED PROFESSIONALS SUCH AS SURGEONS AND OTHER CLINICAL FACULTY WANT TO PRESERVE SALARY DIFFERENTIALS (AND IN FACT NEGOTIATE FOR MARKETPLACE \$) WHILE MOST OTHER MEMBERS OF THE FACULTY, ESPECIALLY THE BASIC SCIENTISTS WANT TO REDUCE THEM.

BASIC SCIENTISTS AND MANY RESEARCH ORIENTED CLINICAL FACULTY HAVE STRONG PREFERENCES TO HAVE EDUCATION AND RESEARCH BE THE PRIORITY MISSIONS OF THE MEDICAL SCHOOL AND THEREFORE ADVOCATE THAT SCARCE RESOURCES SUCH AS SPACE BE ALLOCATED TO ACCOMPLISH THOSE MISSIONS.



## SUMMARY OF NEGOTIATING TASKS

1. SET YOUR MSP ON EACH ISSUE.
2. SET YOUR PRIORITIES. ESPECIALLY IN MULTIPLE ISSUE NEGOTIATIONS.
3. DECIDE HOW MUCH YOU WILL TRADE-OFF ON MINOR ISSUES TO OBTAIN MSP ON MAJOR ISSUES.
4. PLAN A NEGOTIATION STRATEGY.
  - A. MAKE A TENTATIVE JUDGMENT OF OPPONENT'S MSP AND PRIORITIES.
  - B. SET AN OPENING POSITION.
  - C. PLAN CONCESSIONS AND THE ORDER IN WHICH YOU'LL MAKE THEM.
  - D. DECIDE ON IMAGE YOU WANT TO CREATE - ESPECIALLY RE: POWER.
  - E. IDENTIFY ISSUES WITH JOINT PROBLEM SOLVING POTENTIAL.
  - F. IF POSSIBLE, SEPARATE COOPERATIVE ISSUES FROM CENTRAL TALKS INVOLVING COMPETITIVE PURE BARGAINING.
  - G. CONSOLIDATE A-F INTO A COMPREHENSIVE STRATEGY.
5. GET AGREEMENT ON A-F, AND THE BARGAINING STRATEGY FROM KEY COALITIONS WHO HAVE A STAKE IN THE ISSUES.

SUGGESTED READINGS

1. WALTON AND MCKERSIE, A BEHAVIORAL THEORY OF LABOR NEGOTIATIONS, MCGRAW-HILL, 1965.

The most comprehensive analysis of negotiating behavior. Their principles apply to all types of negotiations. Somewhat academic, and therefore hard to read quickly-- but worth the effort you put into it.

2. KARRASS, C.L., GIVE AND TAKE, THOMAS Y. CROWELL., 1974

Readable and useful, but poorly organized and anecdotal. Also almost all of the examples are difficult to translate to the reality of an academic medical center.

3. KARRASS, C.L., THE NEGOTIATING GAME, THOMAS Y. CROWELL, 1970

Also readable and more useful than Give and Take. The book is divided into three parts. The first deals with a large experiment involving professional negotiators. The second and third parts of the book are theoretically and how-to-do-it oriented. Not bad to spend time with hanging over the sky in a holding pattern.

4. NIERENBERG, THE ART OF NEGOTIATING

The best-selling book. Easy to read, but superficial, anecdotal, and excessively oriented to cooperation. He seems to view all negotiations as problem-solving sessions.

\*\*\*\*\*

Governance -----Part I "Theory" Steve Ruma

I. Health Care: Largest Industry in the U.S. Economy  
Academic Medicine in context of health care industry  
Financial Support of U.S. Medical Schools

II. The Academic Health Science Center  
Three interdependent "organizations"--  
Semi-autonomous research institutes  
Professional School(s)  
Comprehensive Research, Training, Clinical Business

III. Forces Shaping Governance  
Governance groping for new forms.  
"Control" shifting to Center and Campus leadership.  
Shift from "incrementalism" to strategic planning.  
Shift from Administration to Management.

IV. Systems Models- Alternatives for Center Governance  
Consortium  
Overlapping Board  
Holding Company  
Corporate

V. Definitions-  
Governance  
Organization  
Power/Influence

VI. Overlapping and Conflicting Governance Processes-

Academic

Corporate

Political

Dispersed Power/ Interest Group "Theory"

VI. Organization Design

Functional--purpose: technical excellence

Project--purpose: coordination & control

Matrix--purpose: compromise, excellence & control

Mixed

Relationship of organization design to interdependent organizations and governance processes.

VII. Decision-making: Issues and Options--

Executive

Majority/Minority

Consensus

Relationship of decision-making structures to governance, organization design, and power and influence processes.

Managing the balance between high quality and high acceptance decisions.

VIII. Hierarchical and lateral interfaces--

The role of the Dean as Conductor of an orchestra playing improvised variations on a structured semi-anarchic theme...

Key players:

Vice President Health Affairs

Dean, School of Medicine

Director, Teaching Hospital

Chairpersons, Clinical Departments

Head, Sub-Specialty Sections

Chairpersons, Basic Science Departments

Ownership Environment:

Federal Agencies  
State Legislature  
State Agencies (e.g. Regents)  
University Trustees  
University Administration  
Medical Center/Health Affairs Administration  
Medical School Administration  
Clinical Chairpersons  
Basic Science Chairpersons  
Hospital Trustees  
Hospital Administration  
Philanthropic Organization heads (eg Hughes)  
etc.

Issues shaping Governance--

1. Compliance norms in transition.
2. Dean vis-a-vis VP Health Affairs; University management  
Roles, Responsibilities, Relationships
3. Tripartite management:  
VP--Dean--Hospital Director  
Dean--Clinical Chairs--Hospital Director
4. Excess "manufacturing" capacity.  
Enrollment  
Research facilities  
Size of faculty  
Hospital beds
5. Reorganization of Basic Sciences
6. Management of research resources  
Space, Seed \$, FTE's  
Research intensive---Non-research schools
7. Organization of Deanery
8. Policy and practice re: faculty practice
  - a. Revenue
  - b. Organization
9. Acceptance and incorporation of for-profit activities
  - a. Organizational relationships with for-profit corporations  
Clinical service organizations  
Industry sponsored research  
Venture capital/technology transfer  
(e.g. Harvard, Stanford, UT Dallas)
  - b. Faculty involvement
10. Marketing: University and/or Regent ratification  
Image, mission !?
11. Faculty physician unions
12. Academic Medical Center--  
A separate but related unit to parent University?

SEMI-AUTONOMOUS  
RESEARCH INSTITUTES

PROFESSIONAL  
SCHOOL

BUSINESS

ACADEMIC

POLITICAL

CORPORATE

FUNCTIONAL

PROJECT

MATRIX

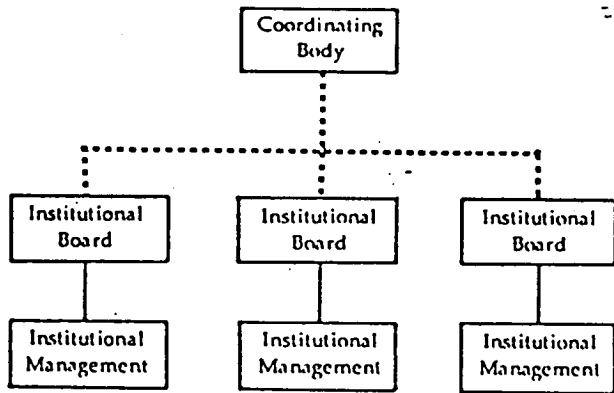
CONSENSUS

MAJ/MIN

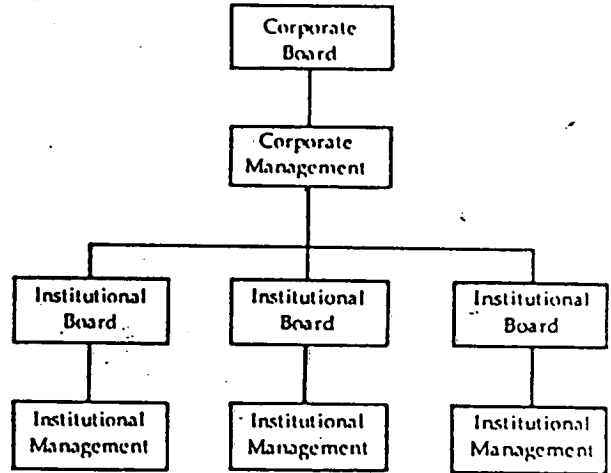
EXECUTIVE

THE FOUR BASIC TYPES OF SYSTEM STRUCTURES

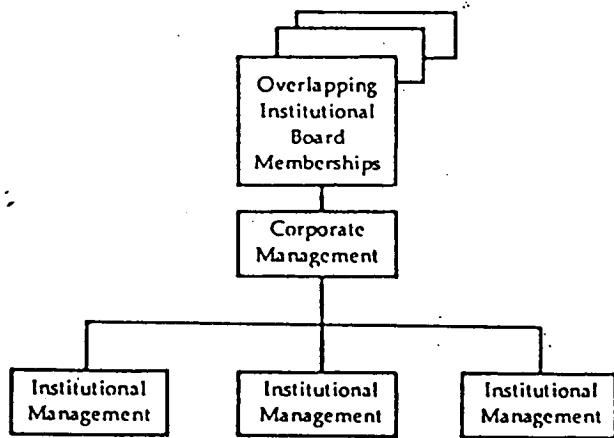
CONSORTIUM MODEL



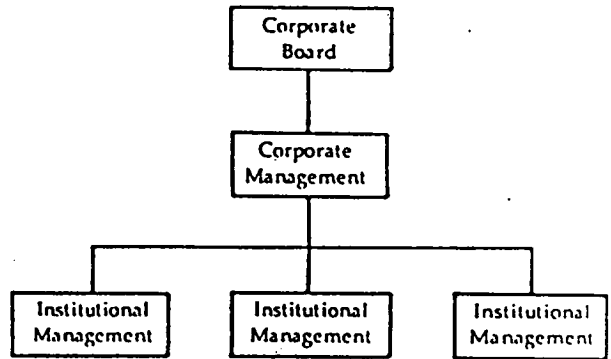
HOLDING COMPANY MODEL



OVERLAPPING BOARD MODEL



CORPORATE MODEL



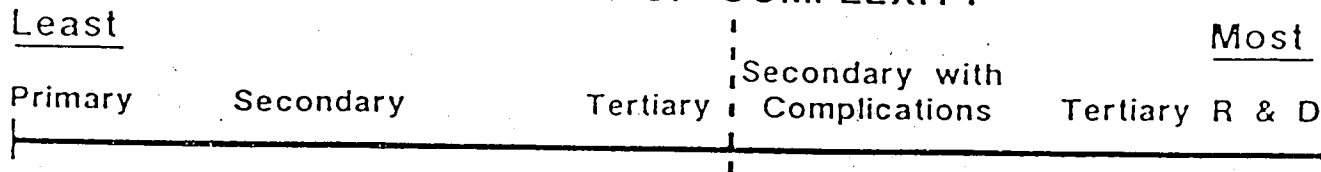


**POWER:** A PERSON EXERCISES POWER WHEN, AS A DIRECT RESULT OF AN INTERVENTION, HIS/HER PREFERENCES ARE INCORPORATED IN THE FINAL DECISION.

**INFLUENCE:** A PERSON HAS INFLUENCE IF, AS A RESULT OF DIRECT OR INDIRECT INTERVENTION HIS/HER PREFERENCES ARE CONSIDERED IN THE PROCESS OF ARRIVING AT A DECISION.

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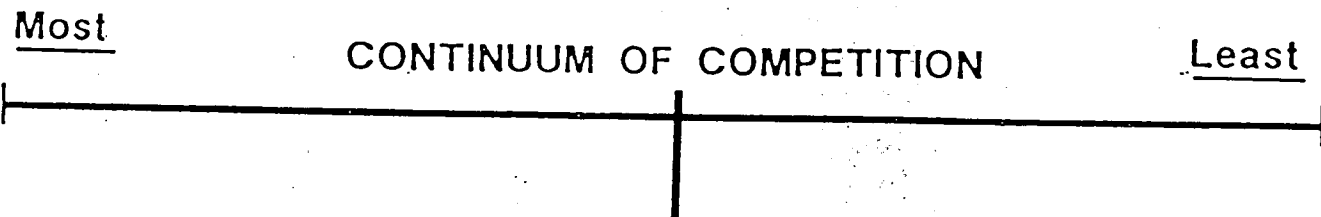
### CONTINUUM OF COMPLEXITY



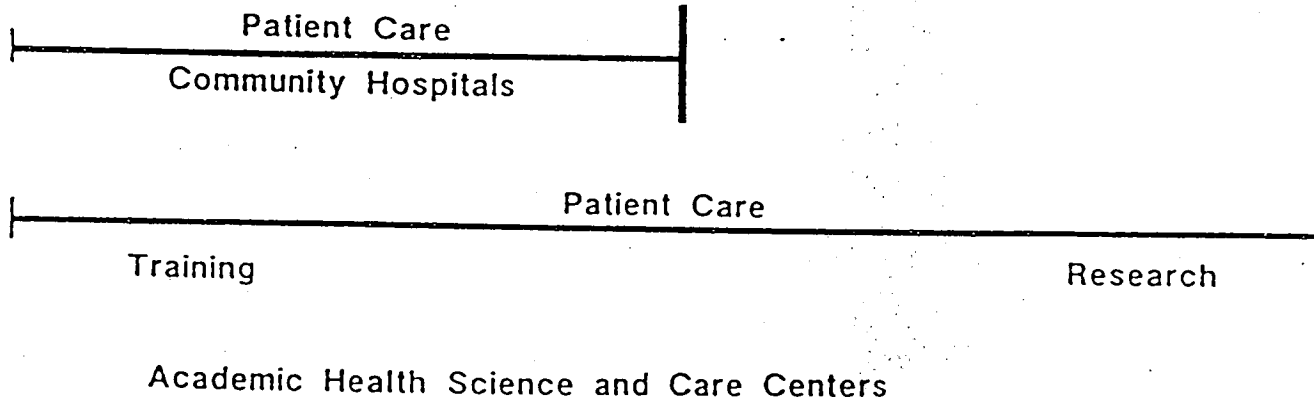
### CONTINUUM OF COST



### CONTINUUM OF COMPETITION



### CONTINUUM OF PRODUCTS



**GOVERNANCE**

**ACADEMIC CORPORATE**

**POLITICAL**

**ORGANIZATION**

**SEMI-  
AUTONOMOUS  
RESEARCH  
INSTITUTES**

**PROFESSIONAL  
SCHOOLS**

**COMPREHENSIVE  
CLINICAL  
BUSINESS**

# THREE IMAGES OF MEDICAL CENTER GOVERNANCE

BASIC IMAGE	POLITICAL	CORP./ BUREAUCRATIC	ACADEMIC / COLLEGIAL
Change Processes	Primary Concern	Minor Concern	Minor Concern
Conflict	Viewed as normal: Key to analysis of policy influence	Viewed as abnormal; to be controlled by bureaucratic sanctions	Viewed as abnormal; eliminated in a "true community of scholars"
View of Social Structure	Pluralistic; fractured by subcultures & divergent interest groups	Unitary; integrated by the formal bureaucracy	Unitary; united by the "Community of Scholars"
Basic Theoretical Foundations	Conflict Theory Interest Group Theory Power Theory	Weberian Bureaucratic Classical Formal Systems	Human Relations Approach to Organizations Literature on Professionalism
View of Decision-Making	Negotiation, bargaining, and political influence processes	Rationalistic, formal bureaucratic procedures	Shared, collegial decisions
Goal Setting and Policy: Formulation or Execution?	Emphasis on Formulation	Emphasis on Execution	Unclear: Probably more emphasis on Formulation

DISPERSED POWER ----- COALITIONS

THE MORE SOURCES OF UNCERTAINTY OR  
CONTINGENCY FOR THE ORGANIZATION

THE MORE BASES THERE ARE FOR POWER  
AND THE LARGER NUMBER OF POLITICAL  
POSITIONS IN THE ORGANIZATION.

DISPERSED POWER -----COALITIONS

2.

DECENTRALIZATION DILUTES THE  
POWER STRUCTURE BY CREATING  
MORE POWER POSITIONS BUT  
LIMITING THE ORGANIZATION'S  
DEPENDENCE ON EACH ONE.

\*\*\*\*\*

DISPERSED POWER ----- COALITIONS

3.

WHEN POWER IS WIDELY DISTRIBUTED

AN INNER CIRCLE EMERGES TO

CONDUCT COALITION BUSINESS.

\*\*\*\*\*

DISPERSED POWER -----COALITIONS

4.

THE ORGANIZATION WITH DISPERSED  
BASES OF POWER IS IMMOBILIZED  
UNLESS THERE EXISTS AN  
EFFECTIVE INNER CIRCLE.

\* \* \* \* \*



DISPERSED POWER ----- COALITIONS

5.

IN THE ORGANIZATION WITH  
DISPERSED POWER, THE CENTRAL  
POWER FIGURES ARE THE INDIVIDUAL  
WHO CAN MANAGE THE COALITIONS.

\*\*\*\*\*

DISPERSED POWER ----- COALITIONS

---

6.

WHEN POWER IS WIDELY DISPERSED  
COMPROMISE ISSUES CAN BE  
RATIFIED BUT CANNOT BE DECIDED  
BY THE DOMINANT COALITION  
IN TOTO.

\*\*\*\*\*

DISPERSED POWER ----- COALITIONS

7.

POTENTIAL FOR CONFLICT WITHIN  
THE DOMINANT COALITIONS  
INCREASES WITH INTERDEPENDENCE  
OF THE MEMBERS (AND THE AREAS  
THEY REPRESENT OR CONTROL).

\*\*\*\*\*

DISPERSED POWER ----- COALITIONS

8.

POTENTIAL FOR CONFLICT WITHIN  
THE DOMINANT COALITION INCREASES  
AS EXTERNAL FORCES REQUIRE  
INTERNAL COMPROMISE ON OUTCOME  
PREFERENCES.

\* \* \* \* \*

DISPERSED POWER ----- COALITIONS

9.

POTENTIAL FOR CONFLICT WITHIN  
THE DOMINANT COALITION INCREASES  
WITH THE VARIETY OF PROFESSIONS  
INCORPORATED.

\* \* \* \* \*

DISPERSED POWER ----- COALITIONS

10.

INDIVIDUALS WITH RESPONSIBILITY  
WITHOUT APPROPRIATE AUTHORITY  
WILL SEEK A COALITION.

\* \* \* \* \*

— PARTICIPATION IS IMPERATIVE.

PARTICIPATION TAKES TIME.

PARTICIPATION AFFECTS ACCEPTANCE  
& QUALITY OF DECISIONS.

"REAL" PARTICIPATION DEMANDS STAFF  
WORK AND TIMELY INFORMATION.

PARTICIPATION BLURS AUTHORITY-----  
BUT NOT ACCOUNTABILITY.

PARTICIPATION IS AN INTEGRAL PART  
OF GOVERNANCE -----  
IT IS A POLITICAL PROCESS AND  
NEEDS TO BE MANAGED.

# DECISION MAKING MODES

EXECUTIVE

MAJORITY

CONSENSUS



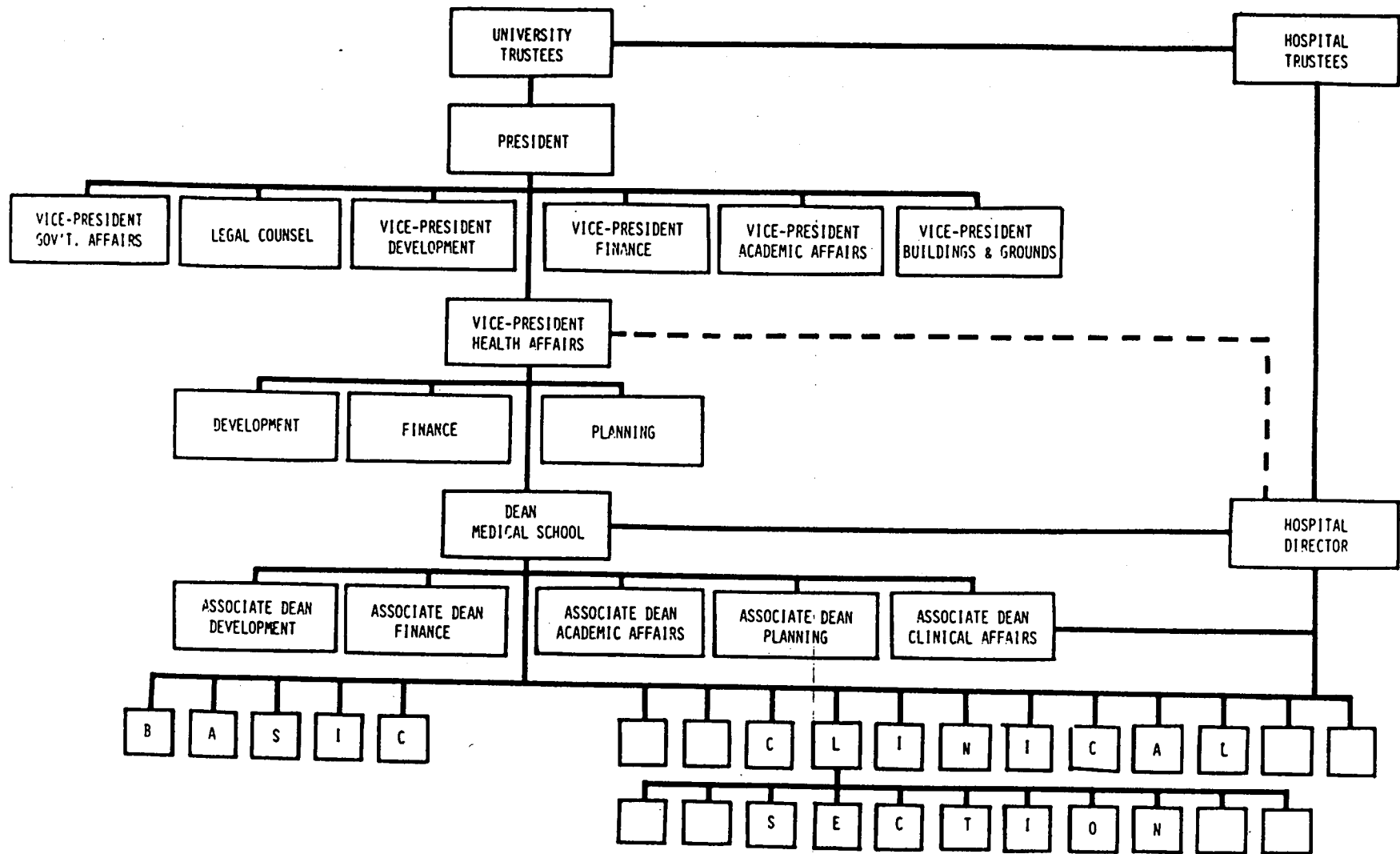
**HIGH  
QUALITY**

**LOW  
QUALITY**

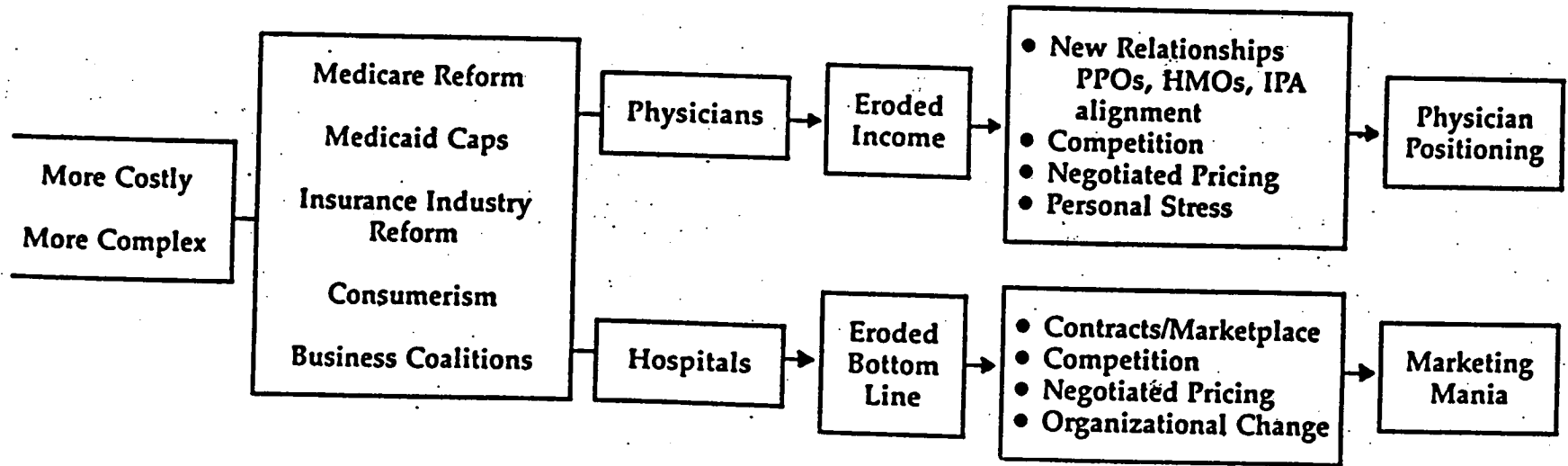
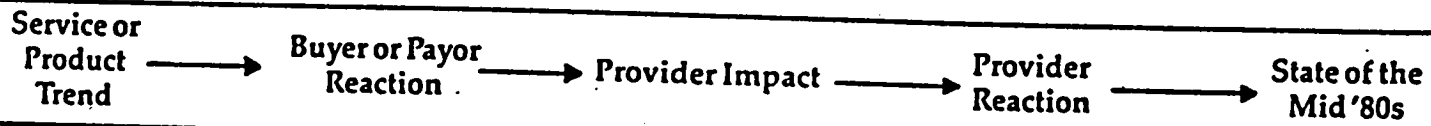
**HIGH  
ACCEPTANCE**

**LOW  
ACCEPTANCE**



## Healthcare Economic/Marketing Evolution



# UNDERSTANDING THE TYPE TABLE

FOUR PREFERENCES ARE SCORED TO ARRIVE AT A PERSON'S TYPE

..... DOES THE PERSON'S INTEREST FLOW MAINLY TO .....

<p><b>(E)</b> THE OUTER WORLD OF ACTIONS, OBJECTS AND PERSONS?</p> <p style="text-align: center;"><b>EXTRAVERSION</b></p>	<p>THE INNER WORLD OF CONCEPTS AND IDEAS? <b>(I)</b></p> <p style="text-align: center;"><b>INTROVERSION</b></p>
---	---

..... DOES THE PERSON PREFER TO PERCEIVE .....

<p><b>(S)</b> THE IMMEDIATE, REAL, PRACTICAL FACTS OF EXPERIENCE AND LIFE?</p> <p style="text-align: center;"><b>SENSING</b></p>	<p>THE POSSIBILITIES, RELATIONSHIPS AND MEANINGS OF EXPERIENCES? <b>(N)</b></p> <p style="text-align: center;"><b>INTUITION</b></p>
--	---

..... DOES THE PERSON PREFER TO MAKE JUDGMENTS OR DECISIONS .....

<p><b>(T)</b> OBJECTIVELY, IMPERSONALLY, CONSIDERING CAUSES OF EVENTS &amp; WHERE DECISIONS MAY LEAD?</p> <p style="text-align: center;"><b>THINKING</b></p>	<p>SUBJECTIVELY AND PERSONALLY, WEIGHING VALUES OF CHOICES &amp; HOW THEY MATTER TO OTHERS? <b>(F)</b></p> <p style="text-align: center;"><b>FEELING</b></p>
--	--

..... DOES THE PERSON PREFER MOSTLY TO LIVE .....

<p><b>(J)</b> IN A DECISIVE, PLANNED AND ORDERLY WAY, AIMING TO REGULATE &amp; CONTROL EVENTS?</p> <p style="text-align: center;"><b>JUDGMENT</b></p>	<p>IN A SPONTANEOUS, FLEXIBLE WAY, AIMING TO UNDERSTAND LIFE AND ADAPT TO IT? <b>(P)</b></p> <p style="text-align: center;"><b>PERCEPTION</b></p>
---	---

THE LOCATION OF THE 16 PREFERENCE TYPES ON THE TYPE TABLE

<b>ISTJ</b>	<b>ISFJ</b>	<b>INFJ</b>	<b>INTJ</b>
<b>ISTP</b>	<b>ISFP</b>	<b>INFP</b>	<b>INTP</b>
<b>ESTP</b>	<b>ESFP</b>	<b>ENFP</b>	<b>ENTP</b>
<b>ESTJ</b>	<b>ESFJ</b>	<b>ENFJ</b>	<b>ENTJ</b>

EXTRAVERSION-INTROVERSION

<b>I</b>	
<b>E</b>	

SENSING-INTUITION

<b>S</b>	<b>N</b>
----------	----------

THINKING-FEELING

<b>T</b>	<b>F</b>	<b>T</b>
----------	----------	----------

JUDGMENT-PERCEPTION

<b>J</b>
<b>P</b>
<b>J</b>

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ATTENTION GOES

ENERGY COMES FROM

BEST WORK DONE

SOME KEY DESCRIPTORS

EXTRAVERTS	INTROVERTS
outside . . . to people, objects and things	inside . . . to concepts, ideas and feelings
being with others	being alone
with others	alone
external extensive many relationships	internal intensive close relationships

THE PERCEIVING FUNCTIONS

WHAT

HOW

SOME KEY DESCRIPTORS

SENSING	INTUITION
facts, realities and immediate, practical considerations	meanings possibilities relationships
by using the five senses	by using intuition
experience utility sensible	hunches fantasy imaginative

THE JUDGING FUNCTIONS

CRITERIA

APPLIED HOW

SOME KEY DESCRIPTORS

THINKING	FEELING
abstract principles	personal values
impersonally oriented	person-centered
firmness categories critique right/wrong	persuasion harmonize appreciate good/bad

JUDGING

LIFE-STYLE ORIENTATION

ORIENTATION TO THE EXTERNAL WORLD

SOME KEY DESCRIPTORS

PERCEIVING

organized orderly decided planned	flexible spontaneous adaptable open options
speaks in terms of decisions judgments conclusions	speaks in terms of information perceptions data
run one's life closure urgency  deadlines!	let life happen open ended there's plenty of time what deadlines?

7  
EFFECTS OF EACH PREFERENCE IN WORK SITUATIONS

INTROVERTS

- Like quiet for concentration.
- Tend to be careful with details, dislike sweeping statements.
- Have trouble remembering names and faces.
- Tend not to mind working on one project for a long time uninterruptedly.
- Are interested in the idea behind their job.
- Dislike telephone intrusions and interruptions.
- Like to think a lot before they act, sometimes without acting.
- Work contentedly alone.
- Have some problems communicating.

EXTRAVERTS

- Like variety and action.
- Tend to be faster, dislike complicated procedures.
- Are often good at greeting people.
- Are often impatient with long slow jobs.
- Are interested in the results of their job, in getting it done and in how other people do it.
- Often don't mind the interruption of answering the telephone.
- Often act quickly, sometimes without thinking.
- Like to have people around.
- Usually communicate freely.

FEELING TYPES

- Tend to be very aware of other people and their feelings.
- Enjoy pleasing people, even in unimportant things.
- Like harmony. Efficiency may be badly disturbed by office feuds.
- Often let decisions be influenced by their own or other people's personal likes and wishes.
- Need occasional praise.
- Dislike telling people unpleasant things.
- Relate well to most people.
- Tend to be sympathetic.

THINKING TYPES

- Are relatively unemotional and uninterested in people's feelings.
- May hurt people's feelings without knowing it.
- Like analysis and putting things into logical order. Can get along without harmony.
- Tend to decide impersonally, sometimes ignoring people's wishes.
- Need to be treated fairly.
- Are able to reprimand people or fire them when necessary.
- Tend to relate well only to other thinking types.
- May seem hard-hearted.

## EFFECTS OF EACH PREFERENCE IN WORK SITUATIONS

### INTUITIVE TYPES

- Like solving new problems.
- Dislike doing the same thing over and over again.
- Enjoy learning a new skill more than using it.
- Work in bursts of energy powered by enthusiasm, with slack periods in between.
- Put two and two together quickly.
- Are impatient with routine details.
- Are patient with complicated situations.
- Follow their inspirations, good or bad.
- Often get their facts a bit wrong.
- Dislike taking time for precision.

### SENSING TYPES

- Dislike new problems unless there are standard ways to solve them.
- Like an established way of doing things.
- Enjoy using skills already learned more than learning new ones.
- Work more steadily, with realistic idea of how long it will take.
- Usually reach a conclusion step by step.
- Are patient with routine details.
- Are impatient when the details get complicated.
- Don't often get inspired, and rarely trust the inspiration when they do.
- Seldom make errors of fact.
- Tend to be good at precise work.

### PERCEPTIVE TYPES

- Tend to be good at adapting to changing situations.
- Don't mind leaving things open for alterations.
- May have trouble making decisions.
- May start too many projects and have difficulty in finishing them.
- May postpone unpleasant jobs.
- Want to know all about a new job.
- Tend to be curious and welcome new light on a thing, situation or person.

### JUDGING TYPES

- Best when they can plan their work and follow the plan.
- Like to get things settled and wrapped up.
- May decide things too quickly.
- May dislike to interrupt the project they are on for a more urgent one.
- May not notice new things that need to be done.
- Want only the essentials needed to get on with it.
- Tend to be satisfied once they reach a judgment on a thing, situation or person.

FOUR TEMPERAMENTS

---

Organizer/  
Stabilizer

SJ

Order  
Policies/Rules  
Accurate  
Discipline  
Stability  
Follow-thru

---

Negotiator/  
Trouble Shooter

SP

Diplomatic  
Crisis Management  
Risk-taking  
Develops Options  
Here and Now

---

Creator/  
Visionary

NT

Promotes Change  
Engages Complexity  
Intellectual Skill  
Creative  
Critical Analysis

---

Catalyst/  
Team Builder

NF

Personal  
Supportive  
Emotional Life  
Team Builder  
Develops People  
Wholeness

---



LEADERSHIP STYLES  
Traditionalist/Stabilizer  
(SJ)

LOOK AT THE WORLD AND SEE:

Facts & Realities

AND WANT TO:

Organize Them

THEY HAVE A LIFE-LONG DRIVE FOR:

Belonging to meaningful social institutions

AND THUS THEY ARE EFFECTIVE AS:

Stabilizers of organizations and maintainers of traditions

THEIR STRENGTHS INCLUDE:

- Being decisive
- Paying attention to organization's rules and regulations
- Bringing a planned, organized approach to work
- Dependable, steady workers, good at follow through
- Thorough, systematic, precise--especially with details

THEIR POTENTIAL WEAKNESSES INCLUDE:

RELIEF FROM CHARISMA

- Not always responsive to need for change
- Decide things too quickly
- Impatient with delays and complications
- Excessive concern for crises, which may not occur

THEIR CONTRIBUTIONS IN A  
WORK TEAM INCLUDE:

- Focus on what needs to be done to make systems work smoothly
- Focus on follow through
- Focus on important details

THEY LIKE TO BE APPRECIATED FOR:

- Their careful, thorough accurate work

Adapted from David Keirsev and Marilyn Bates, Please Understand Me  
by Alan W. Brownsword and Richard S. Goldstein

LEADERSHIP STYLE  
Trouble-Shooter/Negotiators  
(SP)

LOOK AT THE WORLD AND SEE:

Facts & Realities

AND WANT TO:

Collect more, manipulate them

THEY HAVE A LIFE-LONG DRIVE FOR:

Action, activity, competition

AND THUS THEY ARE EFFECTIVE AS:

Trouble-shooters and negotiators

THEIR STRENGTHS INCLUDE

- A practical approach to concrete problems, especially in crisis situations
- Adaptability, flexibility
- Taking risks
- Making things work-fast

CRISIS CHARISMA

THEIR POTENTIAL WEAKNESSES INCLUDE:

- Dislike for theory
- Unpredictability
- Becoming bored when there are no crises
- Producing written document

THEIR CONTRIBUTIONS IN A  
WORK TEAM INCLUDE:

- Making things happen
- Spotting problems

THEY LIKE TO BE APPRECIATED

- The clever way they get things done

Adapted from David Keirsey and Marilyn Bates, Please Understand Me  
by Alan W. Brownsword and Richard S. Goldstein

LEADERSHIP STYLE  
Visionaries  
(NT)

LOOK AT THE WORLD AND SEE:

Possibilities, meanings, relationships

AND WANT TO:

Examine their consequences analytically,  
impersonally

THEY HAVE A LIFE-LONG DRIVE FOR:

Competence

AND THUS THEY ARE EFFECTIVE AS:

Architects of change--visionaries

THEIR STRENGTHS INCLUDE:

- Conceptualizing, designing, especially with regard to organizational change
- Setting high standards
- Seeing the large picture, the complexities
- Grasping underlying principles, laws, dynamics

THEIR POTENTIAL WEAKNESSES INCLUDE:

IDEA CHARISMA

- Do not easily show sensitivity and appreciation to subordinates
- Not following through on details--gets bored with routine
- Elitist
- Impatient with those who aren't seen as competent

THEIR CONTRIBUTIONS IN A  
WORK TEAM INCLUDE:

- Tracking thought processes
- Problem solving
- Providing theoretical input
- Contagious enthusiasm for ideas

THEY LIKE TO BE APPRECIATED FOR:

The quality of their ideas and their intellectual competency

Adapted from David Keirsej and Marilyn Bates, Please Understand Me  
by Alan W. Brownsword and Richard S. Goldstein

LEADERSHIP STYLE  
Catalysts  
(NF)

LOOK AT THE WORLD AND SEE:

Possibilities, meanings, relationships

AND WANT TO:

Judge their value to persons and for people

THEY HAVE A LIFE-LONG DRIVE FOR:

Identity

AND THUS THEY ARE EFFECTIVE AS:

Catalysts

THEIR STRENGTHS INCLUDE:

- Drawing out the best in people
- Participative leadership -working with and through people
- Good verbal and listening skills
- Sensitive to the organizational climate
- Good at expressing appreciation

PEOPLE CHARISMA

THEIR POTENTIAL WEAKNESSES INCLUDE:

- Too generous giving of time and self to others
- Making decisions on basis of personal likes and dislikes
- Giving too much autonomy and freedom
- Easily hurt--personalizing criticism
- Too much focus on people, not enough on organizational goals
- Adding the personal dimension
- Selling the organization
- Bringing out others' creativity

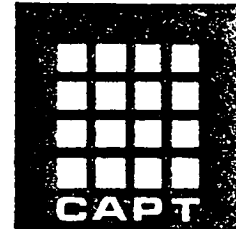
THEIR CONTRIBUTIONS IN A  
WORK TEAM INCLUDE:

Themselves as people who make important contributions

THEY LIKE TO BE APPRECIATED FOR:

Adapted from David Keirseay and Marilyn Bates, Please Understand Me  
Alan W. Brownsword and Richard S. Goldstein

CENTER  
FOR  
APPLICATIONS  
OF  
PSYCHOLOGICAL  
TYPE



Concerned with the constructive  
use of differences

1441 northwest 6th street  
suite B-400  
gainesville, florida 32601

*a part of the amsc foundation*

APPLICATION OF THE  
MYERS-BRIGGS TYPE INDICATOR  
TO MEDICINE  
AND OTHER HEALTH PROFESSIONS

EXECUTIVE SUMMARY

MARY H. MCCAULLEY, PH.D.

Prepared as part of  
Contract No. 231-76-0051  
Health Resources Administration  
U. S. Department of  
Health, Education and Welfare

August, 1977

## PREFACE

The following pages summarize the findings of a project entitled "Application of the Myers-Briggs Type Indicator to Medicine and Other Health Professions," carried out for the Division of Medicine in the Health Resources Administration of HEW under Contract No. 231-76-0051. The report was prepared by the American Medical Student Association Foundation through its Center for Applications of Psychological Type.

Under the contract, four reports were prepared. The major report, Monograph I, carries the name of the contract and is a "state of the art" overview of uses of the Type Indicator in health. The second report is entitled Monograph II: "The Myers Longitudinal Medical Study." It brings together all the research on a sample of 5355 medical students from 45 schools tested by Myers in the 1950's and followed up at various periods thereafter. The third report, "Bibliography: The Myers-Briggs Type Indicator" is a computer listing of research plus an author index. The final report which follows is the Executive Summary for the entire project. It is prepared for separate distribution, and also appears as Part VII of Monograph I.

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## A. Background

The purpose of this project was to bring together and describe what is known about psychological types in medicine and other health professions. The concept of psychological types is one part of the comprehensive theory of the Swiss physician and psychologist, C. G. Jung, who observed that many seemingly random differences in people can be explained if one knows how they prefer to use their contrasting powers of perception and judgment. The theory is concerned with valuable differences in normal people, and the ways people make conscious decisions in directing their lives.

The Myers-Briggs Type Indicator is a questionnaire designed specifically to make it possible to test Jung's theory of types, and to put its insights to practical use. Development of the Indicator began in the early 1940's. It was published as a research instrument in 1962 by Educational Testing Service, and entered the mainstream of psychological tests with its publication in 1975 by Consulting Psychologists Press. During the developmental period a substantial body of data was collected in the health professions; use has increased rapidly in the 1970's. Therefore, it seems timely to bring together what has been learned to help the growing number who use the MBTI in counseling or research in health professions.

An early form of the Indicator was used by the author, Isabel Briggs Myers, in the Myers Longitudinal Medical Study of 5355 medical students from 45 medical schools, tested in the early 1950's and followed up twice thereafter to see if type theory could predict specialty choices. The present form of the Indicator was used by Myers in the Myers Longitudinal Nursing Study of 10,271 students and 670 faculty from 71 diploma nursing schools, tested in 1964-65. In the 1960's, the Indicator was included in longitudinal studies of medical students at the Universities of New Mexico, Ohio State and Washington, and in the 1970's data are being added from medical schools, residency programs, research on teamwork, as well as from pre-medical students in universities. Recently, students and practitioners in dentistry, nursing, pharmacy, medical technology, and physical therapy have been tested in increasing numbers. Other fields, such as optometry, veterinary medicine, or medical records, have very little data at present.

The Indicator can be handscored, but many users send cases for scoring to the Center for Applications of Psychological Type (CAPT) which provides scoring services with the approval of the author and the publisher. The CAPT services grew from research of Isabel Briggs Myers and Mary H. McCaulley, a clinical psychologist at the University of Florida Health Center. The research is designed to understand individual differences within each type and to develop ways for individuals to improve their own type development. Between 1970 and 1976, the research computer program scored over 75,000 Indicator answer sheets and stored the information in the CAPT data bank. About one-third of the cases on the data bank are students or practitioners in the health professions or health-related fields. Users of CAPT scoring services control their own data, but permit CAPT to create composite samples from the data bank using cases scored by the program.

## B. Project Tasks and Goals

The project had three major tasks to accomplish:

### 1. Description of Type Distributions in the Health Professions

The first task was to search the CAPT data bank for all cases giving a health profession as an occupation or, for students, as the major field of study. This process identified 25,258 people. In addition, type distributions were contributed by MBTI users who had scored their own cases. Other data were added from published literature. These "outside cases" added 7,013. The total health sample identified included 32,271 cases, of whom 23,396 were students and 8,875 were practitioners. Medicine accounted for 8,225 cases (6,344 students and 1,881 practicing physicians). Data on an additional 1500 students and 750 physicians are known to exist, but could not be supplied in time for this report. Professions with at least 1,000 cases are medicine, dentistry, nursing, pharmacy, clinical laboratory services, physical therapy, and psychological and counseling services. The distributions of cases in all fields appear in Table 1.

Monograph I organizes and integrates these data. The attractiveness of each health field is estimated, by comparing the types in the field to types of high school and college students, the manpower pools from which health professionals are selected. Information is added on aptitude and achievement, learning styles, choice of specialty, and practice setting.

### 2. The Myers Longitudinal Medical Study

The first task was to bring together all previous work by Myers on her relatively unknown Myers Longitudinal Medical Study. This included a follow-up of academic achievement in the 1950's, a follow-up of specialty choice and type of practice from the AMA Medical Directory of 1963, and several smaller studies of clinical performance and of deaths. The second task was to conduct a second major follow-up using data from the AMA Physician Masterfile, as of December 31, 1973. These analyses included physician location, type of practice, specialty, employment, American specialty boards, specialty societies, and professorial appointments.

In Myers' follow-up of 1963, she identified 4556 physicians with known specialties. The CAPT follow-up identified 4953. Monograph II makes the entire Myers research available to medicine for the first time.

### 3. Bibliography of Myers-Briggs Type Indicator Research

Although technically the MBTI is a "new" psychological test, a search yielded 418 references in published or unpublished research. A Bibliography was created, as a computer listing with author index.



The first goal of these projects was simply to describe what is known about type differences in the health professions. No new data were collected.

The second goal was to see whether Jung's theory of psychological types, as implemented by the Type Indicator, could predict or explain individual differences in health careers—interest, selection, aptitude and achievement, learning experiences, specialty choices, and practice settings.

The third goal was to see whether data, at this stage, show trends of interest to those concerned with selecting and training health professionals.

The fourth goal was to use the facts of the studies as the basis of suggestions for practical uses of the Indicator, and for areas where research studies would be most likely to yield valuable information.

Four audiences were expected to find use for the data in these reports.

First, educators might use the information to understand and improve selection, training, evaluation, and counseling of their students.

Second, students and practitioners themselves might use the information in making career plans.

Third, researchers and manpower planners interested in health professions might use the information, and the theory, for generating more productive research hypotheses, and for interpreting research findings.

Finally, psychologists might find the data useful as a validation of an important personality theory.

The first and second groups were given most importance as we assembled and interpreted our results.

In assessing the findings in these projects, it is important to realize that the groups studied were not collected in accordance with any careful plan or research design in mind. The samples include groups tested for specific research purposes, and persons who happened to take the Type Indicator for reasons quite unrelated to their occupations. The health fields are not represented in our samples in the same proportions as they appear in the real world. Some of the smaller fields of health have been much better studied than some of the major fields. Because this is a baseline report, we included professions with at least forty Type Indicators. Any data on the fields with small samples should be considered as extremely tentative. The Indicator is scored to create 16 separate types, which are not equally distributed. Large samples are needed to have enough cases of the rare types to place confidence in results.

Even with these limitations, the trends in the samples are in the directions predicted from the theory, which is described in the following section.

### C. Brief Description of the Myers-Briggs Type Indicator (MBTI)

The MBTI is concerned with individual differences in people which result from their preferences in use of contrasting methods of perception and of judgment, and from the attitudes in which these preferences appear. The theory assumes that differences are valuable, and that any complex system (such as health care delivery) will benefit from the skills of different types of people. Youth is a time for discovering one's true preferences, and for developing the motivations and skills associated with them. Type development is a life-long, dynamic process of gaining control over one's own powers and developing balance in their use. Mature type development assumes ability to use all preferences, with greatest skill in those preferred, and adequacy in those less-preferred.

The MBTI generates 16 types, each defined by four letters which stand for the preferred poles of four preferences, EI, SN, TF or JP:

- |   |           |   |
|---|-----------|---|
| E, the extraverted attitude, in which energy and interest are directed mainly to the world of actions, objects and persons, | <u>or</u> | I, the introverted attitude, in which energy and interest are directed mainly to the world of concepts and ideas.             |
| S, sensing perception, concerned with observing what is real, immediate, and practical in experience,                       | <u>or</u> | N, intuitive perception, interested in seeing possibilities, meaning and relationships of events.                             |
| T, thinking judgment, which is a rational process of reaching conclusions objectively, logically and analytically,          | <u>or</u> | F, feeling judgment, which is a rational process of weighing values to decide the importance of issues to oneself and others. |
| J, the judging attitude, in which the aim is to plan, organize, and control one's environment,                              | <u>or</u> | P, the perceptive attitude, in which the aim is to understand, experience and adapt to the environment.                       |

The MBTI questionnaire provides a series of questions for each of these bipolar preferences, tapping a wide range of situations in which the preference may appear. The choices for each pole are summed, and the letter assigned for the pole given greater weight. Figure 1 shows the four preferences, and the placement of the 16 types on a type table. The theory postulates specific uses and interactions of the four preferences in each type. The second side of Figure 1 outlines these.

Myers has written descriptions for each type, showing the excellence of the type at full development, and the specific problems resulting from inadequate type development. She has also written brief descriptions of the types in young people. These are reproduced in Figure 2. It is instructive for those unacquainted with the MBTI to compare descriptions which differ on all four letters, relating these to the four preferences.

Jung's theory implies differences in interests, abilities, and career choices. Examples of expectations suggested by the theory are:

1. Expectations Related to EI Preference

- a. Extraverts will be sociable, active, at ease with the environment, and good at communicating. They will be particularly aware of, and responsive to, situational factors in making life decisions.
- b. Introverts will be reserved, deliberate and thoughtful, with capacity for sustained attention and depth of understanding. They will tend to give less weight to situational factors in making life decisions.

2. Expectations Related to SN Preference

- a. Sensing types will be observant, realistic and practical, with more interest in performing tasks than in their implications. They will enjoy practicing well-learned skills (as in direct patient care) and will prefer familiar situations that are not unduly complicated (and thus will live in smaller communities). They will learn more from experience than from books. They will be more likely to allow time in their careers for everyday pleasures of home and recreation.
- b. Intuitive types will be ingenious with complexity and will enjoy finding patterns in complicated systems. They will constantly seek new challenges and will become bored by repetitive tasks. Their interest in symbols will give a gift for reading and an advantage on written tests. They will enjoy higher education, intellectual challenges, research, and any activities on the cutting edge of change. They will be attracted to metropolitan areas or university towns.

3. Expectations Related to TF Preference

- a. Thinking types will be objective, analytical and toughminded. They will be good with equipment (especially ST's) and science (especially NT's). They will be attracted to patient-care activities where technical skill is more important than empathy and nurturance.
- b. Feeling types will be nurturant, compassionate, and good at communicating (especially EF's). They will be attracted to careers where they can give care and understanding on a physical level (especially SF's) or a psychological level (especially NF's).

4. Expectations Related to the JP Preference

- a. Judging types will be organized, systematic, dependable and decisive. As students they will often be considered "overachievers." They will enjoy careers and settings where work is performed with system and order. Many will be attracted to administration and management.
- b. Perceptive types will be curious, open-minded and flexible. They will enjoy careers and settings requiring adaptability to changing conditions.

## D. Major Findings in Medicine

Medicine is the only health profession with enough data to compare trends over time. Myers tested 5355 students from 45 schools in the 1950's. A sample of 6344 students and 1881 physicians have been tested in the 1960's and 1970's. The project compared (a) the two groups of students, (b) specialty changes from 1963 to 1973 in the Myers sample, and (c) the data on medical practice from Myers' sample and today's physicians.

Some users of MBTI data are most interested in the actual numbers of each type in a career. Others wish to know the numbers relative to some reference group. In this study, high school and college students were used as reference groups since these are the pool from which health manpower is drawn. If type made no difference in career selection, every career should have the same proportion of each type as was found in the reference group. Manpower planners will have little interest in the fact that certain types have a high interest in health careers, if there are few of these types in the general population; counselors advising one of these types will find this information very useful. Data throughout the report give both actual and relative numbers.

Actual and relative numbers give quite different information, because the 16 types are not distributed evenly in the general population. Extraverts outnumber introverts, and sensing types outnumber intuitive types. By chance alone, therefore, every career should have many more ES types and far fewer IN types. Myers' medical sample had 26% ES types, and 27% IN types, almost equal actual numbers. In relative terms, compared to high school students, the medical student sample had over twice the expected number of IN types (ratio 2.30<sup>\*\*\*</sup>) and about half the expected number of ES types (.57<sup>\*\*\*</sup>).

### 1. Changes in Medical Students Since the 1950's

The Myers' sample is one of the most evenly balanced of any career in MBTI literature (51% E, 53% N, 54% T and 53% P). Today's students are fairly evenly divided between 48% E and 52% I, but have shifted on the other three preferences. Intuitive types have increased from 53% to 61%, feeling types from 46% to 57% and judging types from 47% to 58%. Tables 2 and 3 show the type distributions of both samples.

These changes combine to cause increases in two important type groupings. Today's students have more of the humanistic NF types who are motivated by idealism and who are interested in psychosocial aspects of medicine (NF increase from 24% to 37%). Today's students also have significantly more of the innovative, persistent NJ types who typically combine high MCAT scores and good grades (from 21% to 29%). These types were more frequent in Myers' sample of minority groups (females 34% and blacks 44%) than in white males (20%). The overall increase in NJ types may reflect higher academic standards by schools and greater persistence needed by applicants in a competitive situation.

Inspection of the two tables shows a dramatic drop in the SP types (from 22% to 9%), which appears also in pre-medical students. The SP types are generally pragmatic, easy-going people whose actual performance may be much more impressive than their test credentials. There is some evidence that, if admitted to medical school, their National Board scores are above what would be predicted from MCAT and college grades. In any case, the drop in these types cannot be laid at the door of admissions committees, but probably occurs because SP students believe they are not competitive. The importance of this change lies in the fact that these types, in the Myers follow-up, were significantly more often found in direct patient care.

a. Comparison of Medical Students and College Students. What types in college are attracted to medicine? As can be seen in Table 2, all types are found in medical school. The ratios show, however, that introverts and intuitive types are significantly more attracted to medicine, as these types are to higher education in general. These relationships hold for Myers' data and today's students, both males and females. The proportion of feeling types has increased for males (45% to 55%) and for females (56% to 61%). Male medical students are similar to college students on TF, but females have significantly fewer feeling types than are found in college females, three-quarters of whom prefer feeling. There are significantly more judging types in medical school than in college, in both male and female samples.

b. Type Differences in the Decision to Become a Physician. Ohio State medical students are asked a number of questions about their decision to enter medicine. As theory predicts, extraverts reported more influence from family and friends. The decisive EJ types made earlier decisions and had fewer doubts about them; the thoughtful and curious IP types made later decisions and were less sure about them (a difference also found in New Mexico students). Asked about alternate choices if they had not succeeded in being admitted to medical school, the toughminded TJ types had considered law, the dedicated FJ's, the ministry and the pragmatic ES's, business.

## 2. Aptitude, Achievement and Clinical Performance

In type terms, academic aptitude requires the skills of intuition and introversion—dealing with symbols, concepts and ideas. Typically IN types average highest, and ES types lowest on aptitude measures in high school and college. Intuitive types averaged higher MCAT scores than sensing types in Myers' sample and in present-day medical students. Data from several present-day schools showed the intuitive's advantage was less on National Boards, and disappeared in measures of clinical performance. In a small part of her sample, Myers also found no correlation between intuition and internship ratings.

These preliminary findings require verification, but they have important implications. Sensing types, who tend to prefer direct patient care,

may be denied admission because they average lower on the MCAT. However, if admitted, their performance is as high as that of intuitive types. Sensing types should have a better chance of being admitted in schools which require a minimum aptitude to insure the knowledge needed to learn medicine, but which evaluate all candidates meeting the minimum on other important factors.

### 3. Learning to Be a Physician

In theory, each type brings to training the skills of its preferred processes, and may need extra training in the skills of its less-preferred processes. Type differences affect motivations, aptitudes and attitudes toward the educational experience. Most of the data on these issues come from the longitudinal studies at New Mexico and Ohio State Universities.

- a. Type Differences in Skills Brought to Medical School. When asked to describe their skills on entering medical school, the logical and ingenious NT's said they had high skills in logical thinking. Intuitive types described themselves as original (intuition is associated with creativity in many studies). Sensing types said they were slow readers. Introverts said they were below average in verbal expression. Judging types said they persevered and organized their work. When asked what skills they needed to develop, introverts wanted training in public speaking and in meeting people; extraverts wanted skills in reading and in writing papers. Sensing types wanted skills in reading and in note-taking. All these characteristics are in accord with type theory.
- b. Type Differences in Learning Experiences. In three schools intuitive types significantly more often elected independent study. In New Mexico, extraverts wanted student participation and student-led discussions, while practical introverts preferred lectures where the faculty gave the facts. Practical extraverts were types giving highest ratings to AMSA Foundation experiential projects in preceptorships and health teams. Several schools of medicine and of other health professions are looking more closely into type differences in learning styles. Valuable insights should be forthcoming in the next several years.
- c. Attitude Changes in Medical School. The New Mexico studies found type-related attitudes at the beginning of medical school, and characteristic differences in the ways attitudes changed during the medical school experience. For example, the humanistic ENFJ's entered medical school with high values for psychosocial factors in medicine; these dropped sharply in the first two years, and rose in the clinical years (though never so high as at the beginning). The science-minded INTP's entered with low interest in psychosocial aspects of medicine, and only began to become interested in the clinical years. If confirmed in other schools, these data suggest that types will differ in the times when they are ready to learn certain materials. It may also be that some research with negative findings masks opposite trends in different types.

#### 4. Choice of Specialty

In theory, a good career decision for any type would call on the strengths and interests of the type, with fewer requirements for use of the less-developed and less-preferred functions.

a. Specialty Choice in the Myers Longitudinal Study. Medical students significantly more often chose specialties whose tasks, in theory, should call on the interests and skills of their types. In the years between 1963 and 1973, rankings of specialties remained stable, with greatest stability in SN rankings and least in EI rankings. An analysis of the 19% of physicians who changed primary specialty during the decade showed a significant trend toward choosing a more compatible specialty the second time.

Medical specialties attracted relatively more introverts and intuitives, while surgical specialties attracted relatively more extraverts and sensing types. There were, however, two groupings of surgeons. Sensing types who, in theory, should enjoy problems which require high technical skill but are comparatively straightforward, were more attracted to general surgery, orthopedic surgery, and obstetrics and gynecology. Intuitive types who, in theory, should prefer complex problems with subtle nuances, were attracted to neurological, plastic and thoracic surgery.

Extraverts were attracted to obstetrics and gynecology, orthopedic surgery and pediatrics. Introverts were attracted to anesthesiology, internal medicine, pathology, and psychiatry.

Table 3 shows the rankings of specialties in the 1973 follow-up of Myers' sample for the four combinations of perception and judgment, ST, SF, NF and NT. The table is informative in several ways.

- (1) All groups are represented in each specialty. Even in psychiatry, which has significantly fewer than the expected number of sensing types, there are 52 ST psychiatrists and 39 SF psychiatrists in practice.
- (2) Many specialties have too few physicians for stable results, despite the fact that the original sample was a large one.
- (3) The rankings of the four columns are quite different, and are consistent with theoretical expectations. Specialties requiring highly technical skills are high on the ST list; specialties requiring psychological insight and concern with subtle relationships are high on the NF list; specialties requiring practical application of medical knowledge and concern for people are high on the SF list; and specialties requiring daily applications of scientific principles with objectivity are higher on the NT list.

b. Specialty Choice in Other Studies. Specialty studies require large samples, and there are no present-day samples large enough to add substantially to Myers' data. Data on medical student choices of New Mexico and Ohio State medical students show consistencies with Myers' data. The New Mexico study of practicing physicians by Quenk and Albert are the most clearcut so far. They also show the attraction of introverts with sensing to anesthesiology, of intuitives to psychiatry, public health and preventive medicine, and of sensing types to general practice and family medicine.

c. Issues in Studying Type Differences in Specialty Choice. While it can be seen that types choose specialties which, in theory, should be attractive to them, the appropriate studies have not yet been done which could show that those who have chosen careers compatible with their type are happier or more successful. Until those studies become available it is important to remember, if the data are to be used in counseling, that at this stage we only know that physicians are more likely to choose compatible specialties.

The next steps in understanding type differences in specialties can come from studies of students and physicians. Data already exist in at least 4 longitudinal studies on specialty changes during medical school. Large studies of single specialties, including reasons for decisions and career satisfaction, would be very productive. Such a sample of over 600 surgeons was collected in 1974 by Dr. Ralph Ingersoll, now of Baylor University. Analysis and reporting of findings have been held up, however, at the request of the College of Surgeons. A number of family practice residency programs have tested residents in the past 5 years, but as yet no mechanism exists to bring the data together for analysis.

## 5. Type Differences in Delivery of Medical Care

Two questions were asked about type differences in delivery of medical care. Are there type differences in delivery of direct patient care? Do different types of physicians actually perform tasks in ways that are characteristic of their types? The evidence on these issues is mainly found in the 1973 Follow-up of Myers' sample, and the study of Physician Work Settings reported by Quenk and Albert in 1975.

Patient care has many aspects. Often it involves a daily round of familiar activities where well-learned skills can be exercised. Sensing types were expected to enjoy these patient-care activities. Sometimes patient care requires complex diagnostic challenges or new breakthroughs. Intuitive types were expected in these patient care activities. Further, thinking types were expected to provide patient care where objectivity and toughness were required (as in surgery), and feeling types where nurturant care and compassion are prime requisites. The evidence for these expectations is not definitive, but it is consistent.



a. Student Attitudes Toward Direct Patient Care. The New Mexico studies found that on entry to medical school, sensing types were more likely to report interest in direct patient care, and plans to spend more hours in seeing patients. Among AMSA students, relatively more sensing types participated in—and rated highly—projects giving direct patient care experience.

b. Physician Reports of Type and Practice. In the 1973 follow-up of Myers' sample, 4210, or 85%, of the follow-up physicians stated they were engaged primarily in direct patient care. Of these, 51% were intuitive types and 49% sensing types. Relative to their numbers, a small but significantly greater proportion of sensing types were in direct patient care (ratio 1.04\*\*\*). Among administrators, intuitive types were clearly in the majority (64%, ratio 1.20\*\*), as they were in medical teaching (64%, ratio 1.22\*\*) and medical research (77%, ratio 1.46\*\*). In work settings, proportionately more intuitive types were, as the above facts suggest, in medical schools and hospital settings.

In the Physician Work Setting study, more sensing types were in traditional primary care, while intuitive types were more interested in teaching and research.

c. Patient-Care Specialties. Both the Myers data and the New Mexico studies showed sensing types more attracted to general practice, and family medicine. Internal medicine attracts more intuitive types. It is likely that future studies will show differences in the sensing and intuitive internists, with the latter more interested in diagnostic referrals. Specialties closely related to internal medicine often have a higher proportion of intuitives than internal medicine itself.

d. Size of Community. In the Myers sample there was a small but significant tendency for sensing types to be in less urban communities, and for intuitives to live in metropolitan areas. In the Work Setting study, sensing types were in smaller communities and had lived there for a longer period of time.

e. Medically Underserved Areas. Only 128, or 2.6% of Myers' physicians were in areas officially classified as medically underserved. All 16 types were represented, and no statistically significant differences were found. Two trends bear watching, however.

First, selection ratios for INFP (1.40) and ENFP (1.58\*) showed more of these idealistic types than might be expected. The possibility that these types are attracted to work in poverty areas is supported by findings in the New Mexico studies. These types entered medical school with an early interest in working in poverty areas, and were less likely than other types to lose

this interest during medical school. In the AMSA Foundation's National Health Service Corps Primary Care Preceptorship Project, 46% of the students attracted to the project were in the four NF types. In the AMSA Foundation participants in preceptorship projects, N, F and P were associated with preference for working for the National Health Service Corps, and F was associated with an interest in working in poverty areas.

A second trend worth watching is that in the Myers data, all four of the matter-of-fact ST types had more than the expected numbers in underserved areas. These types would, in theory, be motivated to practice in underserved areas, not for idealism, but because medicine in these settings can be practiced in straightforward ways, because these types are motivated to perform tasks which obviously need doing, and perhaps because these settings offer time for leisure.

There are practical implications to the possibility that quite different types are attracted to underserved areas for very different reasons. A study of physicians and other health professionals in these areas could show which types are more likely to be found in underserved areas and their reasons for serving there. Are there differences between idealistic types who stay for short times and those who remain? Are sensing types more likely to remain, and if they leave, what are the reasons?

It should be possible to learn the most important motivations for each type so that facts relevant to these motivations could be used in recruiting. It would also help to know the facts most likely to be needed but overlooked (especially by the idealistic types), so that these could be provided.

Knowledge of type differences would be valuable to planners in developing practice models that take into account important type differences. Medicine has more humanistically-oriented physicians than formerly. These NF types need a challenge, a vision of a better world, and a sense that someone appreciates their attempts to move mountains. Program planners who assign these types to settings where it is unlikely that appreciation will be forthcoming from the community could find ways to make sure it was provided by the program itself. A knowledge of type differences in length of stay in communities could improve placement so that the types most likely to leave when the challenge seemed over would be placed in sites where higher turnover would be tolerable.

Once the facts are established showing how different types choose and enjoy working in underserved areas, programs can be designed to take these facts into account. One of the most

useful consequences of type research can be redefinition of problems in ways that increase the possibility of finding solutions.

f. Differences in the Manner of Practicing Medicine. Consistent with theoretical expectations, sensing types in the Physician Work Setting sample reported that they remained longer in the same locations, saw more patients each week, performed more habitual and nonvarying activities, personally managed the financial aspects of their practice, earned higher incomes, and allowed more time for personal interests and for their families.

Intuitive types reported interest in trying new things, and in teaching. They were more likely to be working at several different work settings in the same week (especially the ENF group), and to be affiliated with medical centers. They were also more concerned with finding ways for their spouses to pursue their own activities. In patient care activities, they reported greater concern with patients' emotional problems.

Extraverts reported spending more time with patients and more participation in non-medical community affairs. Consistent with the theoretical expectation that outside influences are more important to extraverts, they were more concerned about recognition from peers, and they made more use of referral facilities.

Thinking types reported more time spent on programmatic issues, such as developing treatment plans, organizational administration, and participation in case reviews. Their "community" activities were more likely to be related to the medical community and they reported more concern with advancement.

These early findings suggest that research focused concurrently on specialties and work settings should be highly productive in understanding the ways different types of physicians function in settings that may seem, on the surface, to be similar.

## E. Major Findings in Other Fields of Health

The health sample in this project is 32,271 students and practitioners in health professions and fields related to health. They were tested from the middle 1960's through 1977, with the majority of cases tested in the mid-1970's. Some fields have samples large enough to be reasonably stable, while others will have samples which will surely prove to be unrepresentative. In no field are there data collected on a randomized representation of all practitioners or of all students. Obviously, data on fields with low representation in the sample should be interpreted with extreme caution.

### 1. Attractiveness of Fields of Health to MBTI Types

The full report gives the rankings for health fields of all 16 MBTI types and rankings for the four preferences, EI, SN, TF and JP. Table 4 shows rankings of health fields for ST, SF, NF and NT, the four combinations of perception and judgment. The table gives the actual numbers in each group, and the ratio which shows attractiveness compared to the CAPT data bank sample of 11,122 college freshmen (which includes first-year students in junior colleges, colleges and universities).

Every field has representatives from each of the four MBTI columns. The practical and matter-of-fact ST types are attracted to health fields which require high technical skill. The sympathetic and friendly SF types are in fields giving direct physical care. The enthusiastic and insightful NF types are attracted to fields requiring psychological understanding and skills in communication. The logical and ingenious NT types are in fields requiring continuous applications of scientific knowledge.

The table also shows that the practical ST and SF types are significantly underrepresented in fields requiring psychological insight and scientific knowledge, and the NF and NT types are underrepresented in fields where it is important to pay constant attention to the details of patient care.

Compared to college freshmen, relatively more extraverts were found in nursing, dietetic and nutritional services, occupational therapy, radiologic technology, speech pathology, and physician extender services. Extraverts and introverts were found in about equal numbers in medicine, pharmacy, and clinical laboratory services, but, in comparison to college freshmen, these fields had significantly more introverted types.

Health fields as a group attract significantly more judging types than would be expected from the numbers of these types in college freshmen. Fields particularly attractive to judging types are medicine, dentistry, pharmacy, nursing, optometry, clinical laboratory services, dietetics and nutritional services, and physician extender services. The perceptive types, who are more interested in understanding events than in controlling them, are found in psychological and counseling services, social work and speech pathology.

Educators training students in fields with large numbers of judging types should be alert to capitalize on the organization and dependability of these students, but should also teach them to avoid the typical problems of judging types—decisions made too quickly on insufficient data, failure to take time to listen and understand, or unwillingness to turn away from the task at hand to attend to new things that need to be done. Those training perceptive types might also spend time showing these students the values of an organized and responsible work style, particularly if they will be working closely with large numbers of judging types.

## 2. Levels of Training

The best data on type differences in educational levels come from nursing. As predicted, the proportion of intuitive types increases from 30% in licensed practical nurses to 58% for nurses in graduate programs. The same progression is found in practitioners with different levels of training. A TF difference also appears at levels of training. Thinking types are in the minority in nursing, but they are proportionately more frequent in students at higher educational levels (23% in LPN students, 36% in graduate students).

## 3. Satisfaction with Health Careers

The fact that certain types are attracted to a given health field does not necessarily mean that these types are more satisfied with their choices. Indirect evidence on this point comes from data on students, in an introductory course in the health related professions, who took both the MBTI and the Strong Vocational Interest Blank. The career norms for the SVIB are based on mature people in professions who said they liked their work. The distributions of students scoring high on the SVIB scale for health careers were very similar to the type distributions for students and practitioners actually in the same careers.

## 4. Sex Differences

In high school and college populations, feeling types outnumber thinking types in female groups in ratios of 2:1 to 3:1. The proportion of feeling types is more evenly divided in male samples. Since feeling types are attracted to careers of service, all health fields have many feeling types. However, there are proportionately more feeling types in those fields where females are in the majority. In comparing males and females in the same health field, the type distributions were similar in most cases, except for the somewhat larger numbers of feeling types among females. In several fields, however, male and female type distributions were quite distinct. Females in medicine have more of the determined and innovative NJ types. Males in nursing and physical therapy have more of the academic introverts with intuition. Males in clinical laboratory services and respiratory therapy had more of the tough-minded TJ types. Type differences may explain some differences now called sex differences. Future studies should take these into account.

## 5. Specialty Choices and Work Settings

A beginning has been made in studying specialty choices in health professions, but no other field has been studied so well as medicine.

In nursing, preliminary data on nursing specialties showed educators had more intuitive types, as would be expected. Administrators and consultants had relatively more academic IN types and logical and ingenious NT's; fewer of the sympathetic and friendly SF nurses were in these roles. Psychiatric nursing, like psychiatry and psychology, attracted more intuitive types. Nursing in hospital settings were more likely to be sensing types; relatively more nurses in schools and public health were intuitive types.

In one study of dieticians, Fellers found that satisfied clinical dieticians were more likely to prefer feeling and satisfied administrative dieticians were more likely to prefer thinking.

In studies of specialties and work settings of medical technologists, type differences have been found in microbiology, blood bank, chemistry and hematology, but these have not yet been verified.

Studies of pharmacy students at Illinois found all types attracted to retail pharmacies, with more perceptive males and feeling females in these settings. Hospital pharmacies attracted I, T and J males and T females; industry attracted the science-minded NT females.

Many investigators are studying career satisfaction, and choices of settings and specialties. These studies should add greatly to knowledge of type differences within and across careers in the next few years.

## F. Theoretical Implications and Practical Uses

This project has brought together a substantial amount of information on psychological types in medicine and other health professions. In the main, type differences were in the directions expected from C. G. Jung's theory of psychological types. This finding is important, because a good theory can give valuable insight into the meanings of seemingly unrelated facts.

The findings support those MBTI users who are already finding Jung's ideas of practical use in alerting them to issues which should be raised in selection interviews, in suggesting ways to teach students more efficiently, in improving communications among team members, and in counseling students and practitioners at periods of career decisions. The facts of this report will increase the precision of use of the theory in each of these practical applications.

It is now established that all 16 types are found in each health field studied, but it is also established that for any given field, all types are not equally attracted, admitted, graduated from training, or found in practice. Health careers have characteristic type distributions; some fields appear to draw most members from a comparatively few types, while others, including medicine, have a more balanced type distribution. By definition, each of the 16 MBTI types finds certain aspects of life more interesting, and is more likely to have developed skills along the lines of these interests. Any career that calls on a rather restricted group of skills should, therefore, attract fewer types than careers (such as medicine) which include a diversity of activities.

Significant differences have been found within and across health fields in selection, aptitude and achievement, education of the professional, and choices of specialties and practice settings. The broad outlines of type differences are clear and understandable, and a foundation has been laid for the important next stage. We must now discover the many specific facts for each career, and for each type within each career, which will eventually provide the tools to improve selection, training and counseling of students, and will help both students and practitioners make wise career decisions.

### 1. Considerations and Limitations in Using MBTI Data

This section is written for non-psychologists who often find it hard to evaluate psychological instruments. The professional training of psychologists typically makes them very aware of the difficulties of measuring anything as complex as human personality, and they approach any new measure with interest and skepticism. The points below may seem obvious, but they are mentioned because in our experience they have been frequent sources of misunderstanding.

- a. Personality Testing is Not an Exact Science. Measurement error and lack of precision are inevitable in all personality instruments.

b. Motivation of Test-Takers Influences Answers. Test results can be invalidated by deliberate faking, by random responses, by failure to understand questions, or by inability to report true preferences through lack of self-understanding. The fact that MBTI results can be reported to test-takers and are found useful is important, because validity is increased when people see a value for themselves in giving honest answers.

c. Psychological Type Does Not Explain All Behavior. New users of the MBTI sometimes feel they have found a panacea for all interpersonal problems. While the theory explains much that is important because it is concerned with conscious use of fundamental mental processes, the MBTI does not measure many factors needed for a complete description of personality-factors such as cultural environment or psychopathology, to give but two examples.

d. All Members of the Same Type are Not Alike. The theory describes which preferences are preferred, but not the contents on which they are exercised. For example, intuitive types are interested in possibilities, but one intuitive may see artistic possibilities, another may be more interested in possibilities for understanding personality, or for diagnosing illness, or for changing health care.

Another source of differences among members of the same type is level of type development, i.e., of command of perception and judgment. Good type development increases the likelihood that people have the assets of their type; poor type development makes it more likely that they are struggling with the blindspots of their type. The New Mexico studies found significant differences between students of the same type who were or were not anxious. In pilot work on type development, Myers found that students with less command of perception and judgment were more likely to drop out of medical school, to receive lower clinical performance grades in medical school, to receive lower internship ratings, and to have a higher mortality rate. A major next step in MBTI research is to follow these clues so as to identify and learn how to correct blocks on the road to excellence in type development.

e. It is Premature to Use the MBTI for Selection. MBTI responses are less likely to be valid under the competitive conditions of selection. Also, there are at present no data proving that any type will fail in any health career. Our hypothesis is that health care is so complex that all types can find their niche. The best strategy is to test students and practitioners, so as to learn from them specifically how type differences are important. Faculties who test students and observe type differences carefully will build clinical skill in identifying clues of good or poor type development in each type. This strategy should help improve selection, teaching and advisement.



## 2. Uses of Findings in Research

- a. Asking Better Questions. It is now known that types differ in many behaviors of concern to educators and planners in health, and that Jung's theory can predict or explain type differences. By simply asking, "How might types differ?" researchers are alerted to important issues which might otherwise be overlooked.
- b. Comparisons Across Programs or Across Time. The MBTI is a useful tool in identifying similarities and differences in types attracted to programs with different philosophies or missions, or to the same program monitored across time.
- c. Sampling. The MBTI gives a new precision in sampling, especially in follow-up studies. For example, researchers might interview only a representative group of the frequent types, but all of the rare types.
- d. Addition of Type Concepts to Ongoing Research. It is comparatively easy and inexpensive to add MBTI data to many ongoing studies. Such an addition creates a new level of analysis and explanatory power.

## 3. Recommended Research Projects

- a. Studies of Specialties and High-Interest Populations. Because more precise data on type differences in satisfaction, manner of work, and clinical performance within specialties would give a powerful tool for advising entrants into careers, research in these areas should have high priority. The most immediate need is for more complete information about direct patient care in all health fields, and about those who provide it in underserved areas.
- b. Studies of Individual Differences Within Types. More facts and clinical observations are needed to identify levels of excellence in each type, and to help all members of the type reach higher levels of type development. This is particularly important in the health professions, where clear perception and good judgment are necessary for optimum patient care.
- c. Studies Cutting Across Health Professions. Type theory is a useful bridge across professions in and outside of health. It is important to know how type differences identified in one profession appear in the same types engaged in activities of other health fields.
- d. Studies of Communication in Teams Across Disciplines. Data on faculty teams and practice teams need to be expanded, with the focus on how differences can be used constructively.
- e. Studies of Type Differences in Existing Longitudinal Medical Studies. A rich and relatively untapped resource for understanding type differences lies in longitudinal studies of at least 20 medical schools. Without waiting for passage of time, these schools could

rapidly answer questions about type differences in performance, career planning and attitude change. Pooled data could give needed large numbers of rare types. Follow-up studies of graduates from these schools would be enriched by the wealth of data from student days. Most schools contacted for this project indicated interest in working together as a consortium, if funds were available for the additional tasks and for pooling of certain data. Such a consortium could well establish the expertise and data base for addressing the complex issues of type differences in clinical performance and the actual delivery of health care.

#### 4. Uses of Findings in Counseling

The data of this report can be helpful in alerting students and practitioners to the fact that they are typical or atypical in their fields, and in helping them think through their life goals in light of the demands of their careers. The MBTI is a relatively new psychological instrument, and many counselors have not yet been trained in its use. The four MBTI preferences can readily be grasped, and it is easy for users to miss the subtleties of both the instrument and the theory; thus they fail to gain full benefit from use of the MBTI. Training for counselors is increasing in universities and through workshops of the AMSA Foundation. In any setting, cooperation between counselors and researchers will give rapid progress through shared insights.

#### 5. Uses of Findings in Manpower Planning

Professions can be grouped in terms of the types attracted to them. Some professions attract precise and orderly types; others attract psychologically-minded independent spirits, or toughminded and analytical people, or those most compassionate and nurturant. These differences cut across educational levels and have implications for career ladders, for redeployment when new fields are developed, and for communications between groups. Knowledge of the type characteristics of a field gives a powerful tool in establishing requirements for selection, in planning training, and in organizing work settings.

#### 6. Uses of Type in Patient Care

In assembling data for this project, we found health professionals exploring type differences in patient care. Preliminary work with small samples has related type differences to exercise after myocardial infarction, ability to taste quinine, response to hallucinogenic drugs, emotional illness, and sensitivity to pain. Some suggested that Jung's theory is consistent with new work on hemispheric dominance; others believe it will be useful in studying patient compliance. In a few years type differences in patients may be as important as type differences in the professionals who give them care.

Table 1

## Sources and Distributions of Myers-Briggs Type Indicators in Health

FIELDS OF HEALTH	STUDENTS			PRACTITIONERS			GRAND TOTAL
	Data Bank	Other	Total	Data Bank	Other	Total	
Medicine	4047	2297	6344	1758	123	1881	8225
Dentistry and Allied Fields	842	344	1186	90	6	96	1282
Nursing and Allied Fields	6879	746	7625	2025	610	2635	10260
Optometry	91	-	91	25	-	25	116
Pharmacy and Allied Fields	2175	258	2433	277	2	279	2712
Veterinary Medicine and Allied Fields	121	-	121	21	-	21	142
Clinical Laboratory Services	422	283	705	1177	6	1183	1888
Dietetics and Nutrition	24	191	215	305	4	309	524
Occupational Therapy	376	308	684	155	2	157	841
Physical Therapy	533	558	1091	153	2	155	1246
Physician Extender Services	115	195	310	13	-	13	323
Psychological and Counseling Services	1102	145	1247	1036	170	1206	2453
Radiologic Technology	154	60	214	53	-	53	267
Respiratory Therapy	161	192	353	127	-	127	480
Social Work	140	-	140	169	-	169	309
Speech Pathology	151	64	215	122	-	122	337
Other Health Related Fields <sup>a</sup>	123	299	422	296	148	444	865
Cardiovascular Technology			(52)			-	(52)
Health Administration			(9)			(51)	(60)
Health Education			-			(182)	(182)
Health Related - General			(208)			(51)	(259)
Medical Assistant			(25)			(51)	(76)
Medical Communications			(48)			-	(48)
Medical Illustration			(27)			-	(27)
Medical Records			(53)			(45)	(98)
Outreach Workers			-			(46)	(46)
<b>Totals</b>	<b>17,456</b>	<b>5,940</b>	<b>23,396</b>	<b>7,802</b>	<b>1,073</b>	<b>8,875</b>	<b>32,271</b>
	<b>Total Data Bank</b>		<b>25,258</b>	<b>Total Other Sources</b>			<b>7,013</b>

<sup>a</sup>Totals for Other Health Related Fields include all cases. Totals in ( ) are for those fields with 25 or more cases and are included as part of the totals for Other Health Related Fields.

### THE THEORY: DOMINANT AND AUXILIARY FUNCTIONS FOR EACH TYPE

According to Jung's theory of psychological types, everyone uses all four functions (S, N, T, F), and adopts all four attitudes (E, I, J, P). The types are called preference types because people in each type prefer one of the two perceptive functions (S or N), and one of the two judgment functions (T or F). These preferences appear in the 2 middle letters of the type formula. Types also differ in the functions they prefer to use when in the introverted or extraverted attitudes.

The most preferred, or favorite, or dominant function, is extraverted in E types and introverted in I types. The second favorite or auxiliary function is introverted in E types and extraverted in I types. The type table below shows these relationships for each of the 16 MBTI types.

<p><b>ISTJ</b> INTROVERTED SENSING with Thinking</p> <p>Sensing is dominant and introverted Thinking is auxiliary and extraverted</p>	<p><b>ISFJ</b> INTROVERTED SENSING with Feeling</p> <p>Sensing is dominant and introverted Feeling is auxiliary and extraverted</p>	<p><b>INFJ</b> INTROVERTED INTUITION with Feeling</p> <p>Intuition is dominant and introverted Feeling is auxiliary and extraverted</p>	<p><b>INTJ</b> INTROVERTED INTUITION with Thinking</p> <p>Intuition is dominant and introverted Thinking is auxiliary and extraverted</p>
<p><b>ISTP</b> INTROVERTED THINKING with Sensing</p> <p>Thinking is dominant and introverted Sensing is auxiliary and extraverted</p>	<p><b>ISFP</b> INTROVERTED FEELING with Sensing</p> <p>Feeling is dominant and introverted Sensing is auxiliary and extraverted</p>	<p><b>INFP</b> INTROVERTED FEELING with Intuition</p> <p>Feeling is dominant and introverted Intuition is auxiliary and extraverted</p>	<p><b>INTP</b> INTROVERTED THINKING with Intuition</p> <p>Thinking is dominant and introverted Intuition is auxiliary and extraverted</p>
<p><b>ESTP</b> EXTRAVERTED SENSING with Thinking</p> <p>Sensing is dominant and extraverted Thinking is auxiliary and introverted</p>	<p><b>ESFP</b> EXTRAVERTED SENSING with Feeling</p> <p>Sensing is dominant and extraverted Feeling is auxiliary and introverted</p>	<p><b>ENFP</b> EXTRAVERTED INTUITION with Feeling</p> <p>Intuition is dominant and extraverted Feeling is auxiliary and introverted</p>	<p><b>ENTP</b> EXTRAVERTED INTUITION with Thinking</p> <p>Intuition is dominant and extraverted Thinking is auxiliary and introverted</p>
<p><b>ESTJ</b> EXTRAVERTED THINKING with Sensing</p> <p>Thinking is dominant and extraverted Sensing is auxiliary and introverted</p>	<p><b>ESFJ</b> EXTRAVERTED FEELING with Sensing</p> <p>Feeling is dominant and extraverted Sensing is auxiliary and introverted</p>	<p><b>ENFJ</b> EXTRAVERTED FEELING with Intuition</p> <p>Feeling is dominant and extraverted Intuition is auxiliary and introverted</p>	<p><b>ENTJ</b> EXTRAVERTED THINKING with Intuition</p> <p>Thinking is dominant and extraverted Intuition is auxiliary and introverted</p>

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### THE 4 COLUMNS: COMBINATIONS OF PERCEPTION AND JUDGMENT

<p>SENSING PLUS THINKING</p> <p><b>ST</b></p> <p>PRACTICAL AND MATTER-OF-FACT</p> <p>Like using abilities in</p> <p>TECHNICAL SKILLS WITH FACTS AND OBJECTS</p> <p>for example in</p> <p>Applied science Business Production Construction and many more</p>	<p>SENSING PLUS FEELING</p> <p><b>SF</b></p> <p>SYMPATHETIC AND FRIENDLY</p> <p>Like using abilities in</p> <p>PRACTICAL HELP AND SERVICES FOR PEOPLE</p> <p>for example in</p> <p>Patient care Community service Sales Teaching and many more</p>	<p>INTUITION PLUS FEELING</p> <p><b>NF</b></p> <p>ENTHUSIASTIC AND INSIGHTFUL</p> <p>Like using abilities in</p> <p>UNDERSTANDING &amp; COMMUNICATING WITH PEOPLE</p> <p>for example in</p> <p>Behavioral science Research Literature &amp; art Teaching and many more</p>	<p>INTUITION PLUS THINKING</p> <p><b>NT</b></p> <p>LOGICAL AND INGENIOUS</p> <p>Like using abilities in</p> <p>THEORETICAL AND TECHNICAL DEVELOPMENTS</p> <p>for example in</p> <p>Physical Science Research Management Forecasts &amp; Analysis and many more</p>
---	--	--	--

### THE 4 QUADRANTS: COMBINATIONS OF ATTITUDE AND PERCEPTION

<p>INTROVERSION AND SENSING</p> <p><b>IS</b></p> <p>KNOWLEDGE IS IMPORTANT TO ESTABLISH TRUTH</p> <p>"THOUGHTFUL REALISTS"</p>	<p>INTROVERSION AND INTUITION</p> <p><b>IN</b></p> <p>KNOWLEDGE IS IMPORTANT FOR ITS OWN SAKE</p> <p>"THOUGHTFUL INNOVATORS"</p>
<p>EXTRAVERSION AND SENSING</p> <p><b>ES</b></p> <p>KNOWLEDGE IS IMPORTANT FOR PRACTICAL USE</p> <p>"ACTION-ORIENTED REALISTS"</p>	<p>EXTRAVERSION AND INTUITION</p> <p><b>EN</b></p> <p>KNOWLEDGE IS IMPORTANT FOR CREATING CHANGE</p> <p>"ACTION-ORIENTED INNOVATORS"</p>

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# MYERS-BRIGGS TYPE INDICATOR

## UNDERSTANDING THE TYPE TABLE

FOUR PREFERENCES ARE SCORED TO ARRIVE AT A PERSON'S TYPE

+++++ DOES THE PERSON'S INTEREST FLOW MAINLY TO +++++

<b>E</b> THE OUTER WORLD OF ACTIONS, OBJECTS AND PERSONS? EXTRAVERSION	THE INNER WORLD OF CONCEPTS AND IDEAS? INTROVERSION
---	---

+++++ DOES THE PERSON PREFER TO PERCEIVE +++++

<b>S</b> THE IMMEDIATE, REAL, PRACTICAL FACTS OF EXPERIENCE AND LIFE? SENSING	THE POSSIBILITIES, RELATIONSHIPS AND MEANINGS OF EXPERIENCES? INTUITION
---	--

+++ DOES THE PERSON PREFER TO MAKE JUDGMENTS OR DECISIONS +++

<b>T</b> OBJECTIVELY, IMPERSONALLY, CONSIDERING CAUSES OF EVENTS & WHERE DECISIONS MAY LEAD? THINKING	SUBJECTIVELY AND PERSONALLY, WEIGHING VALUES OF CHOICES & HOW THEY MATTER TO OTHERS? FEELING
---	---

+++++ DOES THE PERSON PREFER MOSTLY TO LIVE +++++

<b>J</b> IN A DECISIVE, PLANNED AND ORDERLY WAY, AIMING TO REGULATE & CONTROL EVENTS? JUDGMENT	IN A SPONTANEOUS, FLEXIBLE WAY, AIMING TO UNDERSTAND LIFE AND ADAPT TO IT? PERCEPTION
--	--

THE LOCATION OF THE 16 PREFERENCE TYPES ON THE TYPE TABLE

ISTJ	ISFJ	INFJ	INTJ
ISTP	ISFP	INFP	INTP
ESTP	ESFP	ENFP	ENTP
ESTJ	ESFJ	ENFJ	ENTJ

EXTRAVERSION-INTROVERSION

I
E

SENSING-INTUITION

S	N
---	---

THINKING-FEELING

T	F	T
---	---	---

JUDGMENT-PERCEPTION

J
P
J

		SENSING TYPES		INTUITIVES	
		WITH THINKING	WITH FEELING	WITH FEELING	WITH THINKING
INTROVERTS	JUDGING	<p><b>ISTJ</b></p> <p>Serious, quiet, earn success by concentration and thoroughness. Practical, orderly, matter-of-fact, logical, realistic and dependable. See to it that everything is well organized. Take responsibility. Make up their own minds as to what should be accomplished and work toward it steadily, regardless of protests or distractions.</p> <p>Live their outer life more with thinking, inner more with sensing.</p>	<p><b>ISFJ</b></p> <p>Quiet, friendly, responsible and conscientious. Work devotedly to meet their obligations and serve their friends and school. Thorough, painstaking, accurate. May need time to master technical subjects, as their interests are not often technical. Patient with detail and routine. Loyal, considerate, concerned with how other people feel.</p> <p>Live their outer life more with feeling, inner more with sensing.</p>	<p><b>INFJ</b></p> <p>Succeed by perseverance, originality and desire to do whatever is needed or wanted. Put their best efforts into their work. Quietly forceful, conscientious, concerned for others. Respected for their firm principles. Likely to be hurried and followed for their clear convictions as to how best to serve the common good.</p> <p>Live their outer life more with feeling, inner more with intuition.</p>	<p><b>INTJ</b></p> <p>Have original minds and great drive which they use only for their own purposes. In fields that appeal to them they have a fine power to organize a job and carry it through with or without help. Skeptical, critical, independent, determined, often stubborn. Must learn to yield less important points in order to win the most important.</p> <p>Live their outer life more with thinking, inner more with intuition.</p>
	PERCEPTIVE	<p><b>ISTP</b></p> <p>Cool onlookers, quiet, reserved, observing and analyzing life with detached curiosity and unexpected flashes of original humor. Usually interested in impersonal principles, cause and effect, or how and why mechanical things work. Exert themselves no more than they think necessary, because any waste of energy would be inefficient.</p> <p>Live their outer life more with sensing, inner more with thinking.</p>	<p><b>ISFP</b></p> <p>Retiring, quietly friendly, sensitive, modest about their abilities. Shun disagreements, do not force their opinions or values on others. Usually do not care to lead but are often loyal followers. May be rather relaxed about assignments or getting things done, because they enjoy the present moment and do not want to spoil it by undue haste or exertion.</p> <p>Live their outer life more with sensing, inner more with feeling.</p>	<p><b>INFP</b></p> <p>Full of enthusiasms and loyalties, but seldom talk of these until they know you well. Care about learning, ideas, language, and independent projects of their own. Apt to be on yearbook staff, perhaps as editor. Tend to undertake too much, then somehow get it done. Friendly, but often too absorbed in what they are doing to be sociable or notice much.</p> <p>Live their outer life more with intuition, inner more with feeling.</p>	<p><b>INTP</b></p> <p>Quiet, reserved, brilliant in exams, especially in theoretical or scientific subjects. Logical to the point of hair-splitting. Interested mainly in ideas, with little liking for parties or small talk. Tend to have very sharply defined interests. Need to choose careers where some strong interest of theirs can be used and useful.</p> <p>Live their outer life more with intuition, inner more with thinking.</p>
EXTRAVERTS	PERCEPTIVE	<p><b>ESTP</b></p> <p>Matter-of-fact, do not worry or hurry, enjoy whatever comes along. Tend to like mechanical things and sports, with friends on the side. May be a bit blunt or insensitive. Can do math or science when they see the need. Dislike long explanations. Are best with real things that can be worked, handled, taken apart or put back together.</p> <p>Live their outer life more with sensing, inner more with thinking.</p>	<p><b>ESFP</b></p> <p>Outgoing, easygoing, accepting, friendly, fond of a good time. Like sports and making things. Know what's going on and join in eagerly. Find remembering facts easier than mastering theories. Are best in situations that need sound common sense and practical ability with people as well as with things.</p> <p>Live their outer life more with sensing, inner more with feeling.</p>	<p><b>ENFP</b></p> <p>Warmly enthusiastic, high-spirited, ingenious, imaginative. Able to do almost anything that interests them. Quick with a solution for any difficulty and ready to help anyone with a problem. Often rely on their ability to improvise instead of preparing in advance. Can always find compelling reasons for whatever they want.</p> <p>Live their outer life more with intuition, inner more with feeling.</p>	<p><b>ENTP</b></p> <p>Quirk, ingenious, good at many things. Stimulating company. alert and outspoken, argue for fun on either side of a question. Resourceful in solving new and challenging problems, but may neglect routine assignments. Turn to one new interest after another. Can always find logical reasons for whatever they want.</p> <p>Live their outer life more with intuition, inner more with thinking.</p>
	JUDGING	<p><b>ESTJ</b></p> <p>Practical realists, matter-of-fact, with a natural head for business or mechanics. Not interested in subjects they see no use for, but can apply themselves when necessary. Like to organize and run activities. Tend to run things well, especially if they remember to consider other people's feelings and points of view when making their decisions.</p> <p>Live their outer life more with thinking, inner more with sensing.</p>	<p><b>ESFJ</b></p> <p>Warm-hearted, talkative, popular, conscientious, born cooperators, active committee members. Always doing something nice for someone. Work best with plenty of encouragement and praise. Little interest in abstract thinking or technical subjects. Main interest is in things that directly and visibly affect people's lives.</p> <p>Live their outer life more with feeling, inner more with sensing.</p>	<p><b>ENFJ</b></p> <p>Responsive and responsible. Feel real concern for what others think and want, and try to handle things with due regard for other people's feelings. Can present a proposal or lead a group discussion with ease and tact. Sociable, popular, active in school affairs, but put time enough on their studies to do good work.</p> <p>Live their outer life more with feeling, inner more with intuition.</p>	<p><b>ENTJ</b></p> <p>Hearty, frank, able in studies, leaders in activities. Usually good in anything that requires reasoning and intelligent talk, such as public speaking. Are well-informed and keep adding to their fund of knowledge. May sometimes be more positive and confident than their experience in an area warrants.</p> <p>Live their outer life more with thinking, inner more with intuition.</p>

Figure 2  
Effects of Combinations of All Four Preferences in Young People;

Taken from Myers, I. B. *Introduction to Type, 2nd Ed.* Gainesville, Florida: Center for Applications of Psychological Type, 1976.  
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Table 2

Comparison of Medical Students in Myers' Sample of the 1950's with Students of the 1960's and 1970's

MYERS LONGITUDINAL MEDICAL STUDY

MEDICAL STUDENTS TESTED IN THE 1950's

N = 5355

COMPOSITE OF

MEDICAL STUDENTS TESTED IN THE 1960's AND 1970's

N = 5982

SENSING TYPES with THINKING with FEELING		INTUITIVE TYPES with FEELING with THINKING		N	PERCENT
ISTJ	ISFJ	INFJ	INTJ		
N = 321 % = 5.99 ■■■■■■■	N = 246 % = 4.59 ■■■■■	N = 209 % = 3.90 ■■■■	N = 339 % = 6.33 ■■■■■■■	E 2751 I 2604	51.37 48.63
JUDGING				S 2510 N 2845	46.87 53.13
INTROVERTS				T 2890 F 2465	53.97 46.03
ISTP		ISFP		J 2497 P 2858	46.63 53.37
N = 311 % = 5.81 ■■■■■		N = 266 % = 4.97 ■■■■■		U 1115 IP 1489	20.82 27.81
INFP		INTP		EP 1369 EJ 1382	25.56 25.81
N = 389 % = 7.26 ■■■■■■■		N = 523 % = 9.77 ■■■■■■■■■		ST 1338 SF 1172	24.99 21.89
PERCEPTIVE				NF 1293 NT 1552	24.15 28.98
ESTP		ESFP		SJ 1355 SP 1155	25.30 21.57
N = 278 % = 5.19 ■■■■■		N = 300 % = 5.60 ■■■■■■■		NP 1703 NJ 1142	31.80 21.33
ENFP		ENTP		TJ 1416 TP 1474	26.44 27.53
N = 429 % = 8.01 ■■■■■■■■■		N = 362 % = 6.76 ■■■■■■■■■		FP 1384 FJ 1081	25.84 20.19
PERCEPTIVE				IN 1460 EN 1385	27.26 25.86
ESTJ		ESFJ		IS 1144 ES 1366	21.36 25.51
N = 428 % = 7.99 ■■■■■■■■■		N = 360 % = 6.72 ■■■■■■■			
ENFJ		ENTJ			
N = 266 % = 4.97 ■■■■■		N = 328 % = 6.13 ■■■■■■■			
JUDGING					

NOTES: ■ = 1% of sample

Data include students from 45 medical school tested in the 1950's by Isabel Briggs Myers for the Myers Longitudinal Medical Study.

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SENSING TYPES with THINKING with FEELING		INTUITIVE TYPES with FEELING with THINKING		N	PERCENT
ISTJ	ISFJ	INFJ	INTJ		
N = 491 % = 8.21 ■■■■■■■■■	N = 418 % = 7.49 ■■■■■■■	N = 441 % = 7.37 ■■■■■■■	N = 409 % = 6.84 ■■■■■■■	E 2871 I 3111	47.99 52.01
JUDGING				S 2341 N 3641	39.13 60.87
INTROVERTS				T 2584 F 3398	43.20 56.80
ISTP		ISFP		J 3482 P 2500	58.21 41.79
N = 141 % = 2.36 ■■■		N = 177 % = 2.96 ■■■		U 1789 IP 1322	29.91 22.10
INFP		INTP		EP 1178 EJ 1693	19.69 28.30
N = 624 % = 10.43 ■■■■■■■■■		N = 380 % = 6.35 ■■■■■■■		ST 1139 SF 1202	19.04 20.09
PERCEPTIVE				NF 2196 NT 1445	36.71 24.16
ESTP		ESFP		SJ 1752 SP 589	29.29 9.85
N = 102 % = 1.71 ■■		N = 169 % = 2.83 ■■■		NP 1911 NJ 1730	31.95 28.92
ENFP		ENTP		TJ 1691 TP 893	28.27 14.93
N = 637 % = 10.65 ■■■■■■■■■		N = 270 % = 4.51 ■■■■■		FP 1607 FJ 1791	26.86 29.94
PERCEPTIVE				IN 1854 EN 1787	30.99 29.87
ESTJ		ESFJ		IS 1257 ES 1084	21.01 18.12
N = 405 % = 6.77 ■■■■■■■		N = 408 % = 6.82 ■■■■■■■			
ENFJ		ENTJ			
N = 494 % = 8.26 ■■■■■■■■■		N = 386 % = 6.45 ■■■■■■■			
JUDGING					

NOTES: ■ = 1% of sample

Data include medical students in the CAPT data bank plus distributions of students supplied from other medical schools.

Prepared as part of the final report for "Application of the Myers-Brig Type Indicator to Medicine and Other Health Professions," Contract No. 231-76-0051 for Health Resources Administration, HEW.

CAPT 8-77

Table 3  
Attractiveness of Medical Specialties for Combinations of Perception and Judgment in 1971 Follow-up of Myers Longitudinal Medical Study

S T - SENSING PLUS THINKING PRACTICAL AND MATTER-OF-FACT			S F - SENSING PLUS FEELING SYMPATHETIC AND FRIENDLY			N F - INTUITION PLUS FEELING ENTHUSIASTIC AND INSIGHTFUL			N T - INTUITION PLUS THINKING LOGICAL AND INGENIOUS		
SPECIALTIES	N	RATIO	SPECIALTIES	N	RATIO	SPECIALTIES	N	RATIO	SPECIALTIES	N	RATIO
Aerospace Medicine	20	1.37	Allergy	17	1.46	Child Psychiatry	38	1.77***	Neurology	39	1.62***
Preventive Medicine	12	1.37	Anesthesiology	60	1.36**	Neurological Surgery	17	1.50	Pathology	92	1.54***
Obstetrics & Gynecology	156	1.35***	Ophthalmology	48	1.32*	Psychiatry	146	1.49***	Psychiatry	178	1.46***
Orthopedic Surgery	68	1.24*	Occupational Medicine	21	1.29	Public Health	33	1.44*	Pulmonary Diseases	26	1.45*
General Practice	260	1.23***	Family Practice	33	1.22	Preventive Medicine	11	1.33	Child Psychiatry	36	1.35*
Dermatology	25	1.23	General Practice	217	1.18**	Gastroenterology	20	1.32	Thoracic Surgery	35	1.21
Urology	35	1.20	Urology	30	1.18	Dermatology	25	1.31	Cardiovascular Diseases	77	1.20
General Surgery	165	1.18	Pediatrics	94	1.16	Plastic Surgery	16	1.26	Otolaryngology	27	1.18
Anesthesiology	58	1.15	Gastroenterology	16	1.14	Cardiovascular Diseases	56	1.08	Internal Medicine	313	1.16***
Radiology	61	1.05	Thoracic Surgery	24	1.10	Internal Medicine	234	1.08	Neurological Surgery	16	1.14
Otolaryngology	20	1.02	Plastic Surgery	13	1.09	Pediatrics	92	1.06	Radiology	76	1.12
Family Practice	31	1.00	Obstetrics & Gynecology	111	1.09	Family Practice	30	1.03	Allergy	17	1.09
Occupational Medicine	18	.97	Orthopedic Surgery	52	1.08	Thoracic Surgery	24	1.03	Plastic Surgery	17	1.07
Cardiovascular Diseases	53	.96	Otolaryngology	18	1.05	Aerospace Medicine	14	1.02	Aerospace Medicine	17	1.00
Public Health	23	.94	General Surgery	123	1.00	Neurology	19	.98	Anesthesiology	58	.98
Pediatrics	81	.88	Pulmonary Diseases	13	.97	Occupational Medicine	17	.97	Preventive Medicine	10	.97
Internal Medicine	195	.85**	Public Health	19	.89	Radiology	52	.95	Orthopedic Surgery	62	.97
Ophthalmology	35	.84	Internal Medicine	176	.87*	Obstetrics & Gynecology	103	.94	Gastroenterology	18	.96
Pathology	41	.80	Radiology	43	.84	Ophthalmology	37	.94	Ophthalmology	46	.95
Allergy	10	.75	Neurology	14	.78	Pathology	45	.93	Pediatrics	101	.94
Neurological Surgery	9	.75	Cardiovascular Diseases	33	.69*	General Surgery	122	.93	General Surgery	148	.90
Pulmonary Diseases	10	.65	Dermatology	11	.62	General Practice	171	.86*	Urology	30	.88
Thoracic Surgery	16	.64*	Pathology	26	.58**	Pulmonary Diseases	12	.83	Dermatology	20	.84
Gastroenterology	10	.62	Neurological Surgery	6	.57	Urology	21	.77	Occupational Medicine	18	.83
Plastic Surgery	8	.59	Aerospace Medicine	7	.55	Allergy	9	.72	Family Practice	29	.80
Psychiatry	52	.50***	Psychiatry	39	.43***	Orthopedic Surgery	37	.72*	General Practice	191	.78***
Neurology	10	.49**	Child Psychiatry	7	.35***	Otolaryngology	13	.71	Public Health	22	.77
Child Psychiatry	10	.44**	Preventive Medicine	2	.26*	Anesthesiology	25	.53***	Obstetrics & Gynecology	92	.68***
<b>TOTAL: ALL SPECIALTIES</b>	<b>1243</b>	<b>1.00</b>	<b>TOTAL: ALL SPECIALTIES</b>	<b>1089</b>	<b>1.00</b>	<b>TOTAL: ALL SPECIALTIES</b>	<b>1169</b>	<b>1.00</b>	<b>TOTAL: ALL SPECIALTIES</b>	<b>1452</b>	<b>1.00</b>

Notes: Ratio = % of grouping in specialty + comparable % in total 4953 physicians with known specialties (or Frequency<sub>obs</sub> + Frequency<sub>exp</sub>).

Ratios significantly more than 1.00 indicate specialties attractive to the MBTI grouping; ratios significantly less than 1.00 indicate specialties less attractive. Rankings for specialties with small numbers are less likely to remain stable.

\* p < .05, \*\* p < .01 and \*\*\* p < .001. Variations in significance levels occur because larger differences are required for significance in smaller samples.



Program Initiation Form

Program Name \_\_\_\_\_ Division \_\_\_\_\_

Program Chief \_\_\_\_\_ Today's Date \_\_\_\_\_

PART I: AUTHORIZATION PAGE

A. General information

1. Effective date of this program \_\_\_\_\_

2. Additional information available from \_\_\_\_\_ ext: \_\_\_\_\_

3. Program location \_\_\_\_\_

4. Program developed by: \_\_\_\_\_

5. Program summary:

6. Charges (See Rate Development Sheet, PART IV)

<u>code</u>	<u>description</u>	<u>charge</u>
-------------	--------------------	---------------

7. Rate revision or development to Rate Setting Commission by \_\_\_\_\_  
comments: \_\_\_\_\_

8. This is a  new service  revision of an existing service

9. Approvals necessary for program initiation  
service qualifier

10. Equipment/supply acquisition Capital \$ \_\_\_\_\_ Non-Capital \$ \_\_\_\_\_

11. Revenue over (under) direct expense	\$ _____
Actual cost to BWH (direct expense + assigned overhead)	\$ _____
Reimbursement to BWH based on payor mix	\$ _____
Surplus (deficit)	\$ _____

12.  Existing space to be used for this program  
 Additional space required for this program  
 New space required for this program  
 Space saving with this program

B. Reviews

signature

date

- 1. Program Chief
- 2. Division Chief
- 3. Department Administrator
- 4. Department Chairman
- 5. Reimbursement Manager
- 6. VP for Clinical Services
- 7. VP for \_\_\_\_\_
- 8. VP for Finance
- 9. VP for Planning
- 10. Executive Vice President
- 11. President

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Implementation review by Fiscal Services

- 1. Budget operations
- 2. General Accounting
- 3. Patient Accounting
- 4. MIS

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by: \_\_\_\_\_

**PART II. PROGRAM POLICIES**

- 1. Program Chief \_\_\_\_\_ ext: \_\_\_\_\_
- 2. Program initiation by \_\_\_\_\_ ext: \_\_\_\_\_
- 3. Type of service:

- Primary Care Services which are
  - a. available 24 hours a day, 7 days a week
  - b. economically feasible
  - c. provided in a manner acceptable to those receiving care
  - d. available for common illnesses
  - e. comprehensive, coordinated with other health care providers

- Chronic Disease Care  
Services for the supervision and treatment of a specific problem or disease

- Diagnostic Care  
Services for the determination of a disease or dysfunction

4. Which other Boston facilities provide comparable services and at what cost?

5. Why should Brigham and Women's Hospital provide this service?

6. Are there alternatives to this program?

7. Target population

- a. age range \_\_\_\_\_
- b. geography \_\_\_\_\_
- c. disease category \_\_\_\_\_
- \_\_\_\_\_
- d. economic distribution (estimate %)  
 1. Medicare \_\_\_\_\_ Self Pay \_\_\_\_\_  
 2. Blue Cross \_\_\_\_\_ Medicaid \_\_\_\_\_
- e. Are interpreters needed for patient education? \_\_\_\_\_

8. Eligibility:  
How will the program decide which patients are to receive this service?

- 9. Referrals: (estimate %)  
 a. within the hospital \_\_\_\_\_ %  
 b. outside the hospital \_\_\_\_\_ %  
 c. self referral \_\_\_\_\_ %

10. How is the effectiveness of the program to be monitored?

11. Which other services will be affected by this program?

service

how affected

---

Program Name \_\_\_\_\_

page 5.

12. Program Narrative and Justification:

**PART III: FISCAL INFORMATION**

Projected Annual Program Budget for FY \_\_\_\_\_

**A. Salary and Wage Expense**  
code      position

FTE

total wages

total FTE

TOTAL

=====

=====

**B. Other Direct Expense**  
description

amount

TOTAL

=====

**C. Revenue**  
revenue units

charge

annual revenue

TOTAL

=====

**D. Other Revenue-Recoveries**  
Recovery/Salaries

Recovery/Expense

Total Recovery

TOTAL

=====

Of the revenue/direct expense listed on page 6, please list below those items which CURRENTLY appear in submitted hospital budgets:

<u>code #</u>	<u>item/position</u>	<u>FTE/units</u>	<u>FTE/unit cost</u>	<u>Total</u>
---------------	----------------------	------------------	----------------------	--------------





D. Other expense (indirect costs)

Bases for calculation: total personnel cost \_\_\_\_\_

square footage \_\_\_\_\_

location \_\_\_\_\_

TOTAL \$

- |   |                         |                |       |
|---|-------------------------|----------------|-------|
| 1. Depreciation and Interest:               | square footage _____    | location _____ | _____ |
| 2. Operation of Plant:                      | square footage _____    | location _____ | _____ |
| 3. Maintenance                              | square footage _____    | location _____ | _____ |
| 4. Housekeeping:                            | hours _____             |                | _____ |
| 5. Laundry:                                 | # pounds _____          |                | _____ |
| 6. General and Administrative:              | accumulated costs _____ |                | _____ |
| 7. Fringe benefits:                         | salaries _____          |                | _____ |
| 8. Medical Records:                         | patient days _____      |                | _____ |
| 9. Nursing School                           | hours _____             |                | _____ |
| 10. In-service Education:                   | hours _____             |                | _____ |
| 11. Cafeteria:                              | FTE'S _____             |                | _____ |
| 12. Dietary:                                | patient days _____      |                | _____ |
| 13. Interns                                 | hours _____             |                | _____ |
| 14. Depreciation of major movable equipment |                         |                | _____ |

TOTAL

=====

**PART V: SPACE REQUIREMENTS**

A. How much space is required to execute this program? \_\_\_\_\_ sq.ft

new

existing

1. ancillary services
2. clinic space
3. inpatient space
4. administrative space
5. storage/holding space
6. other \_\_\_\_\_

B. Are renovations to existing or proposed space required? \_\_\_\_\_

If so, what are the estimated costs? \_\_\_\_\_

How will renovations be paid for? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

C. Are you requesting the Planning/Construction Office to identify space? \_\_\_\_\_

D. Is program start dependent on completion of renovated space? \_\_\_\_\_

PART VI: RENOVATION AND CAPITAL EXPENSE FOR FY \_\_\_\_\_

A. Item cost

Justification;

Requested from hospital funds?  YES  NO

B. Item cost

Justification:

Requested from hospital funds?  YES  NO

C. Item cost

Justification:

Requested from hospital funds?  YES  NO

D. Item cost

Justification:

Requested from hospital funds?  YES  NO

E. Item cost

Justification:

Requested from hospital funds?  YES  NO

F. Item cost

Justification:

Requested from hospital funds?  YES  NO

G. Item cost

Justification:

Requested from hospital funds?  YES  NO

H. Item cost

Justification:

Requested from hospital funds?  YES  NO

TOTAL

I. Total capital costs requested from hospital funds \$ \_\_\_\_\_

J. What costs are currently budgeted on hospital funds and in what fiscal year:

FY \_\_\_\_\_ \$ \_\_\_\_\_

FY \_\_\_\_\_ \$ \_\_\_\_\_

FY \_\_\_\_\_ \$ \_\_\_\_\_

K. What costs will be supported from other sources:

FY \_\_\_\_\_ \$ \_\_\_\_\_

FY \_\_\_\_\_ \$ \_\_\_\_\_

FY \_\_\_\_\_ \$ \_\_\_\_\_

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**DEPARTMENT OF BIOLOGICAL CHEMISTRY  
FIVE YEAR PLAN OF OVERALL RESOURCE REQUIREMENTS**

	<b>YEAR 1</b>	<b>YEAR 2</b>	<b>YEAR 3</b>	<b>YEAR 4</b>	<b>YEAR 5</b>	<b>5 YEAR CUM.</b>
<b>SPECIALTY EQUIP.</b>	\$500,000	\$1,000,000	\$500,000	\$500,000	\$500,000	
<b>RECRUITMENTS</b>	\$320,000	\$853,000	\$733,000	\$314,000	\$303,000	
<b>RENOVATIONS</b>	\$3,500,000	\$6,000,000	\$6,000,000	\$500,000		
<b>TOTAL:</b>	<b>\$4,320,000</b>	<b>\$7,853,000</b>	<b>\$7,233,000</b>	<b>\$1,314,000</b>	<b>\$803,000</b>	<b>\$21,523,000</b>
<b>POTENTIAL SOURCES OF FUNDS:</b>						
<b>ENDOWED PROFESSORSHIPS</b>		\$200,000	\$200,000	\$200,000	\$200,000	
<b>NSF EQUIPMENT GRANTS</b>		\$300,000	\$300,000			
<b>SPONSORED RESEARCH AGREEMENTS</b>			\$500,000	\$1,000,000	\$1,000,000	
<b>FOUNDATION SUPPORT</b>		\$200,000	\$300,000	\$400,000	\$500,000	
<b>PRIVATE DONOR</b>	\$500,000	\$500,000				
<b>NIH EQUIPMENT AWARD</b>	\$400,000					
<b>COLLABORATIVE AGREEMENTS</b>	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	
<b>HHMI</b>		\$500,000	\$500,000	\$500,000	\$500,000	
<b>TOTAL:</b>	<b>\$1,150,000</b>	<b>\$1,950,000</b>	<b>\$2,050,000</b>	<b>\$2,350,000</b>	<b>\$2,450,000</b>	<b>\$9,950,000</b>
<b>ADDITIONAL SUPPORT REQUIRED:</b>	<b>\$3,170,000</b>	<b>\$5,903,000</b>	<b>\$5,183,000</b>	<b>(\$1,036,000)</b>	<b>(\$1,647,000)</b>	<b>\$11,573,000</b>

**DEPARTMENT OF BIOLOGICAL CHEMISTRY  
RECRUITMENT PROJECTIONS  
(New Positions)**

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
<b>PROF - X-RAY</b>					
<b>SALARY</b>	\$95,000	\$95,000	\$95,000	\$95,000	\$95,000
<b>START-UP</b>	\$225,000				
<b>PROF - NMR</b>					
<b>SALARY</b>		\$95,000	\$95,000	\$95,000	\$95,000
<b>START-UP</b>		\$225,000			
<b>PROF</b>					
<b>SALARY</b>			\$80,000	\$80,000	\$80,000
<b>START-UP</b>			\$200,000		
<b>ASSIST PROF</b>					
<b>SALARY</b>		\$44,000	\$22,000	\$11,000	\$11,000
<b>START-UP</b>		\$175,000			
<b>ASSIST PROF</b>					
<b>SALARY</b>		\$44,000	\$22,000	\$11,000	\$11,000
<b>START-UP</b>		\$175,000			
<b>ASSIST PROF</b>					
<b>SALARY</b>			\$44,000	\$22,000	\$11,000
<b>START-UP</b>			\$175,000		
<b>SUBTOTALS</b>					
<b>SALARY</b>	\$95,000	\$278,000	\$358,000	\$314,000	\$303,000
<b>START-UP</b>	\$225,000	\$575,000	\$375,000	\$0	\$0
<b>TOTAL</b>	<b>\$320,000</b>	<b>\$853,000</b>	<b>\$733,000</b>	<b>\$314,000</b>	<b>\$303,000</b>

**TOTAL OVER FIRST FIVE YEARS**

**SALARY** \$1,348,000  
**START-UP** \$1,175,000

-----  
**\$2,523,000**  
=====

## FIVE YEAR PLAN FOR STRUCTURAL BIOLOGY

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
<hr style="border-top: 1px dashed black;"/>					
<b>1ST SENIOR FACULTY RECRUITMENT</b>					
<b>SALARY</b>	<b>\$95,000</b>				
<b>START-UP</b>	<b>\$225,000</b>				
 <b>2ND SENIOR FACULTY RECRUITMENT</b>					
<b>SALARY</b>		<b>\$95,000</b>			
<b>START-UP</b>		<b>\$225,000</b>			
 <b>EQUIPMENT</b>	<b>\$500,000</b>	<b>\$500,000</b>	<b>\$500,000</b>		<b>\$500,000</b>
 <b>RENOVATIONS</b>	<b>\$1,500,000</b>	<b>\$1,000,000</b>		<b>\$500,000</b>	
<hr style="border-top: 1px dashed black;"/>					
<b>TOTALS</b>	<b>\$2,320,000</b>	<b>\$1,820,000</b>	<b>\$500,000</b>	<b>\$500,000</b>	<b>\$500,000</b>
 <b>TOTAL OVER FIVE YEARS</b>					<b>\$5,640,000</b>
					<b>=====</b>

## THE KEIRSEY TEMPERAMENT SORTER

Decide on answer A or B and put a check mark in the proper column of the answer sheet. Scoring directions are provided at the bottom of page 11. There are no right or wrong answers since about half the population agrees with either answer you choose. The results of the questionnaire and your "type" will be discussed during the seminar.



## The Keirsey Temperament Sorter

1. **At a party do you**
  - (a) interact with many, including strangers
  - (b) interact with a few, known to you
2. **Are you more**
  - (a) realistic than speculative
  - (b) speculative than realistic
3. **Is it worse to**
  - (a) have your "head in the clouds"
  - (b) be "in a rut"
4. **Are you more impressed by**
  - (a) principles
  - (b) emotions
5. **Are you more drawn toward the**
  - (a) convincing
  - (b) touching
6. **Do you prefer to work**
  - (a) to deadlines
  - (b) just "whenever"
7. **Do you tend to choose**
  - (a) rather carefully
  - (b) somewhat impulsively
8. **At parties do you**
  - (a) stay late, with increasing energy
  - (b) leave early, with decreased energy
9. **Are you more attracted to**
  - (a) sensible people
  - (b) imaginative people
10. **Are you more interested in**
  - (a) what is actual
  - (b) what is possible
11. **In judging others are you more swayed by**
  - (a) laws than circumstances
  - (b) circumstances than laws

12. **In approaching others is your inclination to be somewhat**
  - (a) objective
  - (b) personal
13. **Are you more**
  - (a) punctual
  - (b) leisurely
14. **Does it bother you more having things**
  - (a) incomplete
  - (b) completed
15. **In your social groups do you**
  - (a) keep abreast of other's happenings
  - (b) get behind on the news
16. **In doing ordinary things are you more likely to**
  - (a) do it the usual way
  - (b) do it your own way
17. **Writers should**
  - (a) "say what they mean and mean what they say"
  - (b) express things more by use of analogy
18. **Which appeals to you more**
  - (a) consistency of thought
  - (b) harmonious human relationships
19. **Are you more comfortable in making**
  - (a) logical judgments
  - (b) value judgments
20. **Do you want things**
  - (a) settled and decided
  - (b) unsettled and undecided
21. **Would you say you are more**
  - (a) serious and determined
  - (b) easy-going
22. **In phoning do you**
  - (a) rarely question that it will all be said
  - (b) rehearse what you'll say
23. **Facts**
  - (a) "speak for themselves"
  - (b) illustrate principles

24. **Are visionaries**  
(a) somewhat annoying  
(b) rather fascinating
25. **Are you more often**  
(a) a cool-headed person (b) a warm-hearted person
26. **Is it worse to be**  
(a) unjust (b) merciless
27. **Should one usually let events occur**  
(a) by careful selection and choice  
(b) randomly and by chance
28. **Do you feel better about**  
(a) having purchased (b) having the option to buy
29. **In company do you**  
(a) initiate conversation (b) wait to be approached
30. **Common sense is**  
(a) rarely questionable (b) frequently questionable
31. **Children often do not**  
(a) make themselves useful enough  
(b) exercise their fantasy enough
32. **In making decisions do you feel more comfortable with**  
(a) standards (b) feelings
33. **Are you more**  
(a) firm than gentle (b) gentle than firm
34. **Which is more admirable:**  
(a) the ability to organize and be methodical  
(b) the ability to adapt and make do
35. **Do you put more value on the**  
(a) definite (b) open-ended

36. **Does new and non-routine interaction with others**  
(a) stimulate and energize you  
(b) tax your reserves
37. **Are you more frequently**  
(a) a practical sort of person  
(b) a fanciful sort of person
38. **Are you more likely to**  
(a) see how others are useful  
(b) see how others see
39. **Which is more satisfying:**  
(a) to discuss an issue thoroughly  
(b) to arrive at agreement on an issue
40. **Which rules you more:**  
(a) your head (b) your heart
41. **Are you more comfortable with work that is**  
(a) contracted (b) done on a casual basis
42. **Do you tend to look for**  
(a) the orderly (b) whatever turns up
43. **Do you prefer**  
(a) many friends with brief contact  
(b) a few friends with more lengthy contact
44. **Do you go more by**  
(a) facts (b) principles
45. **Are you more interested in**  
(a) production and distribution  
(b) design and research
46. **Which is more of a compliment:**  
(a) "There is a very logical person."  
(b) "There is a very sentimental person."

47. Do you value in yourself more that you are  
(a) unwavering (b) devoted
48. Do you more often prefer the  
(a) final and unalterable statement  
(b) tentative and preliminary statement
49. Are you more comfortable  
(a) after a decision (b) before a decision
50. Do you  
(a) speak easily and at length with strangers  
(b) find little to say to strangers
51. Are you more likely to trust your  
(a) experience (b) hunch
52. Do you feel  
(a) more practical than ingenious  
(b) more ingenious than practical
53. Which person is more to be complimented: one of  
(a) clear reason (b) strong feeling
54. Are you inclined more to be  
(a) fair-minded (b) sympathetic
55. Is it preferable mostly to  
(a) make sure things are arranged  
(b) just let things happen
56. In relationships should most things be  
(a) renegotiable  
(b) random and circumstantial
57. When the phone rings do you  
(a) hasten to get to it first  
(b) hope someone else will answer
58. Do you prize more in yourself  
(a) strong sense of reality (b) a vivid imagination

59. Are you drawn more to  
(a) fundamentals (b) overtones
60. Which seems the greater error:  
(a) to be too passionate (b) to be too objective
61. Do you see yourself as basically  
(a) hard-headed (b) soft-hearted
62. Which situation appeals to you more:  
(a) the structured and scheduled  
(b) the unstructured and unscheduled
63. Are you a person that is more  
(a) routinized than whimsical  
(b) whimsical than routinized
64. Are you more inclined to be  
(a) easy to approach (b) somewhat reserved
65. In writings do you prefer  
(a) the more literal (b) the more figurative
66. Is it harder for you to  
(a) identify with others (b) utilize others
67. Which do you wish more for yourself:  
(a) clarity of reason (b) strength of compassion
68. Which is the greater fault:  
(a) being indiscriminate (b) being critical
69. Do you prefer the  
(a) planned event (b) unplanned event
70. Do you tend to be more  
(a) deliberate than spontaneous  
(b) spontaneous than deliberate

# Answer Sheet

Enter a check for each answer in the column for a or b

	a	b	a	b	a	b	a	b	a	b	a	b									
1			2		3		4		5		6		7								
8			9		10		11		12		13		14								
15			16		17		18		19		20		21								
22			23		24		25		26		27		28								
29			30		31		32		33		34		35								
36			37		38		39		40		41		42								
43			44		45		46		47		48		49								
50			51		52		53		54		55		56								
57			58		59		60		61		62		63								
64			65		66		67		68		69		70								
1			2			3			4			5			6			7			8
1			2			3			4			5			6			7			8
	E I			S N			T F			I P											

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	a	b	a	b	a	b	a	b	a	b	a	b								
1	✓		2	✓	3	✓	4	✓	5	✓	6	✓	7	✓						
8	✓		9	✓	10	✓	11	✓	12	✓	13	✓	14	✓						
15	✓		16	✓	17	✓	18	✓	19	✓	20	✓	21	✓						
22		✓	23	✓	24	✓	25	✓	26	✓	27	✓	28	✓						
29	✓		30	✓	31	✓	32	✓	33	✓	34	✓	35	✓						
36	✓		37	✓	38	✓	39	✓	40	✓	41	✓	42	✓						
43		✓	44		45	✓	46	✓	47	✓	48	✓	49	✓						
50	✓		51	✓	52	✓	53	✓	54	✓	55	✓	56	✓						
57	✓		58	✓	59	✓	60	✓	61	✓	62	✓	63	✓						
64	✓		65	✓	66	✓	67	✓	68	✓	69	✓	70	✓						
1	82		2	91		3	82		4	010		5	19		6	100		7	13	
	82			91			82			010			19			100			13	
	E I			S N			T F			I P										

You have now identified your "type." It should be one of the following:

- |      |      |      |      |
|------|------|------|------|
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If you have an X in your type, yours is a mixed type

## THE KEIRSEY TEMPERAMENT SORTER

Decide on answer A or B and put a check mark in the proper column of the answer sheet. Scoring directions are provided at the bottom of page 11. There are no right or wrong answers since about half the population agrees with either answer you choose. The results of the questionnaire and your "type" will be discussed during the seminar.

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2. **Are you more**
  - (a) realistic than speculative
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3. **Is it worse to**
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4. **Are you more impressed by**
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5. **Are you more drawn toward the**
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  - (b) touching
6. **Do you prefer to work**
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  - (b) just "whenever"
7. **Do you tend to choose**
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8. **At parties do you**
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10. **Are you more interested in**
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11. **In judging others are you more swayed by**
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  - (b) circumstances than laws

12. **In approaching others is your inclination to be somewhat**
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13. **Are you more**
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14. **Does it bother you more having things**
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15. **In your social groups do you**
  - (a) keep abreast of other's happenings
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16. **In doing ordinary things are you more likely to**
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17. **Writers should**
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18. **Which appeals to you more**
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19. **Are you more comfortable in making**
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20. **Do you want things**
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21. **Would you say you are more**
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22. **In phoning do you**
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27. **Should one usually let events occur**  
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35. **Do you put more value on the**  
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52. Do you feel  
(a) more practical than ingenious  
(b) more ingenious than practical
53. Which person is more to be complimented: one of  
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61. Do you see yourself as basically  
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62. Which situation appeals to you more:  
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63. Are you a person that is more  
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64. Are you more inclined to be  
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65. In writings do you prefer  
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66. Is it harder for you to  
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67. Which do you wish more for yourself:  
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69. Do you prefer the  
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70. Do you tend to be more  
(a) deliberate than spontaneous  
(b) spontaneous than deliberate



# Answer Sheet

Enter a check for each answer in the column for a or b

a		b		a		b		a		b		a		b	
1				2				3				4			
8				9				10				11			
15				16				17				18			
22				23				24				25			
29				30				31				32			
36				37				38				39			
43				44				45				46			
50				51				52				53			
57				58				59				60			
64				65				66				67			

1		2		3		4		5		6		7		8	

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15	✓			16	✓			17	✓			18	✓		
22		✓		23	✓			24	✓			25	✓		
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36	✓			37	✓			38	✓			39	✓		
43		✓		44		✓		45	✓			46	✓		
50	✓			51	✓			52	✓			53	✓		
57	✓			58	✓			59	✓			60	✓		
64	✓			65	✓			66		✓		67	✓		

1	82	2	91	3	82	4	010	5	19	6	100	7	13	8	

1	82	2	173	3	19	4	179	5		6		7		8	

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8			9		10		11		12		13		14
15			16		17		18		19		20		21
22			23		24		25		26		27		28
29			30		31		32		33		34		35
36			37		38		39		40		41		42
43			44		45		46		47		48		49
50			51		52		53		54		55		56
57			58		59		60		61		62		63
64			65		66		67		68		69		70

1	2	3	4	5	6	7	8
E	I	S	N	T	F	I	P

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22		✓	23	✓	24	✓	25	✓	26	✓	27	✓	28	✓	
29	✓		30	✓	31		✓	32	✓	33	✓	34	✓	35	✓
36	✓		37	✓	38	✓	39	✓	40	✓	41	✓	42	✓	
43		✓	44		✓	45	✓	46	✓	47	✓	48	✓	49	✓
50	✓		51	✓	52	✓	53	✓	54	✓	55	✓	56	✓	
57	✓		58	✓	59	✓	60	✓	61	✓	62	✓	63	✓	
64	✓		65	✓	66		✓	67	✓	68	✓	69	✓	70	✓

1	2	3	4	5	6	7	8
82	91	82	00	19	00	13	
82	91	173	00	19	00	173	
E	I	S	N	T	F	I	P

You have now identified your "type." It should be one of the following:

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21. **Would you say you are more**
  - (a) serious and determined
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22. **In phoning do you**
  - (a) rarely question that it will all be said
  - (b) rehearse what you'll say
23. **Facts**
  - (a) "speak for themselves"
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32. **In making decisions do you feel more comfortable with**  
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33. **Are you more**  
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34. **Which is more admirable:**  
(a) the ability to organize and be methodical  
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35. **Do you put more value on the**  
(a) definite (b) open-ended

36. **Does new and non-routine interaction with others**  
(a) stimulate and energize you  
(b) tax your reserves
37. **Are you more frequently**  
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38. **Are you more likely to**  
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39. **Which is more satisfying:**  
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41. **Are you more comfortable with work that is**  
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42. **Do you tend to look for**  
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48. Do you more often prefer the  
(a) final and unalterable statement  
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49. Are you more comfortable  
(a) after a decision (b) before a decision
50. Do you  
(a) speak easily and at length with strangers  
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51. Are you more likely to trust your  
(a) experience (b) hunch
52. Do you feel  
(a) more practical than ingenious  
(b) more ingenious than practical
53. Which person is more to be complimented: one of  
(a) clear reason (b) strong feeling
54. Are you inclined more to be  
(a) fair-minded (b) sympathetic
55. Is it preferable mostly to  
(a) make sure things are arranged  
(b) just let things happen
56. In relationships should most things be  
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(a) hasten to get to it first  
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59. Are you drawn more to  
(a) fundamentals (b) overtones
60. Which seems the greater error:  
(a) to be too passionate (b) to be too objective
61. Do you see yourself as basically  
(a) hard-headed (b) soft-hearted
62. Which situation appeals to you more:  
(a) the structured and scheduled  
(b) the unstructured and unscheduled
63. Are you a person that is more  
(a) routinized than whimsical  
(b) whimsical than routinized
64. Are you more inclined to be  
(a) easy to approach (b) somewhat reserved
65. In writings do you prefer  
(a) the more literal (b) the more figurative
66. Is it harder for you to  
(a) identify with others (b) utilize others
67. Which do you wish more for yourself:  
(a) clarity of reason (b) strength of compassion
68. Which is the greater fault:  
(a) being indiscriminate (b) being critical
69. Do you prefer the  
(a) planned event (b) unplanned event
70. Do you tend to be more  
(a) deliberate than spontaneous  
(b) spontaneous than deliberate

# Answer Sheet

Enter a check for each answer in the column for a or b

	a	b	a	b	a	b	a	b	a	b	a	b		
1			2		3		4		5		6		7	
8			9		10		11		12		13		14	
15			16		17		18		19		20		21	
22			23		24		25		26		27		28	
29			30		31		32		33		34		35	
36			37		38		39		40		41		42	
43			44		45		46		47		48		49	
50			51		52		53		54		55		56	
57			58		59		60		61		62		63	
64			65		66		67		68		69		70	

1	2	3	4	5	6	7	8
E	I	S	N	T	F	J	P

## Directions for Scoring

1. Add down so that the total number of "a" answers is written in the box at the bottom of each column (see next page for illustration). Do the same for the "b" answers you have checked. Each of the 14 boxes should have a number in it.

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3. Now you have four pairs of numbers. Circle the letter below the larger number of each pair (see answer sheet below for illustration). If the two numbers of any pair are equal, then circle neither, but put a large X below them and circle it.

	a	b	a	b	a	b	a	b	a	b	a	b			
1	✓		2	✓	3	✓	4	✓	5	✓	6	✓	7	✓	
8	✓		9	✓	10	✓	11	✓	12	✓	13	✓	14	✓	
15	✓		16	✓	17	✓	18	✓	19	✓	20	✓	21	✓	
22		✓	23	✓	24	✓	25	✓	26	✓	27	✓	28	✓	
29	✓		30	✓	31		✓	32	✓	33	✓	34	✓	35	✓
36	✓		37	✓	38	✓	39	✓	40	✓	41	✓	42	✓	
43		✓	44		✓	45	✓	46	✓	47	✓	48	✓	49	✓
50	✓		51	✓	52	✓	53	✓	54	✓	55	✓	56	✓	
57	✓		58	✓	59	✓	60	✓	61	✓	62	✓	63	✓	
64	✓		65	✓	66		✓	67	✓	68	✓	69	✓	70	✓

1	2	3	4	5	6	7	8
82	91	82	010	19	100	13	
82	91	173	010	119	179	179	
E	I	S	N	T	F	J	P

You have now identified your "type." It should be one of the following:

- |      |      |      |      |
|------|------|------|------|
| INFP | ISFP | INTP | ISTP |
| ENFP | ESFP | ENTP | ESTP |
| INFJ | ISFJ | INTJ | ISTJ |
| ENFJ | ESFJ | ENTJ | ESTJ |

If you have an X in your type, yours is a mixed type

## THE KEIRSEY TEMPERAMENT SORTER

Decide on answer A or B and put a check mark in the proper column of the answer sheet. Scoring directions are provided at the bottom of page 11. There are no right or wrong answers since about half the population agrees with either answer you choose. The results of the questionnaire and your "type" will be discussed during the seminar.

## The Keirsey Temperament Sorter

1. **At a party do you**
  - (a) interact with many, including strangers
  - (b) interact with a few, known to you
2. **Are you more**
  - (a) realistic than speculative
  - (b) speculative than realistic
3. **Is it worse to**
  - (a) have your "head in the clouds"
  - (b) be "in a rut"
4. **Are you more impressed by**
  - (a) principles
  - (b) emotions
5. **Are you more drawn toward the**
  - (a) convincing
  - (b) touching
6. **Do you prefer to work**
  - (a) to deadlines
  - (b) just "whenever"
7. **Do you tend to choose**
  - (a) rather carefully
  - (b) somewhat impulsively
8. **At parties do you**
  - (a) stay late, with increasing energy
  - (b) leave early, with decreased energy
9. **Are you more attracted to**
  - (a) sensible people
  - (b) imaginative people
10. **Are you more interested in**
  - (a) what is actual
  - (b) what is possible
11. **In judging others are you more swayed by**
  - (a) laws than circumstances
  - (b) circumstances than laws

12. **In approaching others is your inclination to be somewhat**
  - (a) objective
  - (b) personal
13. **Are you more**
  - (a) punctual
  - (b) leisurely
14. **Does it bother you more having things**
  - (a) incomplete
  - (b) completed
15. **In your social groups do you**
  - (a) keep abreast of other's happenings
  - (b) get behind on the news
16. **In doing ordinary things are you more likely to**
  - (a) do it the usual way
  - (b) do it your own way
17. **Writers should**
  - (a) "say what they mean and mean what they say"
  - (b) express things more by use of analogy
18. **Which appeals to you more**
  - (a) consistency of thought
  - (b) harmonious human relationships
19. **Are you more comfortable in making**
  - (a) logical judgments
  - (b) value judgments
20. **Do you want things**
  - (a) settled and decided
  - (b) unsettled and undecided
21. **Would you say you are more**
  - (a) serious and determined
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(a) deliberate than spontaneous  
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# Answer Sheet

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36			37		38		39		40		41		42										
43			44		45		46		47		48		49										
50			51		52		53		54		55		56										
57			58		59		60		61		62		63										
64			65		66		67		68		69		70										
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15	✓		16	✓		17	✓		18	✓	19	✓	20	✓	21	✓						
22		✓	23	✓		24	✓		25	✓	26	✓	27	✓	28	✓						
29	✓		30	✓		31	✓		32	✓	33	✓	34	✓	35	✓						
36	✓		37	✓		38	✓		39	✓	40	✓	41	✓	42	✓						
43		✓	44		✓	45	✓		46	✓	47	✓	48	✓	49	✓						
50	✓		51	✓		52	✓		53	✓	54	✓	55	✓	56	✓						
57	✓		58	✓		59	✓		60	✓	61	✓	62	✓	63	✓						
64	✓		65	✓		66	✓		67	✓	68	✓	69	✓	70	✓						
1	8	2	3	9	1	4	8	2	5	0	0	6	1	9	7	1	0	8	1	3		
1	8	2	3	9	1	4	8	2	5	0	0	6	1	9	7	1	0					
8	2	9	1	8	2	0	0	1	9	1	3											
E	I	S	N	T	F	J	P															

You have now identified your "type." It should be one of the following:

- |      |      |      |      |
|------|------|------|------|
| INFP | ISFP | INTP | ISTP |
| ENFP | ESFP | ENTP | ESTP |
| INFJ | ISFJ | INTJ | ISTJ |
| ENFJ | ESFJ | ENTJ | ESTJ |

If you have an X in your type, yours is a mixed type



MEDICARE FRAUD AND ABUSE  
HOSPITAL ASSOCIATION OF PENNSYLVANIA  
FALL CONFERENCE

James G. Sheehan  
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601 Market Street  
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Phone: (215) 597-2305

## OUTLINE

### MEDICARE FRAUD

#### Health Care Fraud - who do we catch?

- 1) MDs - 50% of total cases
- 2) dentists, optometrists, podiatrists, chiropractors - 18%
- 3) pharmacists - 9%
- 4) medical supply and service companies (ambulances, DME, etc.) - 8%
- 5) nursing homes and free-standing clinics - 8%
- 6) hospitals - 3%

#### What do we catch them for?

- 1) false claims - service not rendered as billed, not rendered at all, or rendered unnecessarily - 90%
- 2) kickbacks - one provider made payment, in cash or in kind, to another in return for referrals - 4%
- 3) embezzlement, perjury, theft of government property, etc. - 2%

#### How do we find the violators?

- 1) review of Medicare profile - services
- 2) complaints from patients and families on services billed
- 3) complaints from employees
- 4) complaints for competitors
- 5) Blue Shield or Medicare utilization review - consultants
- 6) licensing board complaints
- 7) cooperating witnesses
- 8) informants

#### What can we do to violators?

- 1) false claims/false statements  
5 years in jail  
felony conviction means expulsion from Medicare/  
Medicaid, loss of licensing through state  
licensing board  
injury to reputation - indictment can mean  
loss of staff and/or admitting privileges.

- losses of patients, loss of referrals  
cost of defense, to physician and his family  
civil suits - reckless disregard - triple  
damages plus \$5000 per false claim
- 2) Civil Monetary Penalties Law - \$2000 per false claim
  - 3) Program Suspension for false statements, poor quality services, excessive services, accepting or paying kickbacks

Why are we going after health care providers?

- 1) single largest budget item after defense procurement - \$100 billion for Medicare, \$40 billion for Medicaid
- 2) autonomy of health care providers - part of original Medicare political deal was that Government would not dictate health care practices - control is through sanctions
- 3) coming financial crisis of Medicare - in deficit position after 1994
- 4) blatant fraud
- 5) Moby Dick defendants
  - truth and justice
  - bring down the mighty - personalities of prosecutors
  - intellectual complexity of cases
- 6) Office of Inspector General - special investigators with experience, interest in health care fraud
- 7) Joint Task Force - FBI involvement

What are problem areas?

- 1) practices
  - billing upgrading
  - unnecessary services
  - referral fees
  - like-kind exchanges
- 2) laboratories - blood and physiology and orthotics
  - kickbacks
  - in-office labs
  - joint ventures
- 3) -DRG gaming

How can you avoid or limit investigations for allegations of Medicare fraud and abuse?

- practice and provide quality medical care
- stay current through genuine CME
- awareness of literature
- refer out patients whose needs exceed the provider's comfortable capabilities
- conduct regular audits of your billing practices
  - accurate, complete
  - system in place to implement new regulatory changes
  - pick up systemic errors
  - send Medicare a refund when an error is discovered
  - review billing complaints from patients (red flags)
- utilization reviews of services and activities
- provide management support, emphasis for honest, accurate billing and quality care
  - confidential disclosures
  - outside chain of command grievances
  - duty to report
- make sure practitioners know tests, drugs, other procedures ordered
- be sensitive to any payments which have any relationship to referrals

**DEPARTMENT OF BIOLOGICAL CHEMISTRY  
RECRUITMENT PROJECTIONS  
(New Positions)**

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
<b>PROF - X-RAY</b>					
<b>SALARY</b>	\$95,000	\$95,000	\$95,000	\$95,000	\$95,000
<b>START-UP</b>	\$225,000				
<b>PROF - NMR</b>					
<b>SALARY</b>		\$95,000	\$95,000	\$95,000	\$95,000
<b>START-UP</b>		\$225,000			
<b>PROF</b>					
<b>SALARY</b>			\$80,000	\$80,000	\$80,000
<b>START-UP</b>			\$200,000		
<b>ASSIST PROF</b>					
<b>SALARY</b>		\$44,000	\$22,000	\$11,000	\$11,000
<b>START-UP</b>		\$175,000			
<b>ASSIST PROF</b>					
<b>SALARY</b>		\$44,000	\$22,000	\$11,000	\$11,000
<b>START-UP</b>		\$175,000			
<b>ASSIST PROF</b>					
<b>SALARY</b>			\$44,000	\$22,000	\$11,000
<b>START-UP</b>			\$175,000		
<b>SUBTOTALS</b>					
<b>SALARY</b>	\$95,000	\$278,000	\$358,000	\$314,000	\$303,000
<b>START-UP</b>	\$225,000	\$575,000	\$375,000	\$0	\$0
<b>TOTAL</b>	<b>\$320,000</b>	<b>\$853,000</b>	<b>\$733,000</b>	<b>\$314,000</b>	<b>\$303,000</b>

**TOTAL OVER FIRST FIVE YEARS**  
**SALARY**  
**START-UP**

**\$1,348,000**  
**\$1,175,000**

-----  
**\$2,523,000**  
=====

## Faculty Status Data Department of XX

<u>Name</u>	<u>Status</u>	<u>Location</u>	<u>Antic. Retire</u>	<u>Review Date</u>	<u>Years In Faculty</u>
Person A Professor of XX	FT	1	6/30/90		
Person B Professor of XX	EMR	1	7/01/84		
Person C Associate Professor of XX	FT	2	6/30/18	7/01/90	10
Person D Associate Professor of XX	FT	1	6/30/21	7/01/90	10
Person H Assistant Professor of XX	FT	2	6/30/24	6/01/94	3

**Faculty Recruitment Projection  
Department X**

	Rank	88-89	89-90	90-91	91-92	Comments
Dr. A	A	X				replacement for Dr. Z
Dr. B	A	X				replacement for Dr. X
C Replacement	P		X			70 in 1989; Dr. W is candidate
D Replacement	A			X		leaving 10/89
E Replacement	A			X		left 12/87
F Replacement	A				X	11th year in 1990
G Replacement	A				X	recruit. delayed due to construction
<b>Total</b>		<b>2A</b>	<b>1P</b>	<b>2A</b>	<b>2A</b>	

**Note:**

*P indicates professor*

*A indicates junior faculty rank*

## Faculty Recruitment for Department X

Rank/Position Department X	1990-91	1991-92	1992-93	1993-94	Comments
<b>P Replace Dr. Jones</b>					<b>70 in 1991; External candidate, search accelerated to AY-89</b>
<b>Salary+FB</b>	90,847 *	90,847 **	90,847 **	90,847 **	
<b>Start-up</b>	225,000				
<b>A Replace Dr. Paul</b>					<b>11th year in 1990; will extend time</b>
<b>Salary+FB</b>		42,700 *	21,350 **	10,675 **	
<b>Start-up</b>		100,000			
<b>Annual Total</b>	----- \$315,847 =====	----- \$233,547 =====	----- \$112,197 =====	----- \$101,522 =====	



## Faculty Status Data Department of XX

<u>Name</u>	<u>Status</u>	<u>Location</u>	<u>Antic. Retire</u>	<u>Review Date</u>	<u>Years In Faculty</u>
Person A Professor of XX	FT	1	6/30/90		
Person B Professor of XX	EMR	1	7/01/84		
Person C Associate Professor of XX	FT	2	6/30/18	7/01/90	10
Person D Associate Professor of XX	FT	1	6/30/21	7/01/90	10
Person H Assistant Professor of XX	FT	2	6/30/24	6/01/94	3

## Faculty Recruitment Projection Department X

Rank 88-89 89-90 90-91 91-92 Comments

---

Dr. A	A	X			replacement for Dr. Z
Dr. B	A	X			replacement for Dr. X
C Replacement	P		X		70 in 1989; Dr. W is candidate
D Replacement	A			X	leaving 10/89
E Replacement	A			X	left 12/87
F Replacement	A				X 11th year in 1990
G Replacement	A				X recruit. delayed due to construction
<b>Total</b>		<b>2A</b>	<b>1P</b>	<b>2A</b>	<b>2A</b>

**Note:**

*P indicates professor*

*A indicates junior faculty rank*

## Faculty Recruitment for Department X

Rank/Position Department X	1990-91	1991-92	1992-93	1993-94	Comments
P Replace Dr. Jones Salary+FB Start-up	90,847 * 225,000	90,847 **	90,847 **	90,847 **	70 in 1991; External candidate, search accelerated to AY-89
A Replace Dr. Paul Salary+FB Start-up		42,700 * 100,000	21,350 **	10,675 **	11th year in 1990; will extend time
<b>Annual Total</b>	----- \$315,847 =====	----- \$233,547 =====	----- \$112,197 =====	----- \$101,522 =====	

MEDICARE FRAUD AND ABUSE  
HOSPITAL ASSOCIATION OF PENNSYLVANIA  
FALL CONFERENCE

James G. Sheehan  
Assistant United States Attorney  
Chief, Civil Division  
U.S. Attorney's Office  
3310 U.S. Courthouse  
601 Market Street  
Philadelphia, PA 19106  
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## OUTLINE

### MEDICARE FRAUD

#### Health Care Fraud - who do we catch?

- 1) MDs - 50% of total cases
- 2) dentists, optometrists, podiatrists, chiropractors - 18%
- 3) pharmacists - 9%
- 4) medical supply and service companies (ambulances, DME, etc.) - 8%
- 5) nursing homes and free-standing clinics - 8%
- 6) hospitals - 3%

#### What do we catch them for?

- 1) false claims - service not rendered as billed, not rendered at all, or rendered unnecessarily - 90%
- 2) kickbacks - one provider made payment, in cash or in kind, to another in return for referrals - 4%
- 3) embezzlement, perjury, theft of government property, etc. - 2%

#### How do we find the violators?

- 1) review of Medicare profile - services
- 2) complaints from patients and families on services billed
- 3) complaints from employees
- 4) complaints for competitors
- 5) Blue Shield or Medicare utilization review - consultants
- 6) licensing board complaints
- 7) cooperating witnesses
- 8) informants

#### What can we do to violators?

- 1) false claims/false statements  
5 years in jail  
felony conviction means expulsion from Medicare/Medicaid, loss of licensing through state licensing board  
injury to reputation - indictment can mean loss of staff and/or admitting privileges,

- losses of patients, loss of referrals  
cost of defense, to physician and his family  
civil suits - reckless disregard - triple  
damages plus \$5000 per false claim
- 2) Civil Monetary Penalties Law - \$2000 per false claim
  - 3) Program Suspension for false statements, poor quality services, excessive services, accepting or paying kickbacks

Why are we going after health care providers?

- 1) single largest budget item after defense procurement - \$100 billion for Medicare, \$40 billion for Medicaid
- 2) autonomy of health care providers - part of original Medicare political deal was that Government would not dictate health care practices - control is through sanctions
- 3) coming financial crisis of Medicare - in deficit position after 1994
- 4) blatant fraud
- 5) Moby Dick defendants
  - truth and justice
  - bring down the mighty - personalities of prosecutors
  - intellectual complexity of cases
- 6) Office of Inspector General - special investigators with experience, interest in health care fraud
- 7) Joint Task Force - FBI involvement

What are problem areas?

- 1) practices
  - billing upgrading
  - unnecessary services
  - referral fees
  - like-kind exchanges
- 2) laboratories - blood and physiology and orthotics
  - kickbacks
  - in-office labs
  - joint ventures
- 3) -DRG gaming

How can you avoid or limit investigations for allegations of Medicare fraud and abuse?

- practice and provide quality medical care
- stay current through genuine CME
- awareness of literature
- refer out patients whose needs exceed the provider's comfortable capabilities
- conduct regular audits of your billing practices
- accurate, complete
- system in place to implement new regulatory changes
- pick up systemic errors
- send Medicare a refund when an error is discovered
- review billing complaints from patients (red flags)
- utilization reviews of services and activities
- provide management support, emphasis for honest, accurate billing and quality care
- confidential disclosures
- outside chain of command grievances
- duty to report
- make sure practitioners know tests, drugs, other procedures ordered
- be sensitive to any payments which have any relationship to referrals

July 18, 1987

## Planning

Steve Ruma

"Planning" is not as useful a word as it once was. There are so many different kinds and levels of planning that simply labeling an activity as "planning" does not help the individual decide how to behave and what to do.

### Assumptions about planning in an academic medical center-

1. Many faculty and employees feel a right to take part in planning and decisions that affect their jobs.
2. Many want to use and share information about their work rather than act as passive recipients of directions from "above."
3. Many faculty and staff do not view planning processes as credible because of the extensive time and energy they have given in the past with little visible outcome of the planning.
4. The current and future volatility in the health care industry in general and in academic medical centers in specific (unpredictability and rapid change expected) results in many feeling a sense of futility in planning.
5. Shift toward "corporate" governance and emphasis on "bottom line" operations makes many feel that the real important plans and decision will probably, because of the necessity of time and the cumbersomeness of the decision-making process, be made at the top of the organization.

### Planning: kind and purpose--

Senior medical center management are usually not explicit enough about the kind and purpose of planning activities.

### Two kinds of planning:

Implementation oriented: planning continues until what is being planned is implemented. Planning of this kind is indistinguishable from management.

Speculative: any kind of planning in which the product of the process is a generic set of plans which may or may not be implemented sometime in the future.

Forecasting and modelling: a kind of planning which collects data about a specific issue, develops assumptions about



present and future events, and then generates a model depicting alternative "what if" scenarios.

Modelling provides a framework for analysis. This kind of planning results in doing more but relying on it less. Very frustrating for the participant organization member.

#### Definitions-

##### (a) Planning-

- setting goals, targets and expectations of what will occur and how it will occur.

##### (b) Control-

- monitoring, measuring, evaluating and redirecting when deviations from target are detected.

#### Levels of Planning and Control-

Strategic Planning and Control

Management Planning and Control

Operational Planning and Control

#### Strategic Planning-

- Choosing objectives or reviewing objectives
- Identifying priorities
- Identifying major resources
- Specifying major programs
- Developing policies to achieve above
- Developing processes to monitor implementation

#### Management Planning and Control-

##### (a) Planning Phase

- Results of strategic planning accepted as "givens"
- Planning for acquisition of resources  
people, money, facilities...

-Planning for allocation of resources

(b) Control Phase

-Measuring and evaluating performance of resource acquisition and allocation

-efficiency

-effectiveness

Operational Control

-Planning, measuring and evaluating the execution of individual tasks.

Planning/Control Functions Exist at All Organizational Levels

-Total organization

-Department or service

-Sub-department or sub-specialty

-Individual

#####

Two planning processes:

1. Traditional planning can be described as

Defining the Problem

Setting a Clear Goal

A. At the end of the time period one can measure:

1. Whether the goal has been reached

2. If not, how short of goal

B. It is harder to measure

1. The factors which influenced the process

2. Whether changes along the way would have made a difference

3. How much tension was created in the organization system in reaching the goal.

2. A more effective planning "model":
  - a. Set a vague goal
  - b. Determine action step 1
  - c. Collect information on the effects of action step 1
  - d. Based on this information
    1. Redefine the "vague" goal
    2. Determine action step 2

This latter model allows for maximum flexibility in adapting the goal to changing conditions. It also allows for collecting information on the factors affecting the organization as it works toward the goal.

#### Characteristics of Good Planning...

1. It involves those with relevant information to offer or who will be concerned with implementation.
2. It operates on the basis of long term goals, with provision for short-term adaptation
3. It is anchored in the existing organization
4. It is carried on throughout the organization
5. It is done on a continuing basis
6. It makes provision for review (feedback of results)
7. It generates practical action proposals
8. Helps examine allocation of resources
9. Helps set priorities
10. Promotes reality test

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ONSLAUGHT SIMULATION

EXERCISE

AAMC Management Education Program (Dealing With The Media)

Initial Situation (Group A)

The switchboard has just called you to inform you that a helicopter is enroute to your hospital with a mother in active labor who had taken fertility drugs and is expected to deliver multiple births, possibly as many as seven. On another line you have a call waiting from the news director of a local TV station whose radio scanner had picked up the pilot's request for emergency clearance from the small town home of the patient to your hospital's landing pad.

He wants to know what's happened and may dispatch a camera crew to the hospital if it's something important.

The helicopter will land in 30 minutes.

The hospital CEO is out of town, the PR director is at a luncheon meeting without a beeper, and you as the lead CEO/medical officer for the campus must handle the situation.

What will you recommend be done?

How will you handle the television station?

What needs to be done immediately? For the long term? How much will/can be said and who will say it when?



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First Development (Group 2)

The Associated Press has moved a bulletin on the mother, based on information from an unnamed but reliable source and your hospital switchboard is deluged with calls from the news media. A high number of births are indeed anticipated, the babies are being delivered by caesarean section, but the

-more-

father doesn't want his name disclosed. He's wanted by the Sheriff's office for non-payment of child support to his first wife.

Now that there are a multitude of calls (your situation is now called "herd journalism" and you are about to be stampeded by the herd), respond to the situation by answering all the questions in the Initial Situation information.

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AAMC Management Education Program (Dealing With The Media)

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-----

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Second Development (Group 3)  
-----

Two of the babies are having severe respiratory difficulties and one of the pediatricians orders oxygen therapy, a sometimes-controversial treatment since it may cause brain damage that may not be evident for several years. Not all of his colleagues agree and when the media wants more details, the physician, (who happens to be the department chairman and who has an institutional history of being an arrogant prima donna) refuses to be interviewed.

The immediate family is in seclusion, but an influential uncle of the mother, with whom your Development Officer is in the closing process of a potential major philanthropic donation deal, indicates he was not consulted about the possible side effects and will sue the doctor and hospital for malpractice if either baby is brain damaged.

You received this information from a television station reporter, different from the one which initially called. This reporter has a reputation locally as being a real turkey, one who would "investigate" fraud charges involving his grandmother.

Handle the development.

## ONSLAUGHT SIMULATION

## EXERCISE

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Handle the development.

#### Third Development (Group 4)

-----

Three months later, five of the seven babies have survived. One of the two with respiratory problems has died. The pediatrics team advises you that three of the children apparently have kidney function problems, which could not be diagnosed previously.

-more-

Because the media have been on "the hunt" since the helicopter landed (even national networks cover the story now), they have requested a detailed medical briefing now, about the time the babies are to go home.

The day before the briefing is to occur, you learn that the family has signed a "checkbook journalism" deal with The National Enquirer for an exclusive story and desires no media coverage when the discharge occurs.

How do you handle this?

NOTE: You have 30 minutes to discuss your case among your OWN group members, discussing the problem, developing a strategy for handling the assignment, identify a spokesman and brief that spokesman on anticipated questions from the media. Your spokesman will be interviewed shortly thereafter and a critique session will occur involving training leaders and all groups.

THE WUSOW  
CONSULTING  
MARKETING,  
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A NEWS MEDIA GUIDELINE

Prepared for Participants  
in the AAMC Executive  
Development Seminar Series

The Purpose of This Material

The following pages were written with the goal of giving you something to review quickly when you are about to give an interview to the news media. It is not intended to bog you down in theory or lengthy discussion. It is meant to be a simple, easy-to-use reminder of what to do, and not do, in an interview.

To be the object of news media attention will have its moments of triumph and frustration. It just takes planning and preparation to enjoy the triumph and avoid frustration.

The following pages will give you some guidelines in dealing with the news media, recognizing public relations pitfalls, and making the most of your opportunity to promote your institution through radio, television and newspapers.



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## INTRODUCTION

This guidebook is designed to help you engage in effective public relations activities that can prove very valuable to your hospital -- and, by extension, to the entire hospital industry.

These basic guidelines can help you identify and develop opportunities for favorable publicity and establish strong working relationships with print, radio and TV reporters and editors. But just as importantly, perhaps, this guidebook can help you deal with problem or "crisis" situations.

This booklet is a GUIDE, not a GOSPEL. It offers the best general advice available. Unfortunately, though, you will not be able to guarantee perfect results. Each public relations situation is different, and there are many variables involved -- the most important being, of course, people. But if you follow the general principles contained in this booklet, you will, at least, use the time-tested techniques employed by public relations professionals.

## PUBLIC RELATIONS AND THE HOSPITAL

### "Who, What, Where, When and How"

There are many hospital administrators who have never contacted or talked with a newspaper, magazine, radio, or TV reporter. Some even say, "We stay nice and quiet and mind our own business -- we never get in the papers."

That attitude will not work for hospitals these days -- if indeed it ever did. Managing to stay out of the newspapers is not at all helpful to a hospital: all the good deeds performed by the hospital remain unknown to the community; and, should the hospital face a crisis, there will be no public constituency to rally to its aid.

Given the current health care environment -- in which hospitals are expected to provide the finest quality care at low cost, even as they sit in the midst of a swirling vortex of competition, massive federal budget cutbacks in Medicare and Medicaid, a severe nursing shortage, and the alphabet soup of HMOs, PPOs, CMPs and IPAs -- today's hospital must take an active role in shaping how it is viewed by its community. And that includes politicians and business and other community leaders as well as doctors, nurses, patients, and hospital trustees.

## DECIDING TO USE PUBLIC RELATIONS

When considering whether to interest the press in a hospital activity or event, ask yourself this two-part question: "Do we want our community to know about this activity, and will it be of interest to our community?"

The following activities and events are newsworthy subjects generally well received by local and regional media:

- o A patient whose injury, illness or care provides a human interest perspective
- o Officer and staff advancements
- o New personnel appointments
- o Participation in association functions, election to association office
- o Anniversary and achievement awards
- o Retirements
- o Speeches by staff physicians or administrators
- o Introduction of significant medical procedure
- o New medical service
- o Opening of a new wing
- o Acquisition of major pieces of medical equipment
- o Community projects

## WHO SHOULD HANDLE PUBLIC RELATIONS ACTIVITIES?

Although desirable, you do not always need to hire a professional public relations person to tell the hospital story. However, it is important to appoint someone to accept the responsibility for your public relations activities.

Most local hospitals will find it works best to name one person as public affairs officer or publicity director. This person should have a flair for writing, good grammatical skills, as well as imagination and creativity.

You should place great importance on the latter because the person needs to continually suggest ideas for publicity and be able to see which of the hospital's current activities have publicity value.

### Preparing for your contact with the press

You may sometimes find it difficult to decide where to send your news item...the local or state wide newspapers? Radio? TV? Regional trade publications?

Potential publicity outlets include:

**Newspapers --** These include metropolitan and suburban daily newspapers, weekly and bi-weeklies, shopping guides or "pennysavers."

Learn the names of the department editors or reporters who will be interested in your news. Become acquainted with them and invite them periodically to your hospital.

Learn each paper's deadline schedule.

Don't hesitate to phone the paper when you have a news item and ask to whom it should be directed.

**Radio & --** Send your copy to the news director in charge of preparing scripts for news broadcasts and commentators.  
**Television**

If you want live coverage, call the news program that deals with your kind of event and give them the time, place, date and other pertinent information.

**Wire Service -** Wire services -- Associated Press and United Press International are the best-known -- generate news stories and send them to newspapers all

across the country. AP and UPI have bureaus in most cities. In recent years, many smaller wire services have appeared. Their basic function is the gathering and distribution of news. If you have a big story for which you seek fast, widespread attention, the wire service is where you should head.

**Specialized - Publications** - These include business and trade periodicals, college or university publications and industrial magazines or newsletters. You should know the key community/regional publications.

## MAKING CONTACT

Once you determine which of the media will be receptive to your stories, you should then get to know the members of the press with whom you will be dealing.

This can be accomplished through a letter on hospital letterhead that lets the news person know:

- o You are responsible for public relations at the hospital.
- o You will provide hospital news from time to time.
- o You are a source of information on matters relating to your hospital and the investor-owned industry.

Or, it can be a fact sheet containing such basic information as:

- o The size of the hospital.
- o Principal hospital officials.
- o Background and history.
- o Services provided.
- o Number of employees.
- o Community activities which you sponsor or support.
- o Your name, title and phone number as company contact. Provide your home phone number.

(Relationship with FAHS, and management company information, if relevant.)

Fact sheets save hours of repetitive explanation, guarantee that names are spelled correctly in printed news stories and give editors something to put into their reference files for future use.

This initial mailing should be followed in a few days by a follow-up phone call to ensure receipt of the mailing.

## TELLING YOUR STORY

After making the initial contact, the public relations director for the hospital should keep in touch with editors of local papers, especially in smaller communities. Try to develop an atmosphere of friendly interchange, quite aside from an immediate news story. Invite the editor to tour your hospital. You may find this will lead to editorial support in the future.

When you have a story that you feel warrants publicity or an idea which your media contacts will be receptive to, the next step is to communicate it to the press:

### News Releases

The news release constitutes the most basic and simplest method of communicating your message. If you provide clear and well organized material, the chance of usage is greatly increased.

Include all the facts. Be accurate. The first, or "lead," paragraph should capture and hold the reader's attention.

Take the time to include the names of all persons involved. Check spelling. Include times and places. Mention everything important that has happened or that will happen: "Who, What, When, Where, Why and How."

- o Copy should be double spaced and typed; use generous side margins.
- o Begin one-third of the way down the page and include a headline.
- o Quote the source of information -- which should be a top hospital official. If you use opinions, they should appear in quotes and be attributed to authorities.
- o Use only one side of each piece of paper. Type the word "more" at the bottom of each page, numbers at the top of succeeding pages and "###" to indicate the end of a release.
- o Put your name and business and home phone numbers on every release, in case the reporter wants to call for additional information.

-- continued --



- o Releases should be limited to three pages. Information should be condensed and in layman's terms.

### Photographs

Good photographs are always welcomed by newspapers. A picture and caption will often be used even when the release itself is not. A few tips:

- o Glossy prints often are required. The preferred size usually is 8 x 10. Black and white.
- o Timeliness is as important as in any other form of news.
- o Try to get action shots -- the people should be doing something rather than just staring at the camera. Keep the number of subjects to a minimum, usually three.
- o Type out a caption for each picture and paste it on the back. Don't write on or fold photos. Identify people with titles from left to right.

### Press Conferences

When you have a really important story of great general interest, a press conference may be an appropriate way to announce it. To be successful, a press conference should meet certain specifications:

- o The announcement must be generally newsworthy.
- o All news outlets must be notified in time to schedule coverage. At least one day in advance will insure coverage if the story is interesting.
- o You should have a prepared statement on the announcement for distribution at the conference.
- o The room should be big enough to seat everyone and should have electrical outlets if you expect radio and TV coverage. Have pencils, paper, water on hand.
- o See that your principals arrive on time and are well prepared both to explain the "story" and to answer all questions -- including questions about subjects that may not be the topic of the day.

-- continued --

- o Distribute a media kit with new release, fact sheet, brochure and photos.

### "OpEd" Columns, Letters to the Editor

Your local newspaper's "letters to the editor" column and "op-ed" page are effective vehicles for a statement of your hospital's opinion on an issue, or to stimulate discussion on a particular matter. Public service messages about health are always well received.

Be brief and to the point.

### Features

Let the community know about the services your hospital performs through an actual "real life" case.

The features you are likely to generate are those dealing with people and places:

- o Your hospital has built such a reputation for good food that townspeople come in for Sunday dinner.
- o A hospital employee who suggested draining gas tanks more thoroughly and saved the hospital \$1000 over the year is rewarded with a cash bonus.
- o A physician or hospital employee tours China to learn health care delivery in that country.
- o A baby born on New Year's Eve is the second of his siblings to arrive in time to celebrate this occasion with his parents.

Feature writing employs special skills, and reporters often like to write their own feature articles. Your role is to prepare a concise, well-organized outline.

Offer your feature to only one newspaper, TV or radio station at a time and tell the editor that it's an "exclusive" story.

Follow up:

- o Telephone and offer to answer questions.
- o "Sell" the story, if need be (do not be pushy).

-- continued --

- o If the first contact can not use it, offer it to another paper or station.
- o When it is finally accepted, ask if you can be of assistance; for example, does the editor want photos, an interview, a personal tour?

### Mailing Lists

A good mailing list is a valuable tool in securing good publicity. It doesn't matter how exciting your news is or how well you present it; if it does not reach the right editors it will not be used.

Some hospitals may find that their only real outlet for news is one or two local newspapers. Others may have a much larger list. If you send your news to too few publications, you are missing opportunities. If you send it to too many, you are wasting time and money. You also may be antagonizing editors by burying them under the wrong kind of mail.

Study your audience, and select only those publications that would be interested and would use the kind of news you have to offer. Make a list and keep it up to date.

As a general rule, send all releases to the "city editor" of "assignments editor" of newspapers and to the "editor" of trade publications, weeklies, neighborhood papers and local magazines. If you have made the initial contacts and know the names of persons who should receive such information, send it directly to them.

## SOME DO'S AND DONT'S OF GOOD MEDIA RELATIONS

Keep in mind the following points in dealing with the media:

- Be Friendly. Accept an editor's judgement gracefully.
- Be Helpful. Determine the target media's style and conform to it. Learn the deadline and submit your material well in advance, when possible.
- Be Accurate. Every name, fact and figure must be correct. Always date your news items so the editors knows which date you are talking about when you say "Monday." Anything less than complete facts can be annoying.
- Be Prompt. Nothing is older than old news.
- Be Truthful. To fool or mislead a newspaper would be damaging to your hospital and fatal to your usefulness in press relations. Always present the truth, frankly and dependably.
- Be Frank. You may not be able to tell everything you know. If that's the case, say so.
- Be Fair. Treat all newspapers alike. If a reporter or editor digs up an exclusive story, however, let them have it exclusively.
- Be Patient. Editors must evaluate news of the community and the rest of the world; they must determine the relative importance of your story and handle it accordingly. If they pass over one story the next might well be accepted.
- Don't be a pest. Avoid contacts during deadline times.

-- continued --

Don't lose your temper.

Avoid telephoning editors and complaining if they do not publish your release.

Don't exaggerate.

You may think your news is of greatest importance, but if there is a world crisis or a major event is taking place, locally, no amount of puffery will get your story included.

Don't blame reporters

or a newspaper's policies. And if your story receives less play than you think it's worth, you avoid assuming they are plotting this as part of a plot against your hospital.

Don't pressure an editor

or reporter by reference to advertising. Most of the media are immune to that and, in fact, are likely to react adversely.

Don't give up.

Some of your copy will not be printed other material will be cut or rewritten But now and then you will score a real victory. And the more you keep at the job of publicity, the easier it will become.

## NEWS MEDIA GUIDELINE

by

The Wussow Consulting Group

Brentwood, Tennessee

### PURPOSE

The following pages were written with the goal of giving you something to review quickly when you are about to give an interview to the news media. The document is not intended to bog you down in theory or lengthy discussion. It is meant to be a simple, easy-to-use reminder of what to do, and not do, in an interview.

The principles apply to dealing with reporters at all levels - local, regional and national. We will be exposing you to a variety of those media representatives in the coming months.

To be the object of news media attention will have its moments of triumph and frustration. It just takes planning and preparation to enjoy the triumph and avoid frustration.

The following pages will give you some guidelines in dealing with the news media, recognizing public relations pitfalls, and making the most of your opportunity to promote your organization through television, radio, newspapers, magazines and certain other special publications.

## I. Dealing with the media, Points to Remember

Don't be afraid of reporters.

Reporters are like anyone else: they're trying to do a job, be recognized by their peers and superiors, and advance. Every day their names are at the top of stories that are read by tens of thousands or even hundreds of thousands of people. Every night they're on television or radio, staking their reputations and credibility on stories that are broadcast to hundreds of thousands of people.

They want their stories to capture attention, to have an impact on the public. The stronger the story, the greater the impact. The greater the impact, the more they're congratulated by their peers and superiors, and the greater the likelihood that they'll advance.

What follows are some general guidelines in dealing with reporters.

### 1. Never lie to them.

Unless you want to see your personal reputation - as well as your institution's - go down the drain in a hurry, never lie to a reporter.

### 2. Don't get mad.

Remember, a reporter is looking for the strongest possible story. Some questions may be designed to provoke you. Do not get angry. Answer calmly with what you want to say.

### 3. Be helpful, but don't talk about things that aren't in your area. You are responding to questions. Answer them within the bounds of your expertise.

4. If you don't know, say so.

Don't be afraid to say "I don't know."

5. Don't ask to see the story before it runs.

That draws automatic hostility. A reporter considers it a declaration on your part that you don't trust him to get it right. Don't even do so on the grounds of helping the reporter with technical facts.

6. Don't talk down to them.

If a reporter asks questions that seem dumb or silly, don't be condescending. If you are, you'll pay for it. Also, some reporters may show up looking like they just stepped out of Gentlemen's Quarterly; others will appear as if they shop at the Salvation Army. Each is deserving of the same respect.

7. Don't be intimidated by them.

You are in many respects in control of the situation. He has the questions, but you have the answers. An analogy is the relationship between the baseball pitcher and catcher. The reporter is the catcher, calling the signals. You're the pitcher. Nothing happens until you let go of the ball. Remember: you know 100 percent more about your subject than the reporter.



## II. Television News, Things to Remember

The most important thing you can do is be prepared. That means deciding what your objectives for the interview are, and getting them across.

1. You may be interviewed for 30 minutes; he may use 10 seconds. In a news interview, try to limit your answer to 20 or 30 seconds. That gives less opportunity for editing what you said.
2. Do not be intimidated by the lights and camera.
3. When the camera and lights are being set up, ask what kinds of questions he'll be asking and the focus of his story. Tell him you want to get your answers ready so the interview will go smoothly.
4. There will probably be a microphone attached to you as well as a tape recorder on the desk. It doesn't matter if both of these are off. Don't say anything off the record.
5. Always look at the reporter during an interview, never at the camera. Don't look down. It will make you seem frightened and nervous.
6. Remember, you're not talking to the reporter, you're talking to the audience. Keep them in mind as you answer questions. His questions are merely the conduit by which you reach the audience and get your message across.

7. If the light is too close, or too much in your eyes, say so before the camera starts to roll.
8. Be friendly and confident. If you look worried, concerned, nervous or frightened, the viewers are going to be uncomfortable. A confident manner shows you're in control and believe in what you're saying.
9. If sitting, sit up, leaning slightly forward with your shoulder back and straight.
10. Get your message across. You may find yourself saying the same thing more than once, but that's all right. The reporter will figure out you know the rules of the game.

### III. Newspaper Interviews, Things to Remember

1. Newspaper interviews are usually longer than radio or television interviews.
2. A newspaper reporter's goal is to write his story so that the reader will have had all of the questions that pop into his mind answered as he reads the story. That means the reporter is going to ask more detailed questions about times, dates, places and specific circumstances.
3. Often a reporter will return to the office and while writing his story realize that there's something else he should have asked. Be prepared for follow-up calls. Let the reporter know where to reach you.

4. A television story is on for 90 seconds; thousands of people may miss it by going to the bathroom or watching a different station. A newspaper story hangs around all day. Turn aside the temptation to play favorites with TV.

5. Say what you mean: the subtleties of voice communication - gestures, inflection, the tilt of the head - are lost on a newspaper reader and can easily appear to mean something different than you intended. Be clear.

6. Try to find out the focus of the story beforehand and have background information available.

7. Never let them see you sweat. No matter what happens, be cool and professional. If something throws you, don't show it. You'll be respected for it.

#### IV. Radio Interviews, Things to Remember

1. If possible, find out in advance what at least some of the questions will be.
2. For news spots, keep your answers short, 15 seconds or less. Radio news spots are much shorter than television. Radio talk shows allow for longer answers, but make your comments stand out.
3. Is it live? Taped? Find out and plan accordingly.

4. Speak clearly and normally. Many people have a tendency to quiet down when a microphone is put in front of them.

5. If you're asked a tough question that allows a one-word answer, give a one-word answer. You're under no obligation to do the reporter a favor if he's after your scalp.

6. Don't give complicated answers with lots of facts and figures. They'll be lost on the audience. Keep it simple.

Basic interviewing, a short course

1. Be prepared. Research your subject. State your message. Rehearse it.
2. Be calm, confident, friendly and professional.
3. Never, ever, ever say anything off-the-record. Be positive.
4. Speak in short thoughts. Use interesting language.
5. Don't get cute with an answer. In print it will have a different meaning. On the air it appears flippant.
6. Speak simply, without jargon, so readers and viewers will understand.
7. Try to anticipate questions in advance. The tougher your anticipated questions, the more comfortable you'll be during the interview.
8. For TV, dress conservatively.
9. Speak clearly and confidently.
10. If you don't know, say "I don't know."
11. Don't get angry or impatient. It makes good TV and it will generally make the story more important in the newspaper.
12. Restate your message whenever the opportunity arises.\*
13. Repeat your message whenever you get the chance.\*
14. When you sense an opening, state your message.\*
15. Don't be afraid to repeat your position.\*

\*NOTE: It's important to rehearse your message and restate it at every opportunity.

And remember, S.O.B. = Smile, Have Objectives, Bridge

FINAL

**ASSOCIATION OF AMERICAN MEDICAL COLLEGES**

**Management Education Programs**

**Executive Development Seminar**

**Hawk's Cay Resort and Marina  
Marathon, Florida**

**November 10-15, 1989**

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## AAMC MANAGEMENT EDUCATION PROGRAMS

Executive Development Seminar

Hawk's Cay Resort  
Marathon, Florida

November 10-15, 1989

Please be sure to put your name and institutional affiliation on this questionnaire. Your individual responses will be treated as confidential information; however, we do need to identify you by name to insure a total response.

\_\_\_\_\_  
NAME

\_\_\_\_\_  
INSTITUTION

1. Did you have specific objectives with respect to this seminar?

a. Yes \_\_\_\_\_ b. No \_\_\_\_\_

2. Were these objectives met? Please explain briefly.

3. Which subject area was the most significant for you? Please explain briefly.

4. How much of what you learned from this course (either new concepts or skills) do you think you will be able to use when you return to your institution to help you function more effectively in your role:

- a) none \_\_\_\_\_
- b) little \_\_\_\_\_
- c) some \_\_\_\_\_
- d) most \_\_\_\_\_
- e) all \_\_\_\_\_

Please explain briefly:

5. Are there particular subject areas in the field of management that were not covered in this seminar in which you have an interest?

a. Yes \_\_\_\_\_ b. No \_\_\_\_\_

If yes, please identify:

6. Did you find the instructional methodology used in this seminar comfortable?

a. Yes \_\_\_\_\_ b. No \_\_\_\_\_

Effective?

a. Yes \_\_\_\_\_ b. No \_\_\_\_\_

7. Were the benefits which you derived from attending the seminar worth the cost in terms of dollars?

a. Yes \_\_\_\_\_ b. No \_\_\_\_\_

In terms of time away from your institution?

a. Yes \_\_\_\_\_ b. No \_\_\_\_\_

8. What is the single greatest strength of this seminar?

9. What is the single greatest weakness of this seminar?

10. On the basis of your experience this week, would you recommend that others in your role attend a similar program?

\_\_\_\_\_ Your Title

\_\_\_\_\_ a) I would urge them to attend. It has very high relevance.

\_\_\_\_\_ b) I would not take any strong position.

\_\_\_\_\_ c) I would suggest they not attend because:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

11. What should the AAMC do with future Executive Development Seminars to more effectively meet the needs of medical school administrators?

12. Detailed Session Evaluation.

SESSION	CLARITY OF PRESENTATION					RELEVANCE				
	The content of the session was presented in a clear and logical manner.					The content of the session was relevant to my interest and/or problems.				
	Poor		Excellent			Poor		Excellent		
Governance (Ruma)	1	2	3	4	5	1	2	3	4	5
Personal Styles in Management (Seashore)	1	2	3	4	5	1	2	3	4	5
Legal Issues in Higher Education (Schaffer)	1	2	3	4	5	1	2	3	4	5
Issues in Hospital and Physician Reimbursement (Zelten)	1	2	3	4	5	1	2	3	4	5
Planning and Control (Ruma)	1	2	3	4	5	1	2	3	4	5
Financial Dimensions of Academic Centers (Bray)	1	2	3	4	5	1	2	3	4	5
Strategic Financial Management (Bray)	1	2	3	4	5	1	2	3	4	5
Dealing with the Media (Wussow)	1	2	3	4	5	1	2	3	4	5
Organization Design (Ruma)	1	2	3	4	5	1	2	3	4	5
Negotiating: Theory and Practice (Ruma)	1	2	3	4	5	1	2	3	4	5
Organizational Diagnosis Model (Ruma)	1	2	3	4	5	1	2	3	4	5

13. Suggestions for improving the seminar (Include any suggestions for changes in presentations, discussions, faculty, scheduling, group size, site, location, etc.):





ASSOCIATION OF  
AMERICAN  
MEDICAL COLLEGES

AMERICAN  
MEDICAL EDUCATION:  
*Institutions, Programs,  
and Issues*

## MISSION STATEMENT

The Association of American Medical Colleges has as its purpose the improvement of the nation's health through the advancement of academic medicine. As an association of medical schools, teaching hospitals, and academic societies, the AAMC works with its members to set a national agenda for medical education, biomedical research, and health care and assists its members by providing services at the national level that facilitate the accomplishment of their missions. In pursuing its purpose, the Association works to strengthen the quality of medical education and training, to enhance the search for biomedical knowledge, to advance research in health services, and to integrate education and research into the provision of effective health care.

Adopted by the AAMC Executive Council June 1988

AMERICAN  
MEDICAL EDUCATION:  
*Institutions, Programs,  
and Issues*

October 1989

An AAMC Staff Report Prepared by  
Robert F. Jones, Ph.D.

Director for Institutional Studies

Division of Institutional Planning and Development

**Additional copies of this report can be obtained by writing to:  
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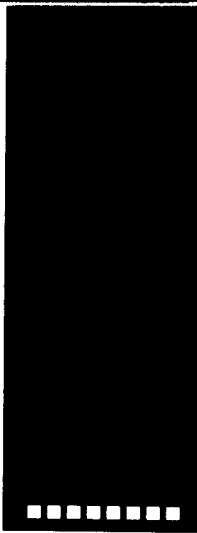
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## Foreword

The Association of American Medical Colleges is pleased to present "American Medical Education: Institutions, Programs, and Issues." This is an updated and revised version of a publication that originally appeared in 1977. Like the four previous editions, this document presents concise and cogent information about the academic medical centers that are the Association's members.

There are two elements to the publication. First, the document provides an easy reference on the characteristics of American medical education. It includes data and statistics on medical schools and teaching hospitals, their students and residents, faculties, and other resources. There is also information on the education, research, and patient care missions of these institutions. For the most part, these data are drawn from the broad array of informational resources that AAMC maintains on academic medicine.

This document does not intend merely to provide descriptive information on American medical education. By exploring a number of critical issues

relating to the academic medical enterprise, it attempts to provide a more substantive overview of medical centers and the challenges they face in carrying out their activities and meeting their societal responsibilities.

The Association hopes that this publication will help to improve public understanding about academic medical centers and American medical education. The strong public support that our member institutions enjoy is essential to their continued well-being.

Robert G. Petersdorf, M.D.

*President*

*Association of American Medical Colleges*



## *Introduction*

American medical education is the product of important initiatives taken during the mid- and late-nineteenth century first by the University of Pennsylvania, the College of Physicians and Surgeons in New York, Lind (later Northwestern) University, Harvard University, and the University of Michigan. The vision and leadership of those associated with the founding of the Johns Hopkins Medical School in 1893 led to the creation of a university-based, graded four-year educational program, combining laboratory instruction with supervised hospital experience. The Hopkins model eclipsed the many proprietary programs of marginal quality which existed at the time. In 1910, Abraham Flexner, supported by the Carnegie Foundation, published a thorough review and critique of medical schools in the United States and Canada, leading to further reforms and institutionalization of the current model of the scientifically trained physician.

Despite fidelity to this heritage, the complex of institutions and programs devoted to medical education near the end of the twentieth century little resembles that present at its beginning. Prior to World War II, medical schools were fewer in number and concerned primarily with education for the M.D. degree. Post-war investment in biomedical and behavioral research transformed medical schools into large-scale research institutions. Medical capability expanded and with it the demand for health care services. Unprecedented national affluence and an egalitarian ethic stimulated the growth of a societal commitment to provide access for all to a basic level of quality medical services. By the 1960s the nation had mobilized for

a substantial expansion of its capacity for training health professionals.

In the ensuing years, society has come to expect from medicine constant gains in the prevention, diagnosis, and treatment of disease and improved health status. In response, medical schools and teaching hospitals have evolved into large, complex academic medical centers, under university auspices or as affiliated institutions with varied interinstitutional agreements and arrangements. These institutions are allied by a commonality of missions: to provide for the general professional education and specialized graduate training of future physicians; to be in the vanguard of biological and behavioral investigation; and to champion the application of new knowledge in the alleviation of suffering, rehabilitation of injury, and prevention of disease and premature death. These same institutions currently play a significant role in society's medical obligations to its poorest members. Because of the importance of these missions, academic medical centers are a national resource, fragile in nature, and essential to accomplishing important national objectives. This monograph presents a brief description of these institutions — their structure, financing, interrelationships, and programs — and the issues which they and society face in preserving and enhancing their unique contributions to the national well-being.



# 1

## *Institutions and Resources*

**T**he mission of academic medical centers is described simply by the functions of education, research, and patient care. The institutions and resources dedicated to this mission have undergone enormous growth and change, particularly over the last four decades.

### **MEDICAL SCHOOLS**

**A**t the turn of the century as many as 160 medical schools operated in the United States, many of marginal or poor quality. The reforms recommended by the Flexner report and subsequent elevation of standards led to the demise of many of these schools and slowed the pace with which new schools were inaugurated. By 1960, the number of U.S. medical schools accredited by the Liaison Committee on Medical Education (LCME) stood at 86. The perception of an impending physician shortage at that time stimulated the development of forty new medical schools by 1980. Only one additional medical school has been established in the 1980s, bringing the total current number to 127.

Forty-four states, the District of Columbia, and Puerto Rico each have at least one medical school (**Figure 1**). The six states without medical schools have negotiated arrangements for their citizens to receive medical training at schools in neighboring states. At present, 53 medical schools (42 percent) are private schools; however, 37 of these schools received appropriated financial assistance in 1987-88 from the government of states in which they are located.

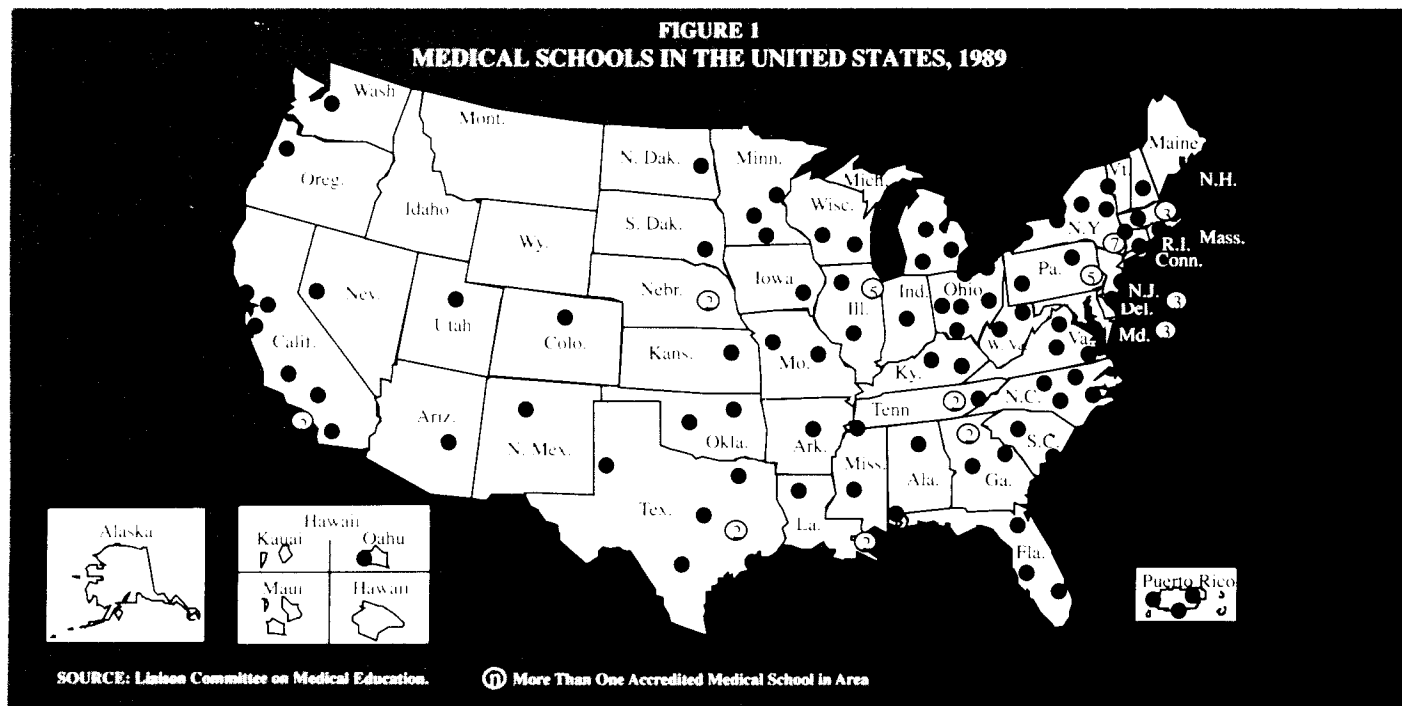
While the 127 medical schools share common general purposes and objectives, they are not

homogeneous. Most are part of a comprehensive public or private university, but 21 medical schools are independent and freestanding or a part of a health science university. Traditionally, the development of medical schools has been accompanied by a major affiliated or university-owned teaching hospital and the recruitment of a full-time academic faculty. However, many of the medical schools founded in the 1970s were planned with community hospitals as the venue for teaching and community physicians as the teaching faculty. The creation of these schools was specifically motivated by the desire to supply primary care physicians for underserved areas in their respective states.

The origin and development of other medical schools have been guided by specific and unique purposes. Three are associated with historically black colleges and have as a special mission to increase the ranks of minority physicians. One school trains physicians for the uniformed services. Five medical schools trace their beginnings to a special partnership between the Veterans Administration (VA) and state governments. These medical schools were built with VA hospitals as the chief clinical training site.

This diversity of medical schools — in history and tradition, mission, and organizational structure, in addition to financial resources and facilities — is a major strength of the American medical education system. It provides the nation with a rich array of institutional resources to meet local, regional, and national needs. However, it also means that medical schools often must take different approaches to solving the problems they face.

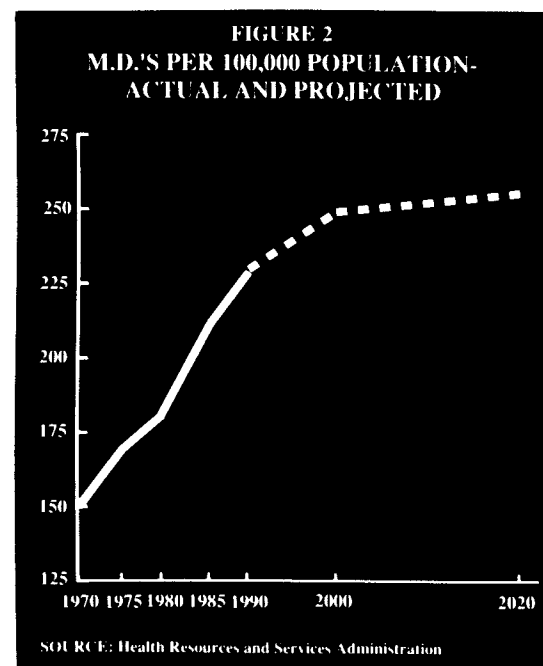
*What is an appropriate enrollment capacity for American medical schools?*



Medical schools vary also in the size of their classes. The 1988-89 first-year enrollment of medical students ranged from 38 in one school to 307 at the largest multi-campus school. The average first-year class size was 126.

In 1988 U.S. medical schools graduated 15,919 students, only slightly fewer than the 16,343 graduates in the peak year of 1984. The 1988 graduating class is still double the size of its counterpart 20 years earlier and contributes to continuing increases in the ratio of physicians to population. For example, in 1970 there were 150 allopathic physicians per 100,000 in the population. By 1980, this figure had risen to 190. In 1990, it is expected to reach 228 and by 2020, 255 (Figure 2). Given the long cycle of training for physicians, even an immediate and radical reduction of medical school class sizes would not forestall the inexorable growth in physician numbers over the next three decades.

There is currently sharp debate on the consequences of these unprecedented manpower levels. While estimates of supply can be gauged quite accurately, forecasts of the demand for medical services cannot be determined easily. Those who view the numbers as a present or impending physician surplus predict a series of negative outcomes: increased health care costs, a result of physician-induced demand for unneeded services; atrophy of physician skills, a consequence of reduced patient load; and general dissatisfaction among physicians, a harbinger of the profession's impending decline. Others foresee more salutary developments, notably, an increase in competition among



physicians leading to improved services and lower costs. They point out developments that could readily absorb an increased capacity: the aging of the population, the emergence of new diseases such as the acquired immunodeficiency program (AIDS), and changes in social policy that extend access to medical care to those currently underserved. An AAMC Task Force on Physician Supply has been studying these issues and is expected to issue a report at the end of 1989. Although the supply of physicians may indeed prove ample for the foreseeable future, the problems of geographic and

■■■■■■■■■■

*Can society  
take advantage  
of increasing  
physician  
numbers to  
improve access  
to medical  
services?*

specialty maldistribution continue. In particular, there is a shortage of physicians providing primary care and other services to inner-city and rural areas.

The AAMC Task Force on Physician Supply has conducted its study at the request of AAMC member institutions. However, decisions on class size, which have national implications for physician supply, are the prerogative of individual institutions. Factors influencing these decisions are frequently of intense but very localized significance. For example, pressures to maintain or increase class size arise from institutional dependence on tuition income; considerations of educational opportunity for children of community, alumni, or political sponsors; and unmet local and regional needs for physician services. The continuing need for physicians to assume positions in biomedical research, medical education, health services research, and health care administration, in addition to medical practice, is another driving force. Finally, the goal of increasing minority representation in the medical profession is seen as being hampered by any reduction in capacity.

Despite these influences, medical schools recently have accomplished a small aggregate reduction in enrollment. Schools which have led the way appear to be responding to dramatic declines in the applicant pool together with the perception of an adequate local supply of physicians. The trend toward reducing medical school class size could have various collateral benefits. It may, for example, improve the quality of medical education by allowing more individualized attention to students and recapturing the more personal relationship that students had with their mentors before the era of expansion.

## MEDICAL SCHOOL FINANCING

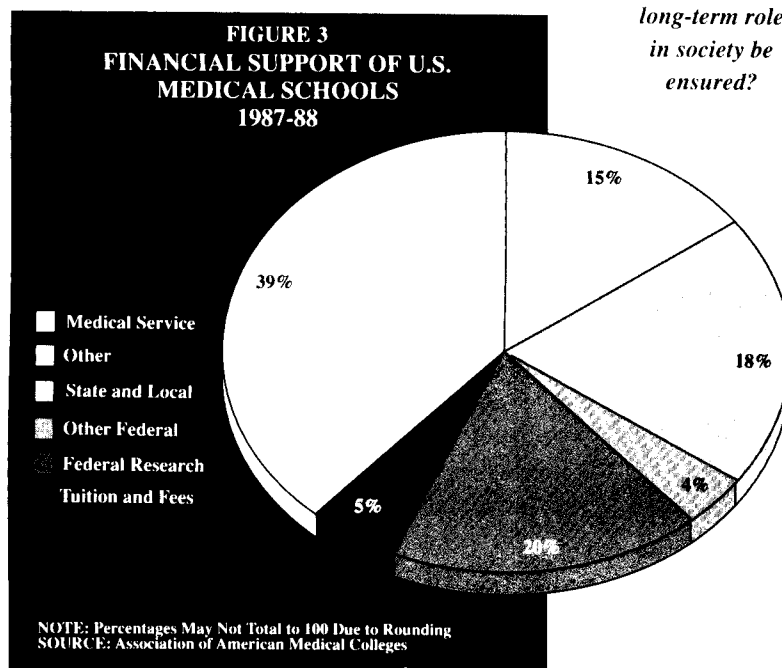
Revenue supporting the operations (excluding construction and student loans) of medical schools in 1987-88 amounted to \$14.1 billion. A total of \$9.0 billion (64 percent) was unrestricted, while \$5.1 billion (36 percent) was in grants and contracts for sponsored programs in medical professional education, biomedical and behavioral research, and related activities. This \$14.1 billion in operating revenues compares to \$436 million in 1960-61, \$1.7 billion in 1970-71, and \$6.4 billion in 1980-81. In constant dollars, the compound rate of real growth since 1960-61 has been 13.7 percent annually.

Of the total program revenue in 1987-88, 24 percent came from the federal government in the

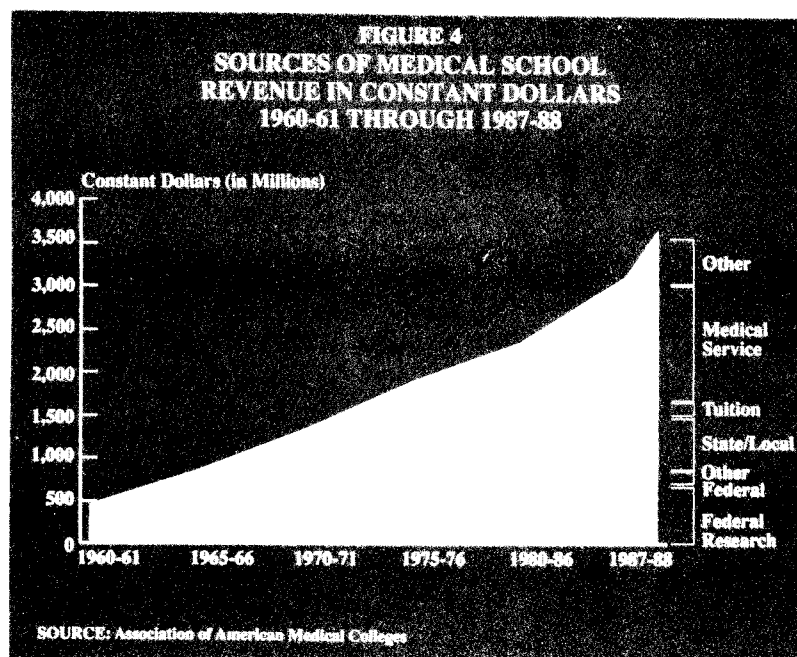
form of grants and contracts for teaching, research, and service programs, including recovery of indirect costs associated with these programs. Federal research funds continue to represent the major component of federal support to medical schools, accounting for \$2.9 billion (20 percent) of total revenues (Figure 3).



*How can stable support for complex institutions with a valued, long-term role in society be ensured?*



Although large in the absolute level of funds, federal support is decreasing in relative terms. As a fraction of medical school revenues federal funds peaked at about 55 percent in the mid-1960s and have declined gradually but consistently to the present level of 24 percent (Figure 4). Appropria-



How should the costs of medical education be distributed between the immediate beneficiaries—students, patients, program sponsors—and the long-term beneficiary, society at large?

Will increasing dependence on faculty practice income erode the academic character of medical schools?

tions and contract revenues from state and local governments increased gradually during the 1960s and early 1970s, but since then this source has also declined in relative terms, reaching an 18 percent level in 1987-88.

Revenues from patient care activities have expanded significantly over the past few decades and currently constitute a major component of the financial structure of medical schools. This category includes support provided by medical faculty group practice plans and reimbursements from affiliated hospitals for services rendered by faculty. In 1987-88 reported income from medical services provided by clinical faculty accounted for 39 percent of total medical school revenues, an amount that is probably understated as a result of differences in income reporting arrangements. In 1960-61, it constituted only six percent. In part, the sizeable growth of this revenue source is due simply to organizational changes and the financial accounting that accompanied them. As medical schools developed formal practice organizations for billing and collection purposes, reimbursement for patient care services that formerly was paid directly to the faculty physician began to be recognized as revenue to the school. However, coincident with that was an increase in patient care reimbursements generally, particularly with the development of Medicare in the mid-1960s, a program of federal health insurance for the elderly, and Medicaid, federal and state aid for the medically indigent. Until those programs were enacted, services to those groups were provided by clinical faculty but were largely unreimbursed.

Tuition and student fees have remained a relatively stable component of medical school revenues at about five percent. However, from the perspective of the student, the increase in tuition levels necessary to maintain this level of support has been quite significant. The remaining sources of medical school revenues include private, industry-sponsored programs, foundation grants, gifts, and endowment income.

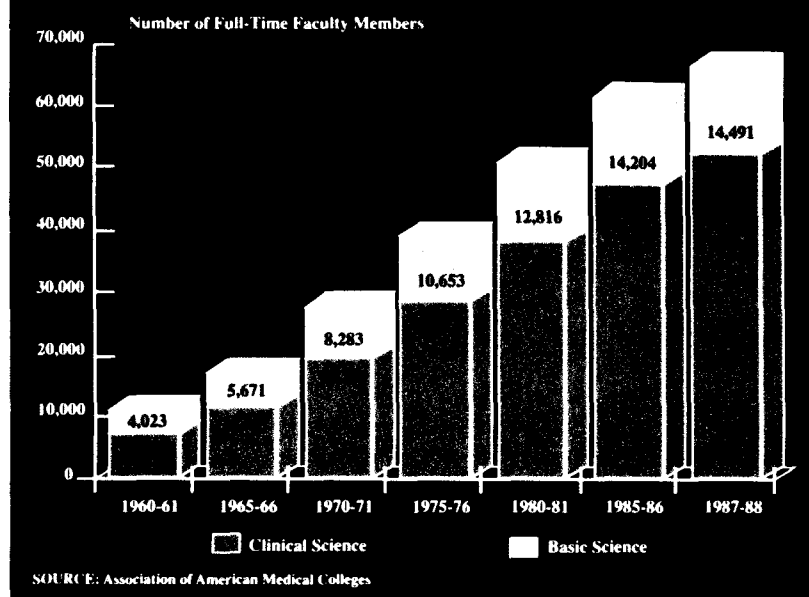
Financial support for U.S. medical schools is a complex issue, affected by the school's ownership,

university organizational structure, and unique, historical financing patterns. Of major significance and concern is the growing dependence of medical schools on medical service income. In fairness, the emergence of this source of funds has enabled the development and expansion of programs that would not otherwise have been possible. But these benefits have not been achieved without the perception of loss to the academic character of institutions. Most importantly, continued growth of medical service income of the magnitude recently witnessed is unlikely, given government-mandated limits on patient care reimbursements and the increasing competition among health care providers. Adapting to these potential fiscal limits represents a major challenge for medical schools in the years ahead.

## MEDICAL SCHOOL FACULTIES

The number of full-time faculty members in U.S. medical schools totaled 66,473 in 1987-88. While faculties continue to grow beyond the increments associated with the expansion of class

FIGURE 5  
FULL-TIME MEDICAL SCHOOL FACULTY MEMBERS  
1960-61 THROUGH 1987-88



size and the development of new medical schools in the 1960s and 1970s, this growth is now almost totally in the clinical faculty ranks (Figure 5). In large part, it reflects the increased involvement of medical schools in patient care activities, but also it is a product of the enlargement of the research

enterprise and widened teaching obligations in the continuum of medical education.

The burgeoning patient care demands on clinical faculties have prompted medical schools to seek modifications of traditional academic systems for faculty appointment, promotion, and tenure. Increasing responsibilities for patients limit the time available for teaching and establishing a program of research, the necessary elements for progress in an academic career. Building a record of accomplishment in all three areas has become exceedingly difficult. Medical schools generally acknowledge that the majority of faculty can excel in only two of the three areas of teaching, research, and patient care. Many have differentiated non-tenure appointment tracks for clinician-educators or researcher-educators. Universities have also lengthened the standard evaluation period prior to the award of tenure, an acknowledgement that medical school faculty members in the context of their various responsibilities may require more time to establish a record of scholarship.

There is a growing concern that the cohort of research-intensive faculty initially appointed in the 1950-1970 era is aging, with consequent effects on research productivity. In 1988-89, 14 percent of medical school faculty members was 60 years of age or older; another 21 percent was between 50 and 59. The implications of these data depend upon the retirement patterns of medical school faculty over the next decade. Beginning in 1994, federal law will prohibit institutions from involuntarily retiring tenured faculty solely on the basis of age. Presently, a mandatory retirement age of 70 is permitted in most states. In eras of limited or no growth, faculty renewal depends heavily on openings created by retirement or other separations from faculty service.

One potential consequence of the elimination of mandatory retirement could be to hinder efforts at increasing the representation of women and minorities on medical school faculties. The proportion of women faculty members rose from 13 percent in 1967-68 to 20 percent in 1988-89. The trend reflects the overall increased presence of women in medicine. Moreover, the percentage of women medical school graduates who join the faculty of a U.S. medical school each year continues to exceed that of the men who join. Despite these advances, women continue to lag behind men in the proportions occupying the higher academic

ranks, a phenomenon that cannot be explained simply by career age differences. In contrast to

***The proportion of women faculty members rose from 13 percent in 1967-68 to 20 percent in 1988-89 . . . . progress in increasing the proportion of minorities on medical school faculties is significantly less evident.***

women, progress in increasing the proportion of minorities on medical school faculties is significantly less evident. In 1988-89, only three percent was from groups underrepresented in medicine (blacks, mainland Puerto Ricans, Mexican-Americans, and American Indians).

## TEACHING HOSPITALS

The resources represented by medical schools and their faculties are complemented by a vast national network of teaching hospitals which serve as the primary sites for clinical education of medical students and residents, postgraduate fellowship training programs, and a significant proportion of other health professions education programs. While approximately 1300 hospitals are involved in graduate medical education, more than three-fourths of the residents in the United States train in the 420 members of the AAMC's Council of Teaching Hospitals (COTH). Included as COTH members are 72 VA medical centers. VA medical centers support the training of approximately 12 percent of residents.

Teaching hospitals are also distinguished by their programs of clinical research: the testing and development of drugs, medical devices, and treatment methods. Many of the advances begun in basic research laboratories of medical schools and universities are incorporated into patient care through clinical research programs at teaching hospitals.

The core mission of teaching hospitals remains the delivery of high quality patient care. Teaching hospitals are large by comparison to other hospitals and contribute uniquely to the nation's health care delivery system by the types of services they offer and the patient populations they serve. To illustrate, COTH members comprise only six percent of short-term, non-federal hospitals, yet account for 21 percent of the beds, 23 percent of the admissions, and 28 percent of the outpatient visits to these hospitals. They handle 20 percent of the emergency room visits and 25 percent of the births as well. In aggregate, COTH members employ nearly 900,000 full-time equivalent staff, includ-

Will the  
elimination of  
mandatory  
retirement  
impede  
institutional  
efforts to  
sustain faculty  
renewal?

**Can teaching hospitals maintain their commitment to education, research, and specialized medical care in the face of restructured delivery and payment systems?**

ing 29 percent of all registered nurses in short-term, non-federal hospitals.

Teaching hospitals provide a comprehensive range of services, including a disproportionately large share of the most sophisticated and intensive hospital services. COTH members comprise 55 percent of all short-term, non-federal hospitals with an organ transplant capability and 34 percent of those with open-heart surgery capability (Figure 6). They include over one-half of the hospitals providing specialized genetic counseling and screening services, over one-third of those offering lithotripsy services, and over one-fourth conducting x-ray radiation therapy.

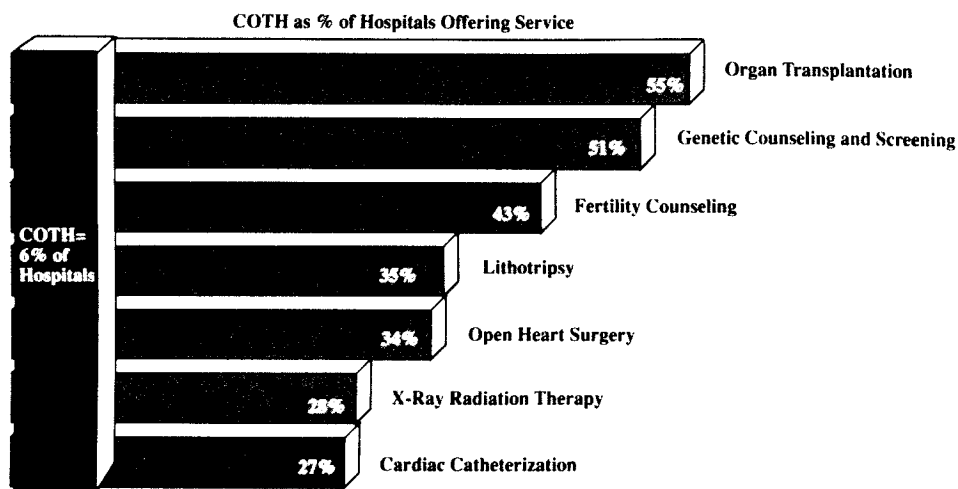
COTH member teaching hospitals are also major providers of patient care services to the poor and medically indigent. In 1987 COTH members ab-

sorbed 59 percent of the charity care charges and 33 percent of the bad debts incurred by all short-term, non-federal hospitals (Figure 7). They were responsible for 34 percent of Medicaid discharges from all short-term, non-federal hospitals.

COTH hospitals are primarily non-profit institutions sponsored by tax-exempt, non-sectarian, or church-related organizations. Eleven percent are state-owned and 10 percent, municipal- or county-owned. Nearly two-thirds of COTH hospitals, but less than half of other hospitals, are located in large metropolitan areas with populations exceeding one million.

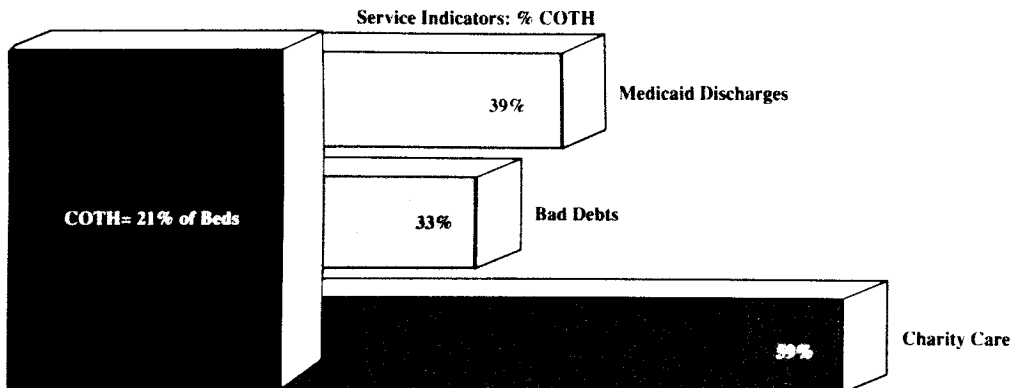
While all COTH hospitals have affiliation agreements with one or more medical schools, a smaller subset of 123 hospitals have a particularly close relationship. Sixty-two of these academic

**FIGURE 6  
SELECTED SPECIALIZED SERVICES PROVIDED BY COTH MEMBERS**



NOTE: Based on all Short-Term, Non-Federal Hospitals  
SOURCE: 1987 Annual Survey of Hospitals, American Hospital Association

**FIGURE 7  
SERVICES OF COTH MEMBERS TO THE POOR AND INDIGENT**



NOTE: Based on all Short-Term, Non-Federal Hospitals  
SOURCE: 1987 Annual Survey of Hospitals, American Hospital Association

medical center hospitals have a common ownership with a school of medicine in either a comprehensive or health sciences university, 39 public and 23 private. Six others, now separately incorporated, shared a common ownership until relatively recently. At 55 other hospitals owned separately, a close relationship is evidenced by a historical arrangement in which the majority of medical school department chairpersons also serve as hospital chiefs-of-service. Government-owned hospitals comprise 26 of these, while 27 others are private, non-profit. Two of these academic medical center hospitals are now owned or leased by for-profit corporations.

The emergence of large-scale purchasers of health care seeking negotiated arrangements for

hospital services has increased competition in the health care field and forced teaching hospitals to review their organizational structures. A few have sought separate incorporation from their parent university (and state system), in search of more responsive decision making and efficient use of resources. Some teaching hospitals have followed a business strategy of vertical integration, developing or becoming a part of a large health care system, which might include several hospitals, physician groups, and delivery systems. As health care is viewed more as a commodity and its delivery system becomes increasingly corporate, the merging and consolidation of providers are likely to continue. To survive, teaching hospitals may increasingly participate in these restructurings.



*How can teaching hospitals owned by state university systems gain sufficient management flexibility to be competitive?*

# 2

## Education

**T**he education of future physicians is the core mission of medical schools and their faculties. Their involvement begins with the selection of qualified applicants to medical school, extends through their program of general professional education in the four years of medical school and the early years of residency training, and continues through specialty training leading to eligibility for board certification. Medical school faculties also are involved in programs of continuing education for physicians and participate in the education of biomedical scientists and of students in other health professions.

### APPLICANTS AND ADMISSIONS

**A**dmission to medical school in the United States is selective, a practice which contrasts with the open enrollment policies of many other countries. It allows medical schools to admit men and women who, in the faculty's opinion, have the academic and personal qualities requisite for a profession based on high standards of competence and service to others. By retaining the prerogative to select their students, faculties also can ensure that the number of matriculants matches the resources available for an optimal education.

The criteria used by faculties in their selection process are broad-based. They include prior academic achievement, judgments by college faculty and advisors of the candidate's academic abilities and personal qualities, and evidence of values and attitudes commensurate with a career of service in a helping profession. Nearly all medical schools

conduct personal interviews to assess the personal qualities, values, and attitudes of applicants, a practice which is rarely observed in other professional schools.

The evaluation of academic abilities is enhanced by the AAMC-sponsored Medical College Admission Test (MCAT). Following an AAMC-conducted, major national review and revision, this standardized examination now includes tests on the biological and physical sciences, a verbal reasoning component, and a writing sample. The science concepts assessed by the examination are drawn from a list of topics which a panel of medical school faculty and practicing physicians has deemed basic to the study of medicine. College science course requirements for admission to medical school are generally limited. This reflects the consensus that the study of medicine requires a science background but should not be restricted to those who major in the sciences. In fact, non-science majors who apply to medical school are admitted at a higher rate than science majors. The introduction of a writing sample or essay in the MCAT is intended to reinforce the importance medical schools place on a broad liberal education for students planning to apply, a point stressed in the 1984 report of the AAMC Panel on the General Professional Education of the Physician (GPEP) and College Preparation for Medicine.

The number of applicants to U.S. medical schools reached a historical peak in 1974 when 42,624 applied for 15,066 first-year positions, a ratio of 2.8 to 1 (**Figure 8**). From that time the number of applicants declined steadily, to a low of 26,721 in 1988. The 37 percent decline over the 14-

*How can the medical profession preserve its attractiveness to the most able of young people?*



year period reduced the ratio of applicants to accepted students to 1.6 to 1. The declining number of applicants may have reached its nadir. Estimates of the size of the 1989 applicant pool predict a four percent increase, only the third such yearly rise in applicants and the largest in the previous 15 years.

The large drop in medical school applicants since the mid-seventies is not explained easily. It may be viewed in part as return to normalcy. In the ten-year period from the mid-sixties to mid-seventies, the number of applicants to medical school more than doubled, an outgrowth of burgeoning college enrollments

applicants is compared to the rising curve of women applicants since 1974 (Figure 9). In 1988, women applicants constituted 38 percent of the applicant

***The introduction of a writing sample or essay in the MCAT is intended to reinforce the importance medical schools place on a broad liberal education for students planning to apply . . . .***

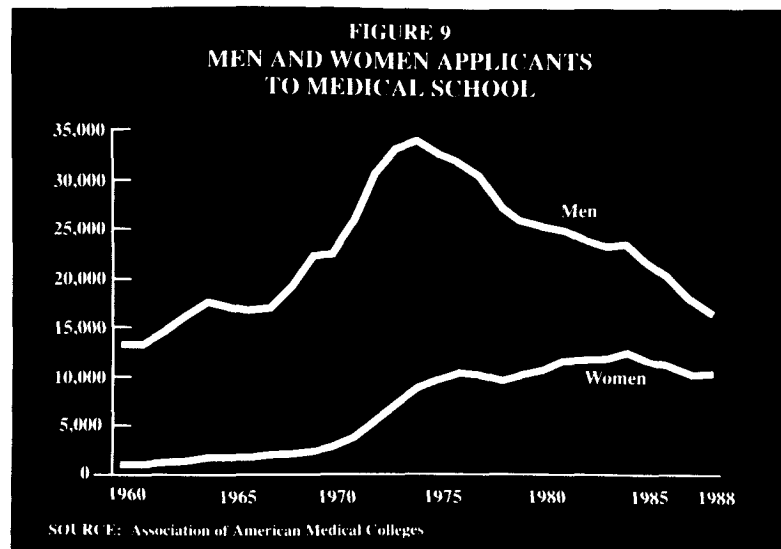
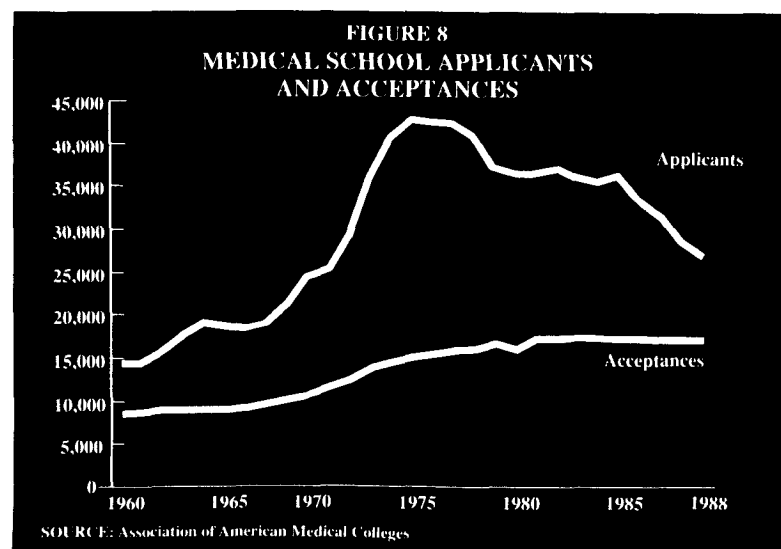
pool and 37 percent of those accepted to medical school.

Other factors undoubtedly have contributed to the decline in medical school applicants: increased tuition levels, lower expected career incomes, perceptions of a physician surplus, lessened physician autonomy in practice as a result of increased corporate involvement in health care delivery, and widely publicized problems of physicians in obtaining affordable professional liability insurance. Medicine has enjoyed high professional standards due in part to its attractiveness as a career to talented young people. The academic qualifications of medical school applicants remain high, but if a significant decline in the applicant pool continues, medical schools will likely reduce class size to maintain admission standards.

Efforts to increase the representation of minorities in the medical profession have not been served by the decline in applicants. The AAMC first identified the underrepresentation of minorities in medicine as a major priority for action twenty years ago. A decade later, a 1978 AAMC Task Force Report on Minority Student Opportunities in Medicine and its subsequent implementation plan expressed the view that expansion of the applicant pool was essential if more minorities were to enter medicine. Despite these initiatives,

blacks constituted only 8.1 percent of medical school applicants in 1988. Other underrepresented minorities, American Indians, Mexican-Americans, and mainland Puerto Ricans, raise this proportion to 10.8 percent. Both figures are only

**How can medical schools best work with undergraduate colleges and universities to ensure that applicants are prepared for the rigors of medical education?**



that were in turn the result of the baby boom generation coming of age and Vietnam-era student draft deferments that encouraged college attendance. The effect of the military draft on applicant trends is striking when the sharp drop in men

How can the historic commitment to correct the underrepresentation of minorities in medicine be fulfilled?

slightly higher than those observed a decade earlier. Particularly for blacks, who constitute 12 percent of the population but only three percent of physicians, a significant boost in applicant numbers is required to erase a historic underrepresentation in the medical profession.

While equal access to the medical profession is a moral and ethical requirement, it is a social imperative as well. A 1984 federal government report detailed continuing large differences in the health status of white and minority groups in this country. Limited access to physicians and other health care professionals is a contributing factor to this phenomenon. Minority physicians are more likely to locate their practices in medically underserved areas and to understand the social and cultural conditions that contribute to poor health in these communities. As the ethnic and cultural composition of the U.S. population changes, it is vital that the medical profession reflect that ethnic and cultural diversity.

In 1987, the AAMC issued a statement which reaffirmed its commitment to increasing the representation of minorities in medicine. Improvements in this area will depend upon progress made in achieving near-term objectives of increasing minority student awareness of medical careers and knowledge of how to prepare for medical school, and of providing assistance in meeting the financial costs of a medical education. In the long term, it will require progress in eliminating the differences between whites and minorities in the quality of education received at all levels, elementary, secondary, and postsecondary, and in the motivation to pursue higher education.

## TUITION AND STUDENT FINANCIAL ASSISTANCE

Medical schools aspire, as a matter of principle, to accept the most worthy candidates for admission, regardless of ability to pay. The realization of equality of access to medical education is influenced by tuition levels and the availability of student financial assistance.

The costs of attending medical school rose steeply in the 1970s, driven substantially but not entirely by the rapid inflation of that decade. Increases in tuition and fees have continued unabated in the 1980s. The median annual tuition at a private medical school is estimated to be \$16,965 in 1989-90; at a public medical school, \$5,463 for state residents and \$11,848 for nonresidents. Behind these figures is an enormous variability among

medical schools in the total level of tuition and fees, from \$1,425 per year for state residents at one public institution to \$23,749 per year at a private institution. One result of the large tuition differentials is an increase in medical student applications for transfer from more to less expensive schools, a practice which can disrupt institutional planning.

Preserving equality of access to medical education under conditions of increasing tuition and fees requires an adequate base of scholarship funds and the availability of low interest, subsidized loans to assist those most in need. In the ten-year period 1977-1987, available scholarship money grew, from \$79 million to \$145 million, but its proportional contribution to student financial assistance declined, from 38 percent to 23 percent. Sources of scholarships also changed dramatically. In 1977-78, Armed Forces Health Professions Scholarships and the National Health Service Corps Scholarships, two programs with a service commitment, accounted for 62 percent of scholarship funds. In 1987-88, due to a drastic reduction in the latter program, their contributions had shrunk to 38 percent. Institutional funds accounted for 34 percent of the scholarship funds available in 1987-88, up from eight percent a decade earlier.

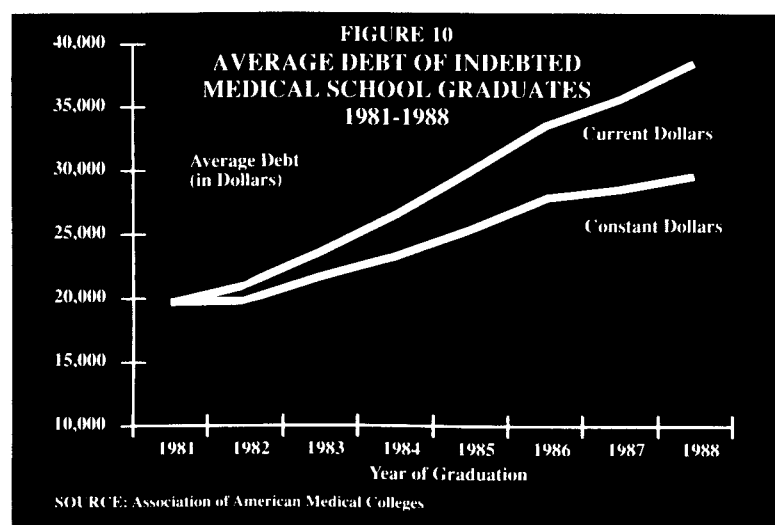
Loans constituted the major portion of the \$642.4 million in student financial assistance awarded in 1987-88. Over half of the total loan revenues, \$277.6 million, was in Stafford Student Loans (SSL), formerly the Guaranteed Student Loan (GSL) program. This program with its deferred interest provision and subsidized rate has grown in popularity. The Health Professions Student Loan (HPSL) and Perkins (formerly National Defense) Loan programs, two other need-based, federally subsidized programs, each accounted for five percent of the loan awards in 1987-88. Most of the remaining loan requirements have had to be met by market-based programs, including the Health Education Assistance Loan (HEAL) program, with 17 percent of the loan activity and the Supplemental Loans for Students (SLS) program, with eight percent. In these programs interest accrues throughout the life of the loan, presenting medical students with a formidable debt to be repaid.

In 1986 the AAMC introduced MEDLOANS, a comprehensive loan program that guarantees all enrolled medical students in good academic standing access to \$30,000 of loan capital each year for the four years of medical education. MEDLOANS utilizes the existing federal SSL, HEAL, and SLS programs, as well as its own Alternative Loan Program (ALP), with terms and conditions that make it the least expensive, privately insured loan

Will rising levels of tuition and fees restrict access to the medical profession?

available for medical student borrowing. MED-LOANS has greatly eased campus administration of student financial assistance while having many desirable features for students: a single loan application, consolidation options pursuant to federal statute, and repayment geared to the earning patterns of physicians.

The major consequence of rising tuition and fees, the failure of scholarship revenues to keep pace, and limitations on subsidized loans, has been the growing indebtedness of medical school graduates (Figure 10). Among the class of 1988, 83 percent incurred some debt to finance their medical education. These debts averaged \$38,489 per student, although they extended to more than \$100,000 for some students. Twenty-four percent



had debts over \$50,000. Underrepresented minority medical graduates in 1988 particularly have been affected by the increased costs of medical education. Nearly 37 percent of this group had debts over \$50,000.

The disincentive effect of high tuition levels and increases in expected debt levels on young people, particularly minorities, applying to medical school has been mentioned. Another possible adverse consequence is the subtle but pervasive influence that high debt levels may have on the specialty choices of medical school graduates in favor of high-earning specialties. Already there is evidence that when debt consists disproportionately of unsubsidized, market-rate loans, students are less inclined to enter the under-supplied primary care specialties. A third deleterious consequence is a potential increase in the incidence of default among medical school graduates. Medical school graduates traditionally have had a low default rate compared to other health professions. Nevertheless,

the rate of default on HEAL loans by medical school graduates increased from 3.8 percent in 1987 to 4.9 percent in 1988.

## EDUCATIONAL PROGRAM

Despite the tremendous changes in size, scope, and institutional context of medical education programs, the basic structure remains remarkably similar to that outlined by Abraham Flexner in his prescription for reform at the beginning of the twentieth century. In the first two years, medical students receive a solid grounding in the biomedical sciences of anatomy, biochemistry, physiology, and microbiology, followed by clinically relevant

transition courses such as pharmacology, pathology, and introduction to clinical medicine. Courses in behavioral science are also standard. Integrated basic and clinical science topics, for example, genetics, immunology, molecular biology, are covered as separate courses or parts of existing courses. Courses and seminars in public health/preventive medicine, epidemiology, geriatrics, and biomedical ethics complete a comprehensive program of instruction. The third and fourth years of the program

are reserved for supervised clinical experiences known as clerkships, the sites for which traditionally have been the inpatient units of affiliated teaching hospitals. Clerkships are mandated in internal medicine, surgery, obstetrics/gynecology, pediatrics, and psychiatry. A clerkship in family practice or other primary care experience is also frequently required by schools. Students generally have the option to elect additional training opportunities. Upon satisfactory completion of this four-year curriculum, the student is awarded an M.D. degree by the institution. However, graduating students are not considered to have the skills necessary for independent practice. A period of graduate training follows, which leads to certification in a chosen specialty or subspecialty.

Throughout the century there have been periodic national reviews of medical school curricula and educational programs, resulting in recommendations for change. These include the recent and widely publicized *Physicians for the Twenty-First*

At what point will increasing debt levels influence the specialty choices of medical school graduates?

Can greater institutional emphasis on the education of medical students be accomplished through revised faculty incentives and redesigned programs?

Will medical school faculties be able to adopt instructional methods that more actively involve students in the learning process?

***Technological advances arising from the research discoveries of the post-war period gave rise to increased specialization in clinical medicine and the sciences basic to medicine. As a result, responsibility for both planning and implementing a program of education for medical students has become more widely dispersed among medical school departments and faculty members.***

How can faculty develop in medical students habits of self-directed, independent learning?

Century, an AAMC-sponsored 1984 Report of the Panel on the General Professional Education of the Physician (GPEP) and College Preparation for Medicine. Despite sometimes broad consensus in these reports on desired elements of medical education programs, the implementation of some of the recommended changes has proven difficult. The Association is presently undertaking a study to determine how change in medical education programs has occurred in response to the GPEP Report and other major commission reports and the obstacles to implementing some of the recommendations. The major elements of most of these reports have centered on issues of *organization and governance* of the program, *methods of instruction*, *content of curricula*, and various aspects of the *clinical education* phase of training. The Charles E.

Culpeper Foundation, Inc.- sponsored project that the Association has undertaken, *Assessing Change in Medical Education*, is expected to be completed in 1991.

**Organization and Governance.** Technological advances arising from the research discoveries of the post-war period gave rise to increased specialization in clinical medicine and the sciences basic to medicine. As a result, responsibility for both planning and implementing a program of education for medical students has become more widely dispersed among medical school departments and faculty members. The chief interest of faculty is often the training of graduate students and residents within their fields of specialization and research. Medical student education must compete with these other activities. The result has been a dilution of the effort focused on general professional education. The structuring of general professional education as an instructional continuum is further hindered by differences in the controlling influences on medical student versus resident education. The former is quite directly the responsibility of the medical school, while the latter is more directly controlled by clinical departments responding to the requirements of national spe-

cialty boards, residency review committees, and local service needs. These structural differences impede articulation of the clinical training experiences in medical school and the first years of residency.

Schools have adopted various strategies to counter these influences and redirect faculty energies toward medical student education. These include modifying faculty promotion and reward systems to place greater value on medical student teaching and defining, adopting, and implementing systems for evaluating medical students on a detailed set of educational objectives. A few schools have developed experimental programs which move the authority and responsibility for medical student education to specially created organizational units. The results of these experiments should be useful in the further evolution of programs.

Improving the articulation of medical student and resident clinical training programs is a particularly challenging problem. One recent proposal, to link the last two years of medical school with the first two years of residency in an integrated clinical training program, raises the possibility that the

long period of training even for generalist physicians, and its attendant costs, could be reduced. The coming years may see cooperating institutions experiment along these lines.

**Methods of Instruction.** Medical student educational programs have been criticized, particularly by the GPEP panel, for relying too heavily on lectures in the first two years, overloading students with information, emphasizing facts over concepts and principles, and rewarding memorization over problem-solving and analysis. There is validity in each of these criticisms although they require some perspective. The decline in the use of laboratory exercises to demonstrate biological phenomena and the subsequent rise in popularity of the lecture format was in part a natural consequence of teaching efficiencies sought with the expansion of class size that occurred in the 1960s and 1970s. Curriculum density and information overload reflect the explosion in bioscientific knowledge and an outmoded assumption, that one could learn all there is to know in the four-year period traditional for the M.D. program. Evaluation methods and assessment techniques which are better at measuring the knowledge base of students than thinking and reasoning skills have contributed to a focus on facts.

There is general agreement that medical education must be an active process, that problem-solving and reasoning skills must be fostered, that biomedical sciences must not be taught as disembodied facts but as the basis of understanding clinical phenomena, and, most importantly, that habits of self-directed, independent learning which prepare students for a lifetime of continuing medical education should be developed. Research projects, independent study assignments, and computer-assisted instruction are methods traditionally used to achieve these objectives. A promising approach taken by several schools is the problem-based curriculum. This refers to a student-centered, small-group approach in which basic and clinical science topics are introduced in the context of patient problems. Discussion of these cases is supplemented by independent research, reading materials, and occasional lectures and demonstrations. The Association sponsors educational workshops to introduce medical schools to these innovative teaching methods.

**Content of Curricula.** While accreditation standards specify a set of broad guidelines for the content of medical education programs, curriculum is the responsibility of individual faculties. Faculties update curricula continually in response to the evolution of science and the changing demands of modern medical practice. They strive to avoid contributing to curriculum density by limiting popular topics that serve only as digressions from fundamental knowledge and skills.

Medical schools attempt to balance presentation of the biological and scientific basis of clinical phenomena with an understanding of psychological, social, and behavioral aspects of disease and disability and the development of interpersonal skills necessary for effective caregiving. The latter dimensions of medical education are especially relevant in preparing students to care for future patient populations that will likely be older and beset with various sociomedical conditions, such as the burgeoning problem of drug abuse. These skills are demanded particularly by the emergence of the human immunodeficiency virus (HIV) epidemic and its clinical manifestation, AIDS. A recent report by the AAMC Committee on AIDS and the Academic Medical Center urged medical schools to re-examine their curriculum in light of the epidemic, particularly with respect to knowledge of infection control procedures, human sexuality, health promotion and disease prevention, physician-patient communication skills, psychosocial aspects of disease, and medical ethics. AAMC

studies have indicated that medical schools have actively introduced HIV-specific subject matter and training experiences into their curricula in recent years.

Perhaps the greatest challenge to medical school curricula in the coming years is preparing students for the transformation of medical practice and

***Perhaps the greatest challenge to medical school curricula in the coming years is preparing students for the transformation of medical practice and health care delivery driven by advances in information technology.***

health care delivery driven by advances in information technology. The storage, retrieval, and management of information is an essential function in the support of medical decision making. In the past, the knowledge base of medicine was stored in textbooks and journals and patient information in hospital and office records. Physicians were expected to use their memories to make correlations between information in the literature and information about their patients and reach diagnostic and therapeutic decisions. Most physicians and students continue to use this memory-dependent mode of decision making. However, the computer technology, databases, and expert systems currently available to hospitals and physician offices, and others coming on-line within the next decade, will demand a fundamental behavioral change.

In 1982 the AAMC published a report on the role of the library in information management. In 1985 it sponsored a conference on medical information science, or medical informatics. Both projects emphasized the need to integrate medical informatics in medical education programs. This requires faculties to invest the time and effort to modify curriculum methods and institutional resources to develop information management systems. The 1982 Association report proposed the concept of an Integrated Academic Information Management System (IAIMS) program for biomedical institutions. The National Library of Medicine (NLM) has assumed a strong leadership role in advancing the concept and funding implementation efforts. IAIMS has been shown to be remarkably successful, not only in transforming how faculty and student access and exchange information, but in promoting greater interaction and cooperation. In the next decade, medical students using computers to access patient records, medical literature and medical databases, and consulting colleagues and expert systems as aids in patient diag-

How can students be best prepared for the new demands of medical practice, such as the aging population and the HIV epidemic?

nosis and therapeutic interventions, should become a commonplace occurrence.

**Clinical Education.** A fundamental characteristic of medical education is its provision of supervised clinical experiences for medical students and residents. The inpatient services of the nation's teaching hospitals have traditionally been the site for these activities and have provided an ideal

***Paramount among the obstacles facing a transition from inpatient to outpatient education is the absence of a financial structure to accommodate this change.***

How can clinical training in medical school and residency be better articulated?

educational milieu. Medical students have been able to observe, discuss, and participate in diagnostic and therapeutic activities in the company of and supervised by residents, fellows, and faculty physicians. Residents and fellows in turn assume greater patient care responsibilities and contribute to medical student education. The concentration of students and residents in a small number of inpatient settings has allowed close quality control of the educational program by department and division chairpersons. Because of the availability of the patient throughout the period of hospitalization, inpatient educational programs have been efficient as well as effective. Teaching at the patient's bedside can be conducted for groups of students at specified times in the teaching physician's schedule.

Several factors now conspire to make inpatient services less ideal as educational sites, particularly for the training of medical students. Technological advances in various specialties and the financial incentives inherent in alternative systems for health care delivery have narrowed the scope of medical conditions for which patients are now hospitalized. As a consequence of incentives in newer reimbursement schemes, those who do receive hospital care tend to stay for a shorter period. Much of the initial diagnostic workup and post-treatment follow-up occurs in the ambulatory setting. As a result, medical students now have little time to get to know hospitalized patients, study their medical conditions, and follow the course of treatment and care. The patients themselves suffer from more acute and complex illnesses, which resemble little the medical conditions students will confront later in the office or clinic setting. The need to extend clinical training further into the ambulatory setting to balance these changes was a consistent theme both of a 1985 AAMC-sponsored conference on clinical education and of a 1986 AAMC-sponsored

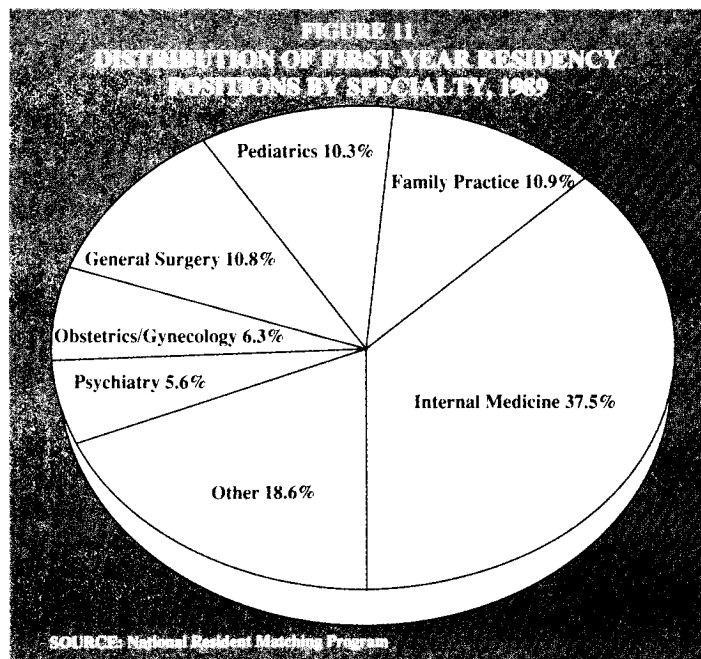
invitational symposium on ambulatory care education. In 1987, with the assistance of the Health Resources Services Administration, the AAMC surveyed medical schools on the extent to which they had adapted their training programs to include more time spent in outpatient settings. The results on the whole were not encouraging. Despite widespread agreement that more ambulatory care training was desirable, little progress had been made to effect changes in this direction.

Paramount among the obstacles facing a transition from inpatient to outpatient education is the absence of a financial structure to accommodate this change. The presence of students in outpatient delivery settings incurs a number of special costs to the practice operation, for example, larger examining rooms to accommodate physician, patient, and student, and increased use of supplies and tests for educational purposes. It also has an impact on the efficiency and productivity of the practice. As a consequence of the student's need for supervision and consultation, the attending physician is able to see fewer patients. Increased costs together with diminished productivity leave a financial gap to be bridged. Outpatient environments promise to be educationally productive. However, until a source of funds is identified to cover these new educational costs, medical schools will continue to find it difficult to move student clerkships into these practice settings.

**GRADUATE MEDICAL EDUCATION**

Graduate medical education or residency training, varying in length from three to seven years, is essential to prepare physicians for independent practice. In 1989, 98 percent of all graduates of U.S. medical schools entered residency programs; 92 percent intended to complete the education and training required for certification by a specialty certifying board.

The complex and elaborate process by which medical school graduates secure residency positions is facilitated by the National Resident Matching Program (NRMP), a computerized process that links student choices for specialty training programs with available positions and preferences of program directors for candidates. The AAMC recently agreed to assume the management of the NRMP, under contract to its independent governing board. In 1989, 14,117 fourth-year students at



U.S. medical schools, 91 percent of all U.S. seniors, sought graduate training through this program. A total of 13,215 (94 percent) was successfully matched by NRMP to a program of their choice. Underrepresented minority medical school graduates have less success in obtaining desired residency positions. Although nearly all minority graduates eventually obtain a residency, they are less likely to match to their programs of choice.

Nearly 38 percent of first-year residency positions obtained by students through the NRMP in 1989 were in internal medicine programs (Figure 11). However, many of these students are seeking to satisfy a requirement for advanced training in one of the other specialties. Eleven percent obtained positions in family practice programs, 11 percent in general surgery programs, and 10 percent in pediatrics programs. Despite a consensus that more primary care physicians are needed, the interest expressed by graduating seniors in primary care specialties has declined throughout most of the 1980s (Figure 12). During this period, interest in the specialties of psychiatry, anesthesiology, and radiology has increased.

Financial support for graduate medical education has been largely derived from hospital revenues through charges to patients and third-party carriers, including the Medicare and Medicaid programs. The justification for this practice has been the services provided to patients by residents in the context of their learning and the need for an ongoing investment in physician education to ensure a continuing supply of qualified physicians. As the supply of physicians has increased and the

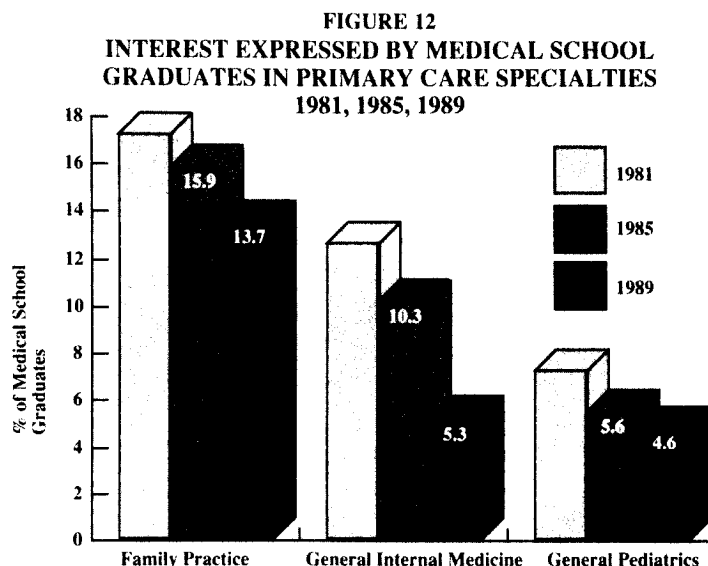
medical care system has changed, the commitment to continuing the financial support of graduate medical education through hospital charges has waned.

Medicare provides its full share of the cost of residency education necessary to complete the educational requirements for primary board eligibility plus one additional year, with a limit of five years; thereafter reimbursement is at 50 percent. This limitation is evidence of an unwillingness to provide the open-ended support of graduate medical education that once prevailed. The growing federal deficit has prompted calls for even further reductions in the federal investment in medical education. There are similar efforts in the private sector to unlink the support of graduate medical education from

the payment for medical services. Large scale purchasers of medical services are seeking to contract with hospitals and physician groups to provide an acceptable range and quality of services at the lowest cost. These purchasers do not accept educational costs as their responsibility.

In 1984 an Association committee conducted a major review of the status of graduate medical education financing. After a thorough examination of various alternative methods, including a proposal to establish a separate fund for this purpose through some form of taxation, the committee concluded that teaching hospital revenues from patient care payers should continue to be the principal

How can stable sources of funding for graduate medical education be secured?



SOURCE: Graduation Questionnaire, Association of American Medical Colleges

source of support. The committee did agree that modifications were needed, including concurrence with Congressional intent to limit the length of training support. It also emphasized that graduate medical education must be conducted cost effectively. The Association adopted the committee's report and has advocated restraints on specialty certifying boards whose changes in certification requirements demand additional resources.

The payment structure for graduate medical

***In 1988 the Association adopted. . . support for a maximum 80-hour work week for residents averaged over four weeks and provisions for graded supervision. . . .***

How can the educational needs of residents, the service requirements of hospitals, and fiscal realities be accommodated by residency programs?

education has also been an avenue in Congressional proposals to alter the specialty mix of physicians in practice. The current payment scheme provides a mild incentive to sponsor training in primary care disciplines: family practice, general internal medicine, general pediatrics, and obstetrics/gynecology. The duration of these training programs is comfortably within the fully funded time span. Proposals have been advanced to increase the incentives for primary care training, as well as to provide financial disincentives for the training of subspecialists in disciplines perceived to be in excess supply.

As with the overall question of physician supply, there is continuing debate on the optimal mix of various medical and surgical specialists. The Association does not endorse the concept of a national system that would regulate training programs on the basis of forecasts of the need for physician services. Methods for estimating demand are at this point too imprecise. Public and private efforts to provide positive incentives to encourage training in specialty areas that are clearly undersubscribed do seem warranted. However, financial disincentives for training in other disciplines are inappropriate when they cover the initial period of board eligibility in those specialties. Teaching hospitals bear some responsibility for achieving a better distribution of physicians among specialties. As early as 1980, the Association's Graduate Medical Education Task Force recommended that each institution sponsoring graduate medical education adjust the size and specialty mix of its programs to be consistent with the physician needs of the region its graduates serve.

A further issue confronting institutions sponsoring graduate medical education programs is the concern about working hours of residents and pro-

visions for supervision of their activities. The term *resident* is derived from the fact that historically physicians in training were expected to live in the hospital. They were responsible for patients 24 hours a day, seven days a week. While these austere requirements have been relaxed greatly, residents typically are on duty in excess of 70 hours per week, including hours in which they are "on call." In a few programs and specialties, residents have been expected to be available for duty even greater periods of time. There is concern that the intensity of the workload, together with inadequate supervision, may be compromising the quality of patient care in teaching hospitals. As a result, some states have begun to regulate resident hours and supervision.

With the dramatic changes taking place in medicine, hospital care, and the health care delivery system, a review of the current structure of residency programs seems welcome. Unfortunately, many of the simple and quick fixes which characterize some proposals fail to reflect the differences in educational needs among the various specialties, ignore established principles upon which residency education is based, and impose a heavy cost requirement that would threaten the viability of some teaching hospitals. In 1988 the Association adopted a series of recommendations for changes in residency programs. Among these were support for a maximum 80-hour work week for residents averaged over four weeks and provisions for graded supervision of residents leading to the ability to make independent patient care decisions. The Association has called for greater emphasis on the supervision of residents in the early years of training. Were a sharp reduction in resident hours mandated by state law or regulation, hospitals would have to adjust their staffing requirements to meet existing service needs. Since this would have considerable financial implications, the AAMC has asked that legislative and regulatory bodies consider the impact of any changes on teaching hospitals and, if they are to be made, that they be phased in gradually.

## EVALUATION AND STANDARDS

Throughout the course of this century an intricate network of accreditation bodies, licensing authorities, and specialty certification boards has developed to provide assurances that physi-



cians in practice have acquired the requisite knowledge and skills to practice medicine safely and competently. For U.S. medical school graduates, this evaluation process begins with the careful and selective process by which each student is admitted to medical school and continues with the ongoing assessment by medical school faculty of the student's satisfactory progress through the curriculum. Faculty observations and judgments regarding the clinical skills and competence of medical students are particularly important in the award of the M.D. degree, indicating a readiness to enter graduate medical education. These same faculty members are involved in assessing the clinical skills of residents, in the course of their graduate medical education program.

Accreditation of medical schools by the Liaison Committee on Medical Education (LCME) provides assurances not only that faculties are competent to judge the knowledge, skills, and abilities of medical students, but that the educational standards and criteria which they set meet minimum national standards. The LCME, an independent, voluntary body jointly established by the AAMC and the American Medical Association (AMA) conducts periodic site visits and reviews of U.S. medical schools for these purposes.

Similarly, the Accreditation Council on Graduate Medical Education (ACGME), of which the AAMC is a sponsor, is charged with determining the essential requirements of graduate medical education programs and ensuring their compliance by institutions in the conduct of graduate medical education programs. Discipline-based Residency Review Committees (RRC) complement these general requirements with a review of programs based on specific training requirements determined for each specialty. The involvement of specialty boards in the determination of residency program requirements is appropriate since these boards certify physicians as meeting certain standards based in part upon satisfactory completion of an acceptable training program.

While the efforts of these voluntary agencies are invaluable to the process of ensuring physician competence for practice, the legal authority to grant a license to practice medicine rests with 54 different state and jurisdictional licensing authorities. The requirements to obtain a license to practice medicine are not uniform among these jurisdictions, but at minimum they include the completion of an acceptable educational program, suc-


cessful passage of an external examination, and, in all but three jurisdictions, at least one year of graduate medical education. For U.S. graduates the external examination requirement can be fulfilled in most states either by passage of a three-part examination sequence offered by the National Board

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of Medical Examiners (NBME) or a two-part Federation Licensing Examination (FLEX) sponsored by the Federation of State Medical Boards (FSMB).

Graduates of foreign medical schools must take FLEX to satisfy the external examination requirements of licensing authorities. However, the uncertainty with which the adequacy of their medical education program is viewed has prompted many jurisdictions to impose additional requirements at the interface between medical school and residency. Foreign medical graduates seeking entry to accredited graduate medical education programs, participation in which is required for licensure, must first obtain a certificate awarded by the Educational Commission for Foreign Medical Graduates (ECFMG). The certificate is based upon satisfactory completion of the Foreign Medical Graduate Examination in the Medical Sciences (FMGEMS) or Parts I and II of the NBME examinations, an English language proficiency requirement, and complete documentation of specified medical credentials.

While the array of agencies, associations, and authorities involved in these processes may appear bewildering to the lay public, their respective roles and interrelationships are based on several principles: the need for multiple agencies providing checks and balances on assessments of the competence of individuals and the quality of programs, the desire to complement standardized paper-and-pencil evaluations of physician knowledge with judgments of clinical skills based on observation by experienced physician-educators, and the assurances provided by completion of a documented and accredited program of studies and supervised clinical experiences. At the moment, the surrogate for accreditation of foreign medical schools is ECFMG certification. The Association has promoted a standardized testing method to assess clinical skills, a




*How can the development of a standardized, practical clinical skills examination be accelerated?*

means of vouching for the clinical competence of foreign medical graduates as well as medical students, residents, and practitioners seeking professional licensure or re-licensure. Both the ECFMG

out a mechanism for providing comparisons at a national level that would be useful to the individual schools as well as accreditation bodies. Moreover, a persistent bias that standardized clinical assess-

***Beyond its potential utility in assessing the readiness of foreign medical graduates for residency training, the promise of a standardized, practical examination to assess clinical skills has generated considerable interest in the medical education community.***

ment might correct is that the 25 percent of competencies for which students and programs are presently compared on a national basis



*What will be the implications of the development of a single examination for licensure?*

and the NBME have been testing such an evaluation procedure, and a Clinical Skills Assessment Alliance has been formed by the AAMC, ECFMG, NBME, AMA, and the American Board of Medical Specialties to design a standardized system that might be employed nationally.

Beyond its potential utility in assessing the readiness of foreign medical graduates for residency training, the promise of a standardized, practical examination to assess clinical skills has generated considerable interest in the medical education community. Standardized written examinations now available as outcome measures in evaluating program quality or as measures of individual competence, for example, scores on NBME examinations, are estimated to cover less than 25 percent of the competencies expected of medical school graduates. The remaining competencies can only be evaluated by direct observation of students by qualified individuals. This process is repeated daily in accredited U.S. medical schools but with-

tend to receive a disproportionate emphasis in the medical education program.

Licensing authorities and examination and certification agencies have also begun to coalesce around another objective: to replace the current multiple examination system leading to licensure with a single examination. Under a proposal made by the FSMB, the NBME, and the ECFMG, a single three-part examination sequence would be constructed and made available to students and graduates of LCME-accredited and non-accredited schools alike. The proposal has the appeal of simplifying the current maze of examination requirements and would aid in making comparisons of performance among different groups. The examination would complement and validate the rigorous and comprehensive educational program of individual medical schools. LCME accreditation would remain available to ensure that high educational standards are met.

# 3

## Biomedical and Behavioral Research

**F**undamental research across a wide range of disciplines in biomedical and behavioral sciences is the means by which knowledge that can be used to ameliorate disease and reduce suffering is acquired. Academic medical centers have provided the creative investigators and intellectually stimulating environments that have so remarkably advanced the understanding and treatment of diseases over the last half century. These institutions are now national and international resources contributing to the nation's preeminence in the biosciences. But they are heavily dependent on outside funds for their sustenance.

### RESEARCH FUNDING

**N**ational expenditures from all sources for biomedical and behavioral research and development totaled \$16.6 billion in 1987, more than eight times the level expended in 1965. However, during the same period, national health care expenses increased more than twelvefold. As a result, biomedical and behavioral research expenditures declined as a percentage of total health expenditures from 4.8 percent in 1965 to 3.1 percent in 1985 (Figure 13). In 1987, the proportion increased to 3.3 percent, but the federal component continued to decline. The latter figure still represents a very low rate of investment for an industry in which research must be viewed as an essential long-term strategy for the control of health care costs.

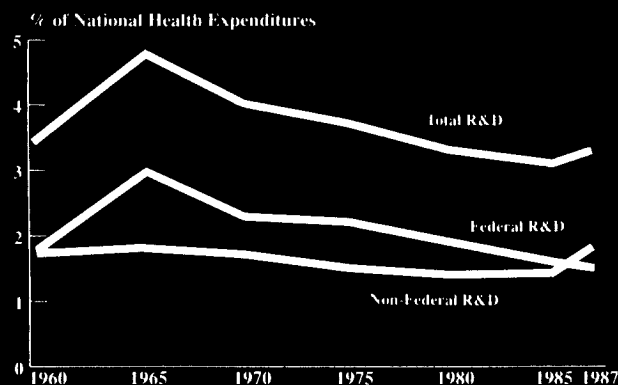
For many years, the federal government accounted for about 60 percent of the national invest-

ment in biomedical research (primarily invested in basic research) and industry for 25 to 35 percent (primarily invested in development). Recently, in large part due to the rapid expansion of the biotechnology industry, some shift has occurred with the federal share decreasing to 47 percent in 1987 and investment by industry at an all-time high of 42 percent. Federal expenditures are primarily for basic research conducted by academic institutions or in federal laboratories. Industrial expenditures are spent mainly within industry. State and private sources account for the remainder of research funds.

In 1987, U.S. medical schools reported sponsored revenues for research of \$2.8 billion. Approximately \$2.1 billion or 75 percent was derived from federal agencies, with the National Institutes of Health (NIH) being the single major source. As

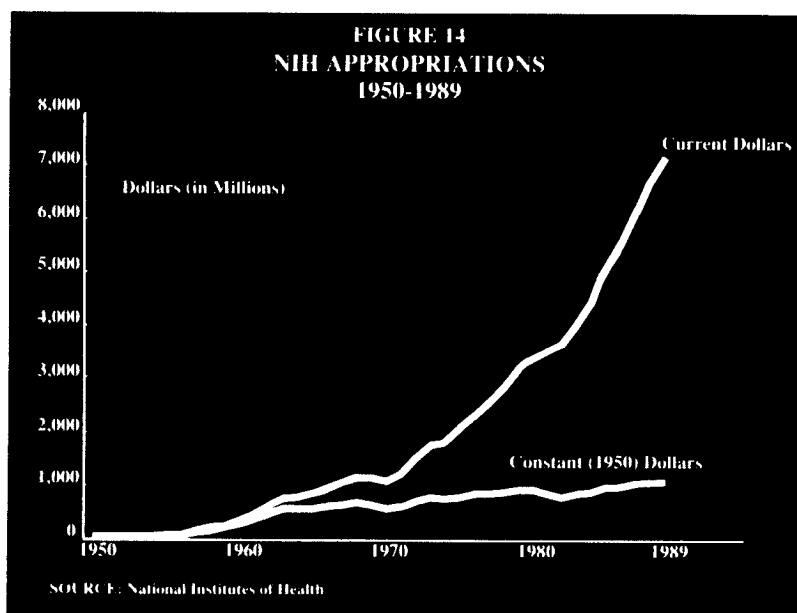
*How can the nation's investment in biomedical and behavioral research be continued in an era marked by growing federal deficits and budgetary constraints?*

**FIGURE 13**  
NATIONAL EXPENDITURES FOR HEALTH RESEARCH AND DEVELOPMENT AS A PERCENTAGE OF NATIONAL HEALTH EXPENDITURES BY SOURCE



SOURCE: Health Care Financing Administration and the National Institutes of Health

a result, the funding patterns for this federal agency have been a focus of intense interest by AAMC member institutions. In the 1950s and 1960s, yearly annual growth in NIH appropriations was appreciable (over 20 percent after inflation). In the 1970s growth in support continued, but in more modest terms (approximately 5 percent per annum). In the late 1980s funding increases have slowed considerably (Figure 14). In addition, a substantial frac-



**Will a focus on specific diseases, e.g., AIDS, undermine the federal commitment to support basic research?**

tion of the recent increases for NIH and the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA), another important source of research funds, is directly attributable to research on HIV infection and AIDS. Specific attention to the HIV epidemic is warranted, but failure to increase investment in a wide array of fundamental, undifferentiated basic research is shortsighted. Prior federal investment in basic research, particularly in the study of retroviruses, enabled scientists to make such rapid progress in identifying the etiologic agent which causes AIDS.

The predominant mechanism for NIH extramural research support is the investigator-initiated grant, whether awarded as a traditional research project grant, program project grant, or career development award. Nationally targeted programs, supported mainly by contracts, constituted a greater share of the extramural awards in the mid-1970s than they have before or since.

A major change in research funding policy in recent years is the increased length of research project grants. In 1988 more than half of research project grants awarded by NIH were for five years, compared to only 20 percent a few years earlier. The effect of the policy change is to reduce the

administrative burden on researchers who otherwise would be devoting considerably more time to the preparation of applications rather than to the conduct of research itself. However, the long-term commitment of funds to these awards adds to funding demands if support for new research projects and opportunities for new investigators are to be preserved.

Over the past quarter century the proportion of research funding required to meet the indirect costs of research, for maintenance of facilities and equipment, administration, and other institutional overhead, has gradually increased. The shift in funding undoubtedly relates to the increasing complexity of modern biomedical research and its demands on institutional resources. However, it has divided administrators, who are responsible for institutional support of the research enterprise, and faculty investigators, who perceive higher indirect rates as dictating a more limited share of funds to cover direct costs. The disparity among institutions in indirect cost rates has also contributed to confusion and mistrust among faculty and research sponsors about the legitimacy of these costs. The Association believes that the true costs of research, including indirect costs, should legitimately be borne by the research sponsor. Indirect cost policies which have the full confidence and trust of the research community and government sponsors need to be developed. A 1989 report commissioned by the Association of American Universities (AAU) on indirect costs provides recommendations which may be useful in this regard.

Biomedical Research Support Grants (BRSG), an important category of award which provides formula-based research funds for use by each grantee institution at its discretion, have failed to keep pace with the allocations to project grants and inflation and have been targeted repeatedly for elimination. Frequently used by grantee institutions for start-up or transition support for new faculty and highly imaginative investigators, these flexible institutional research funds have been vital to the missions of both NIH and the medical schools. As competition for research funds has stiffened, award rates for several of the National Institutes have declined from approximately 35 to 40 percent of approved proposals ten years ago to 20 to 25 percent currently. BRSG funds have been increasingly valuable as a means for medical schools to provide continuity for highly skilled investigators during periods in which funding was reduced or temporarily not available.

In an era marked by growing federal deficits, the burgeoning cost to the federal government of

biomedical and behavioral research is a legitimate concern of those charged with the stewardship of public resources. Congress should be mindful, however, that the biomedical and behavioral research enterprise has proven to be one of the nation's wisest investments, not just as a moral obligation to improve the human condition, but as an economically sound undertaking to reduce the devastating costs of disease, disability, and premature death.

## TRAINING OF RESEARCH PERSONNEL

The maintenance of America's preeminence in biomedical and behavioral research requires continuing contributions to the training of scientific personnel. Yet, when adjusted for inflation, NIH support of research training has declined over the past two decades (Figure 15). Training funds accounted for 13 percent of the NIH extramural research budget in 1972 but less than four percent in 1988. Training support in behavioral research funded by ADAMHA has similarly declined.

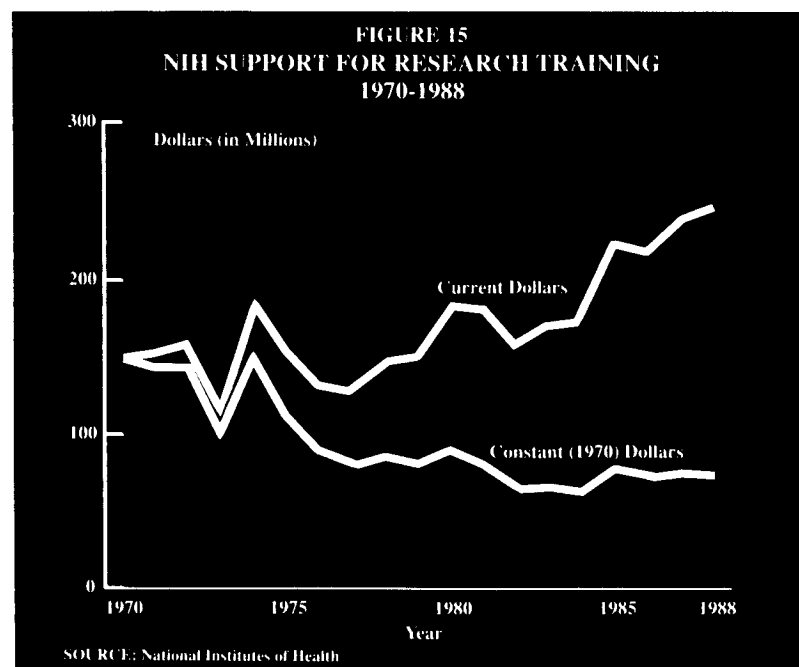
Enrollment of pre- and post-baccalaureate students in the United States is projected to expand substantially during the early twenty-first century. The frontiers of biomedical research and development can also be expected to continue their rapid extension. These phenomena will occur simultaneously with the aging and retirement of a sizeable segment of the current faculty and senior biomedical research workforce. The imminent shortage needs to be countered as rapidly as possible if a crippling hiatus in the integrity of the U.S. biomedical research enterprise is to be averted.

Ideally, the optimal level of biomedical research personnel for the next quarter century could be estimated and coupled to a stable training regime that would provide appropriate numbers of trainees progressing through predoctoral and postdoctoral stages. The National Academy of Sciences Institute of Medicine (IOM) has been conducting periodic estimates of training needs over a more modest future time frame. The availability of predoctoral and postdoctoral training positions funded by NIH, ADAMHA, and the National Center for Health Services Research (NCHSR) has consistently fallen short of IOM targets.

Ensuring an adequate number of qualified physician investigators has been a particular concern of the Association since the mid-1970s, when the number of M.D. and M.D./Ph.D. trainees supported by NIH began to decline. Physician re-

searchers serve a vital role as bridges in translating basic science discoveries into clinical applications. Two NIH training programs, the Medical Scientist Training Program and the Physician Scientist Award Program, are particularly valuable in providing research training to physicians. These training opportunities need to be expanded to provide both increased numbers and duration of training. Such a measure is required to correct the current serious shortage of competent clinical investigators that has been promulgated by too few traineeships, each of which amounts to but a fleeting glimpse of the complexities, objectivity, and vigor characteristic of modern biomedical research.

In recent years the Veterans Administration (VA) has emerged as a major federal source of



funds for the training of young physicians, both as clinicians and investigators. It is estimated that some 400 young physicians are supported yearly through the VA advanced residency training and career development programs. Private-sector funds for research training have appreciably increased over the last decade, although the sources and amounts of this support are difficult to assess and collate nationally. These are welcome additions to the resources for support of research training. However, NIH and ADAMHA must continue to bear the primary responsibility for ensuring that the overall supply of properly trained investigators, both Ph.D. and M.D., is adequate to the need.

The future availability of research personnel rests ultimately on the attractiveness that research careers hold for young people. Currently, the prom-

How can an adequate and stable federal commitment to the training of future research investigators be ensured?

What measures can be taken to expand the pool and improve the qualifications of physician-investigators upon whom the continuity and productivity of clinical research depend?



*How can careers in biomedical research be made more attractive and the number of minorities in research increased?*

ise offered by continuing biological discoveries and technological development is great and the prestige society bestows on those who are participants in the enterprise is high. Graduate enrollment in life science fields has held steady in recent years, despite increasing student interest in business, engineering, and computer science.

Racial-ethnic minorities continue to be under-represented in biomedical research, a cause for concern. Two NIH-sponsored programs have been particularly successful in addressing this problem and need to be supported. The Minority Access to Research Careers program provides special research training opportunities for minorities and incentives to pursue research careers. The Minority Biomedical Research Support program is designed to improve the research capabilities of institutions that enroll large numbers of minority students. In the long term, improved and expanded science education programs at the elementary and secondary level are the key to expanding the pool of qualified minority students interested in scientific careers.

## RESEARCH INFRASTRUCTURE

The aging and deterioration of research facilities and limitations on access to needed equipment and research instrumentation further hinder continuing accomplishments in biomedical and behavioral research. In a 1988 study sponsored by NIH, 45 percent of the medical schools surveyed described their facilities as inadequate to support their medical research needs. The study results indicated that for every dollar budgeted by academic institutions for planned new research construction, another \$1.63 in needed construction is deferred. In addition to the deficit of needed new space is the deteriorating condition of that which exists. For every dollar budgeted by academic institutions for repair and renovation of biomedical research facilities, NIH estimates that \$2.18 of needed work is deferred.

Amid the expressed concern about the lack of new facilities, it is apparent, although not documented, that there is considerable new construction of biomedical research facilities taking place. Much of this is made possible by foundation or corporate support, particularly at established and otherwise well-funded research universities. Institutions of lesser standing have found construction dollars more difficult to obtain.

Many academic medical centers aspire to a high level of research activity exhibited currently

by only a relatively small number of research institutions. Others define their research mission in more limited terms, but they too have finite needs for research infrastructure to support that mission properly. Hence, although the type and degree of infrastructural support vary, the emerging need appears universal.

Whether or not more institutions should be encouraged to achieve a high level of research intensity, with concomitant implications for expansion of infrastructure, is a matter of continuing debate. The magnitude of deferred maintenance and of current and anticipated needs for physical plant renovation alone prompts an urgent need for assessment.

In contrast to facilities, the status of the national stock of biological scientific equipment has improved substantially in recent years. Between 1984 and 1987, a real, inflation-adjusted increase of 48 percent was observed, according to an NIH-sponsored study. Over half of this instrumentation is located in the nation's medical schools. NIH was the source of 44 percent of dollars spent by medical schools to purchase equipment in use in 1987. Despite these advances, the need for sophisticated instrumentation to support research continues unabated. Academic department heads indicated in the NIH study that access to more costly equipment items (over \$50,000) was their top priority.

## PROFESSIONAL AND ETHICAL ISSUES

Many of the recent advances in the understanding and treatment of various medical disorders have been made possible by the use of animal models in the laboratory. Research with animals is a mandatory prelude to human investigation in many medical disciplines. Restrictions on the use of animals would seriously hamper the further development of many human life-saving treatment methods. Despite this, the practice of using animals in research has come under strong attack in the past decade by small but well-organized groups whose ultimate objective is stop all use of laboratory animals. The more extreme of these groups has resorted to dangerous tactics — vandalism, theft, bombings, and threats — in an attempt to bring an immediate halt to research activities. Others have worked to exert influence on local, state, and federal policy makers, resulting in various statutes and proposals for regulations on institutional care and treatment of research animals, many of which are or would be cumbersome, unnecessary, and costly.



*How can the longstanding inattention to the aging and deterioration of biomedical research facilities be reversed?*

A further tactic of these groups has been to seek membership on institutional animal use committees, thereby giving themselves a role in the evaluation of scientific proposals.

The AAMC, cooperating with the Association of American Universities, has provided its member institutions with recommendations for responsible policies and procedures in the management of animal resources. These complement guidelines on animal care and treatment issued by NIH and the Public Health Service. Most medical school animal care facilities now meet the high standards necessary for accreditation by the American Association for the Accreditation of Laboratory Animal Care. Public trust and support will be essential to continuing the vital role played by laboratory animals in biomedical research accomplishments.

AAMC member institutions engaged in biomedical and behavioral research face another professional challenge as a result of recent widely publicized instances of scientific fraud and misconduct. Although infrequent, such cases are serious threats to the integrity of science and undermine public trust and confidence. Institutions supporting research have a responsibility to ensure that allegations of fraud and misconduct are dealt with effectively and expeditiously. In 1982 the Association published *The Maintenance of High Ethical Standards in the Conduct of Research*, which set forth guidelines and recommendations for dealing with scientific fraud. More recently, in 1988, the Association collaborated with a number of other educational associations and professional societies to produce the report *Framework for Institutional Policies and Procedures to Deal with Misconduct in Research*. The latter document builds upon the earlier one, incorporating more current regulatory developments. It provides a model policy for handling allegations or evidence of scientific misconduct, including procedures for inquiry, investigation, appeal/final review and resolution.

A related and more difficult set of issues for institutions is the growth of academia-industry relationships and the potential for conflicts of commitment and interest on the part of the academic researcher. The spectacular research accomplishments of the past four decades have not only expanded the frontiers of science, but have also created significant opportunities for translating basic research findings into commercially viable products. With this development has come an expansion of research relationships between industry and academia, the former drawing from the collective

intellectual and creative talents of medical school faculty, the latter benefitting from an additional source of funding. As such relationships expand, faculty members find themselves with obligations

***A . . . difficult set of issues for institutions is the growth of academia-industry relationships and the potential for conflicts of commitment and interest on the part of the academic researcher.***

and responsibilities that extend beyond the institution. Time available for their institutional responsibilities may be reduced as they attempt to live up to the expectations of their industrial sponsors. Beyond this potential conflict of commitment from faculty involvement with industrial sponsors is an even more serious concern: that faculty may develop financial and managerial interests in organizations sponsoring the research they are conducting, thus at least potentially compromising their objectivity. The Association is currently at work on a guidance document comparable to that written on the issue of scientific misconduct. It will identify situations that might pose a conflict of faculty commitment or interest and recommend policies and procedures for managing them.

The inherent nature of certain types of research, such as recombinant DNA or fetal tissue research, raises social and philosophical questions. Research designed to push the limits of human understanding and capability makes such questions inevitable. Institutions must recognize the legitimacy of lay concerns about the character of biomedical and behavioral research and about the processes by which bioethical issues are resolved and the objectivity and validity of the research are ensured. Open discussion of these issues and the assumption of responsibility by institutions for appropriate oversight and review of socially controversial research programs are important to preserve and expand the public trust and confidence now enjoyed by academic medical centers. Commitment to this policy may be critical to forestall governmental efforts to impose further restrictions on researchers and regulations on the research process that would dampen the creative process.



***Can rising public expectations of further research advances be met in the face of growing attacks on the essential use of laboratory animals?***

# 4

## Patient Care

How should the unique services of teaching hospitals be recognized and supported in payment systems?

**M**edical school clinical faculties differ from many other professional school faculties, for example, in law or business, in the extent to which they are directly involved in the practice of their profession, in addition to teaching and research responsibilities. Teaching hospitals, which provide the venue for many of these clinical services, have as their primary mission the provision of high quality patient services. Together, they play a major and vital role in the nation's health care delivery system. Their unique contributions need to be understood, particularly by those fashioning proposals to control the escalating costs of health care.

### PAYMENT FOR HOSPITAL SERVICES

**B**ecause of their unique service program characteristics, the scope of services, the severity and complexity of illnesses in their patients, and the availability of a specialized professional staff, teaching hospitals incur operating costs above those of routine patient care. Education and clinical research and applied technology programs add further to these costs. Educational programs require funding for residents and fellows, faculty, support staff, and overhead costs. They demand additional staff time and hospital resources to involve trainees in the diagnosis and treatment of patients. Clinical research adds to the cost of care because patients receiving innovative diagnostic and treatment approaches in a controlled environment require close monitoring. Also, the need to accommodate the

complex requirements of developing medical technologies and services generates higher capital costs. Because of their well-developed capabilities and reputation for being in the vanguard of medical knowledge and technique, teaching hospitals attract more severely ill patients. Their commitment to local and regional needs requires them to provide certain special low-volume patient services that are costly to maintain. Finally, their historic role in serving the poor and indigent adds a further financial burden.

Under traditional systems of reimbursement, the special costs of teaching hospitals were met by cost reimbursement and internal cross-subsidies allowed by the payment system. In 1983, Congress approved a new reimbursement system for inpatient services under Medicare based on prospective pricing. Patients were classified into one of 468 diagnosis-related groups (DRG) and hospitals were reimbursed the average historic costs of patients with that diagnosis. The reimbursement system now also includes special payment for cases that represent statistical outliers in terms of costs or length of stay, as well as a payment adjustment for hospitals that bear a disproportionate share of care to the poor and indigent. Congress also recognized the need to support clinical education of health care professionals by including special payments for Medicare's share of direct medical education expenses, including trainee stipends and benefits, faculty supervision and administration, support staff, space, and allocated overhead costs.

The AAMC favored the change to this prospective payment system (PPS) as a measure to control health care costs but had major concerns about the



adequacy of the DRG approach to reflect the special costs of teaching hospitals. Because they offer specialized tertiary care services and serve as referral centers for other hospitals, teaching hospitals tend to attract the more severely ill patients within each DRG. These patients need to be cared for more intensely than the average patient, with a greater need for nursing and other support services, diagnostic tests, and aggressive treatment approaches. Payments based on the average DRG cost place teaching hospitals at a distinct disadvantage.

Congress recognized these concerns and attempted to deal with them through an adjustment labeled "the indirect costs of medical education." The Senate report stated:

*This adjustment is provided in the light of doubts...about the ability of the DRG case classification system to account fully for factors such as the severity of illness of patients requiring the specialized services and treatment programs provided by teaching institutions and the additional costs associated with the teaching of residents...the adjustment for indirect medical education costs is only a proxy to account for a number of factors which may legitimately increase costs in teaching hospitals.*

The label for this adjustment is misleading, since the adjustment is intended to compensate for a teaching hospital's higher patient costs, not its educational costs. The indirect medical education adjustment represents on average 20 percent of the PPS-related Medicare payments to teaching hospitals (Figure 16). Without it, few teaching hospitals could recover the costs associated with their care of Medicare patients. This point is illustrated by data from an ongoing AAMC survey of 65 academic medical center hospitals. In 1986, only two of the hospitals in the sample reported Medicare inpatient costs that exceeded PPS-related Medicare revenues. By 1988, this number had grown to 19, due in part to modifications to the formula used to compute the indirect medical education adjustment leading to reductions in revenues. The number of hospitals failing to cover their Medicare inpatient costs in 1989 is expected to increase still, as a result of further reductions.

The inclusion of the indirect medical education adjustment in the prospective payment system signals an appropriate recognition by the federal government of the special services provided by teaching hospitals and their unique contributions to the health care delivery system. The same cannot be

said of payments from other large-scale purchasers of care. Teaching hospitals have had to cope in recent years with a variety of new payment arrangements, including negotiated charges, fixed per diem or per capita payments, and competitively bid prices. This shift in the attitudes of payers has put all hospitals at financial risk for atypically long lengths of stay and above average use of diagnostic and treatment services. It presents a particular problem for teaching hospitals for the reasons stated above. When price is the determining factor, teaching hospitals, however efficient, are likely to remain at a serious disadvantage to other hospitals.

***The reputation of the teaching hospital for providing high-quality care at the cutting edge of medical knowledge and skill is its primary asset in the competitive health care environment .***

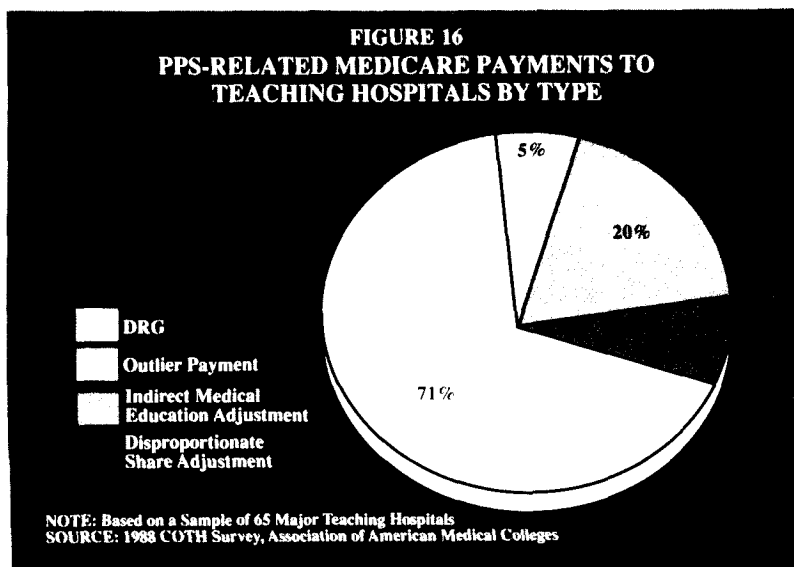
To ensure a continued patient base for educational and research programs and financial viability in an increasingly competitive and cost-conscious health care environment, many teaching hospitals have begun new ventures, many in conjunction with the organized practice of the clinical faculty. These include the development of or contracting with health maintenance organizations, the establishment of primary care community clinics, ambulatory surgery centers, and other non-hospital delivery sites, and the creation of new services, such as rehabilitation, home health care, and long-term care services. The reputation of the teaching hospital for providing high-quality care at the cutting edge of medical knowledge and skill is its primary asset in the competitive health care environment. The contributions of teaching hospitals



*What impact will expanded ventures in new services and delivery systems have on teaching hospitals as a venue for health professions education?*



*Can further reductions in the indirect medical education adjustment for teaching hospitals be prevented?*



in specialized care, regional medical services, and the training of health care professionals make their success a goal with which all should be concerned.

***The VA's contribution to medical education is significant: more than one out of every two practicing physicians has received some training in a VA medical center.***

How can the VA system be properly financed to meet growing service demands and to continue its historic contributions to medical education and research?

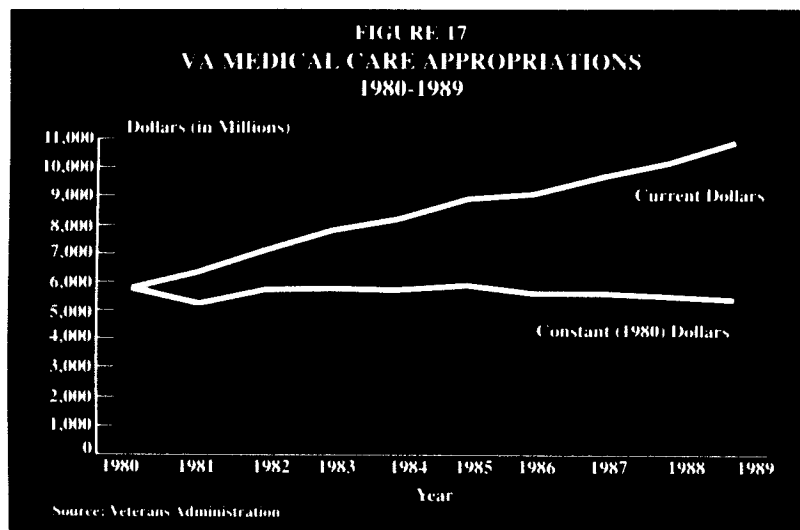
Veterans Administration (VA) medical centers, many of which serve as teaching hospitals, face serious challenges in meeting their commitment of quality patient care for the nation's veteran population. The scale of VA contributions to health care delivery is difficult to overstate. The VA operates the largest organized health care system in the United States. Under current eligibility requirements, nearly half of the veterans with the highest priority for care are in a low-income category. Approximately 45 percent of those hospitalized in VA medical centers have no health insurance coverage of any kind. Thus, the VA system absorbs a large part of the burden of uncompensated care that would otherwise fall on other segments of the health care delivery system.

The population of veterans over age 65 is expected to increase by more than 60 percent before the turn of the century and with it the demand for services. VA medical centers have

resources beyond reasonable limits.

Shortfalls in VA funding are felt particularly in the inability to recruit and retain adequate numbers of trained staff. Often staffing needs are met only at the expense of forgoing the purchase of new diagnostic equipment and of deferring maintenance and renovation of facilities. If the grave inadequacy of VA funding is not soon addressed, maintaining high standards of patient care in VA medical centers will become extremely difficult.

The close partnership between the VA and academic medicine, which began in 1946 with the first formal affiliations between medical schools and VA medical centers, makes these current funding problems a cause for concern in the academic medical community. The VA's contribution to medical education is significant: more than one out of every two practicing physicians has received some training in a VA medical center. The VA currently provides support for one-eighth of the residents in training. Like other teaching hospitals, VA medical centers contribute greatly to biomedical and behavioral research, particularly in its clinical applications. The patient population of VA medical centers has allowed physician investigators to focus specifically on research in diabetes, immunology, mental health and dementia, infectious diseases (including AIDS), geriatrics, endocrinology, and alcohol and drug abuse. Yet, VA funding for these clinical research activities has fluctuated dramatically and, like funding for patient care services, not kept pace with inflation. The uncertainty of VA research funding patterns has a discouraging effect on personnel recruitment efforts, particularly in attracting highly qualified physician-investigators to staff positions, and thereby further contributes to a threatened decline in the quality of care and services.



witnessed sizeable increases in their workload in the last decade. Since 1980 they have conducted an additional 60,000 inpatient treatments and five million outpatient visits, as well as provided for 38,000 more nursing home stays. Yet, VA appropriations for medical care, in real, inflation-adjusted dollars, have not increased during this period (Figure 17). The result has been a stretching of VA

**PAYMENT FOR  
PHYSICIAN SERVICES**

Medical school clinical faculty members have always provided direct patient care, but before the advent of Medicare and Medicaid in the mid-1960s, this care was largely unreimbursed. Since that time, medical schools have developed faculty practice organizations for billing and collection for patient care services. The redistribution of these revenues supports faculty salaries and contributes to educational and research programs.

As described earlier, patient care revenues have become a major source of financing for medical school operations. As a result, current proposals to change methods by which physicians are paid are of considerable interest to medical schools.

The push for physician payment reform is a natural accompaniment to changes in payment for hospital services. Physician expenditures have been a major component to rising health care costs. The Health Care Financing Administration, which administers Medicare, has for some time been interested in ways to control these costs. In 1985, it commissioned a study to develop a resource-based relative value scale (RBRVS) as an alternative approach to base payments for physician services under Medicare. The scale assigns a value to physician services, according to the technical skill, physical effort, mental effort and judgment, and psychological stress involved in each one. After factoring in the costs of practice, a conversion can be made that produces dollar estimates of a proposed resource-based fee schedule. Further studies have indicated that the implementation of an RBRVS-based system would significantly increase payments to physicians involved in patient evaluation and management, for example, family practitioners and internists, while decreasing the amount paid for physicians performing procedures, for example, ophthalmologists and thoracic surgeons.

The federal government's Physician Payment Review Commission has recommended the adoption of a resource-based relative value scale as the cornerstone for a new program to reimburse physicians under Medicare. It appears that such an approach will also quickly become the basis for other third-party reimbursement. Although the full implications of these changes for academic medicine

are not clear, they are likely to be significant. Primary care specialties would be given the greatest boost. They may become increasingly attractive to medical school graduates, a salutary outcome given the broad consensus that more of these practitioners are needed, but one that may tax existing graduate training programs in these specialties and prompt a realignment of hospital training programs. Medical schools that are highly dependent on the practice revenues generated by a few procedurally-oriented departments may find a sharp decline in income that is not matched by the increased revenues of their primary care departments. Financial planning to account for these changes will be essential.

Controlling the escalating costs of physician services while ensuring their quality promises to be a formidable undertaking but is one in which medical schools and teaching hospitals have begun to take an active role. Medical practice parameters or guidelines, based on a comprehensive and systematic program of studies of patient outcomes and the effectiveness and efficiency of treatments, are seen as one mechanism for achieving these aims. Medical practice parameters are designed to improve quality of care by helping physicians identify and prescribe appropriate diagnostic tests and treatment options. They promise to have an additional benefit of reducing the frequency of inappropriate or marginally effective therapeutic options. The development of medical practice parameters is now underway. Medical schools and teaching hospitals will be encouraged to take a major role in conducting the health services and patient outcome assessment research that provides the basis of these parameters.

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*What effect will RBRVS-based payment methods have on the specialty choice of medical school graduates and the demand for graduate training programs?*

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*How will physician payment reform alter the financial structure of medical schools?*



# *The Association of American Medical Colleges*

**T**wenty-two medical school deans founded the American Medical College Association in 1876 to work for much-needed reform in medical education. In 1890, 66 medical college deans, again united by a common desire to elevate the standards of medical education, met to revitalize the group under its present name. The 1910 Flexner report provided the impetus for consolidating major reforms in academic medicine, including the rise of university medical education. The Association thereafter turned its attention to improving the process of medical education, still a primary focus.

In the late 1960s the Association reorganized to support better the full range of concerns — education, research, and service to patients — giving teaching hospital executives, medical school faculty members, and medical students a voice in its governance. Today, it includes in its membership the 127 accredited U.S. medical schools; the 16 accredited Canadian medical schools; 92 academic and professional societies with over 62,000 members; 420 teaching hospitals (including 72 Veterans Administration medical centers); and the nation's medical students.

The Association is governed by an Executive Council, whose members are elected from the Council of Deans (COD), the Council of Teaching Hospitals (COTH), the Council of Academic Societies (CAS), and the Organization of Student Representatives (OSR). The Association's legislative body is its Assembly, comprising the 127 members of the COD, 63 members each of COTH and CAS, and 10 percent of the institutionally appointed members of the OSR.

At the sub-councillor level, members of the

faculties and administrations of academic medical centers are organized into six professional development groups: Business Affairs, Faculty Practice, Institutional Planning, Educational Affairs (formerly Medical Education), Public Affairs, and Student Affairs. These groups meet regularly and serve the AAMC's governing bodies and staff and each other as a source of information and expertise.

The various constituencies and vast expertise contained within the Association's membership allow it to contribute greatly to policy development in medical education, biomedical and behavioral research, and health care areas. Through task forces and committees drawn from the membership, the Association has provided thoughtful commentary and reflection on major public policy issues. It is uniquely positioned to speak for academic medicine on major governmental proposals and legislative initiatives. With the American Medical Association (AMA), the Association sponsors the Liaison Committee on Medical Education (LCME), an accrediting body for U.S. medical education programs leading to the M.D. degree. It also participates in the accrediting bodies for graduate and continuing medical education.

The Association is administered by a full-time appointed president, assisted by a staff of over 180 individuals. The large complement of staff permits the Association to sponsor a number of service programs for its members. Among these is the Medical College Admission Test (MCAT), a nationally standardized examination used to assess applicants' basic knowledge and problem-solving skills. The American Medical College Application Service (AMCAS) is a centralized system that

enables applicants to file a single standardized form for application to participating medical schools. MEDLOANS is a comprehensive loan program developed to provide financial assistance to enrolled medical students. The National Resident Matching Program (NRMP) matches candidates to residency positions according to their preferences and those of the teaching hospitals.

The various divisions of the Association conduct periodic and episodic surveys of segments of the AAMC constituency. The information is published in regular and occasional reports. Major data and information systems on students, faculties, and institutions are maintained by the Association. The Student and Applicant Information Management System (SAIMS) includes data collected on individuals beginning with their application to medical school and continuing through residency training. The Faculty Roster System (FRS) contains information on the background, current academic appointment, employment history, education, and training of all full-time faculty members at U.S. medical schools. The Institutional Profile System (IPS) has information drawn from the annual LCME questionnaire on medical school revenues and expenditures, faculty counts, curricula, student enrollment, and student financial aid. Additional data files are maintained on the characteristics of teaching hospitals.

The Association publishes a monthly peer-reviewed journal, *Academic Medicine*, containing study reports, book reviews, editorials, and papers on national and international developments in academic medicine. Other regular publications include *Medical School Admission Requirements, United States and Canada*; *Minority Student Opportunities in United States Medical Schools*; *AAMC Curriculum Directory*; and the *AAMC Directory of Medical Education*. The Association sponsors an annual meeting each fall that attracts national leaders in academic medicine and that promotes the professional growth of individuals involved in medical education. The Association also sponsors various other symposia, meetings, and conferences of specific groups or formed around topics of interest.

For more than a century, the Association of American Medical Colleges has worked to serve its members and advance their interests: quality in medical education, achievements in biomedical and behavioral research, and excellence in patient care. Into the next century its efforts continue in pursuit of its mission — improving the nation's health through the advancement of academic medicine.