Behavioral Science Offerings of Selected U.S. Medical Schools

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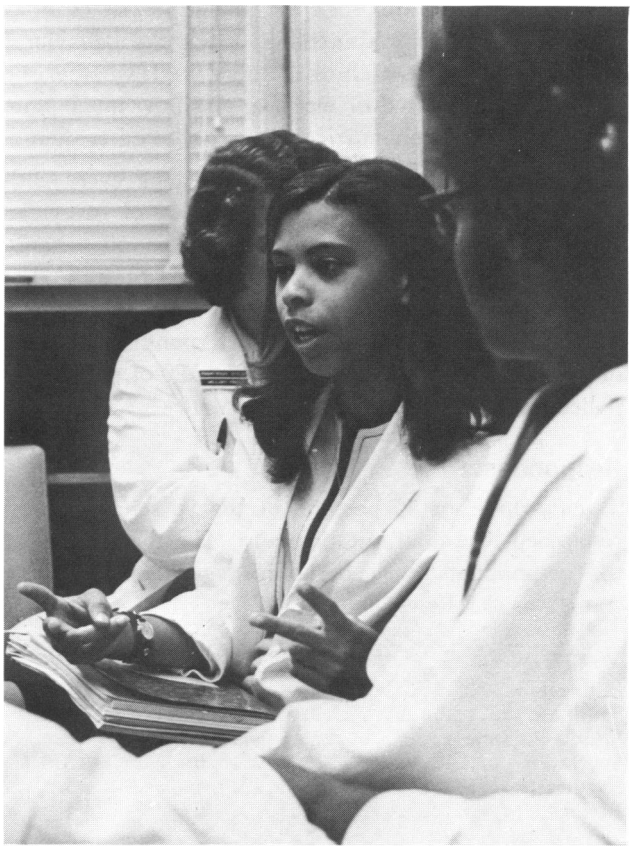
AS PART OF THE PLANNING for a new medical school in Queens County, N.Y., a survey was undertaken of what existing medical schools were offering under the rubric of behavioral science. Participation of behavioral scientists in the training of medical students dates back at least 20 years. Initially, this participation was confined to the disciplines of anthropology, psychology, and sociology. Today, however, it also embraces economics, political science, and urban studies.

Potential Contributions of Behavioral Sciences

The summary report of a project committee on "Teaching Behavioral Sciences in Schools of Medicine" (*1*) separates contributions that behavioral science can make to the training of medical students into 10 areas, namely (*1a*):

1. To extend the scientific orientation of medicine into the field of human behavior at the individual, group, and collective levels of analysis.
2. To help physicians improve and extend their preventive, diagnostic, therapeutic, and rehabilitative skills.
3. To improve the learning process for student physicians during all stages of their professional career.
4. To assist physicians to adapt to rapidly changing organizational, community, and cultural environments.



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5. To bring the perspectives of the consumers of health care into the realm of medical education.

6. To identify the behavioral components that interact in the disease process, in the prevention of disease, and in the enhancement of health.

7. To develop sensitivity in observation, validity in interpretation, and accuracy in prediction of one's behavior and the behavior of others.

8. To develop physicians' skills so that they may effectively educate themselves, their patients, and their co-workers on a continuing basis.

9. To provide instruction in management and leadership skills essential to the provision of health care for individuals, families, and populations at reasonable levels of relevance, quality, convenience, and cost.

10. To teach physicians how to discriminate efficiently between levels of generalization in the patterning of human behavior.

Clearly, these potential contributions are reason enough for planners of new medical schools to consider seriously the role of behavioral science in their projected curriculums.

Study Methods

During the winter of 1978, I polled 50 randomly selected U.S. medical schools about the behavioral science segment of their curriculums. Information was sought on the content of this segment, the principal orientations of the persons assigned to teach the behavioral science courses; the teaching methods used; whether the courses were required or elective, and how much time in the medical school curriculum was allotted to them.

To obtain a sample for polling, I took every 20th school from a list in the 1976 Association of American Medical Colleges Directory until I had 50 schools. Since schools are listed alphabetically by State in that directory, a geographic spread for the polling was assured. I did not try to include corresponding numbers of private and nonprivate institutions; 20 of the schools polled were private, and 30 were not.

Respondents

Twenty-three, or 45 percent, of the 50 schools polled responded to a mail questionnaire. The distribution of the respondents by geographic region and funding status was as follows:

Region	*Private*	*Nonprivate*
Midwest	3	5
South	2	3
Middle Atlantic	1	3
Southwest	0	3
Northeast	1	1
Pacific	0	1

Each questionnaire was directed to the chairman of the school's department of community medicine, but only eight of the respondents were based in that department. Thirteen respondents were based in the department of psychiatry. The other two respondents identified themselves only as deans and noted no departmental affiliations.

Ten of the respondents were physicians. Nine other respondents indicated that their primary orientation was behavioral science. One of the remaining respondents identified himself as an administrative assistant. The other three failed to respond to this question.

Results

Course offerings. In 11 of the responding schools, the behavioral science offerings emanated from the department of psychiatry. In six schools, the department of community medicine was the seat of these courses. In the remaining six schools, behavioral offerings were included under departments bearing such names as "Psychiatry and Behavioral Science," "Section of Behavioral Sciences," Behavioral Medicine and Psychiatry," and "Community Medicine and Hospital Administration."

In toto, 64 different courses were identified by the respondents as behavioral science offerings. I was able to group these courses according to title under five hearings:

1. Specific patient concerns (20 courses), for example, Human Sexualty, Rape, Patient Perspectives and Resources, Problems of Chronic Illness, Problems of Mutilating Surgery;

2. Psychiatry (17 courses), for example, Introduction to Psychiatry, Psychological Foundations of Psychiatry, Religion;

3. Sociological aspects of medicine (12 courses), for example, Social and Cultural Issues in Medical Practice, Medicine and Society, Community Medicine;

4. Communications (9 courses), for example, Introduction to Medical Interviewing, Interviewing in Clinical Medicine, Communications Systems;

5. Psychological components of human behavior (6 courses), for example, Psychological Medicine, Seminar in Social Psychology, Human Behavior in Health and Disease, Understanding Human Behavior.

When the groupings of the 64 behavioral science courses were matched with the kind of teacher assigned, that is, whether physician, behavioral scientist, or teaching team, no one kind of teacher was found to be dominant in any of the five groupings:

Course groupings	Courses in which assigned teacher was—: Physician	Behavioral scientist	Team	No response to question re teacher
Specific patient concerns	1	9	10	0
Psychiatry	8	5	3	1
Sociological aspects of medicine	5	1	5	1
Communications	2	3	4	0
Psychological components of human behavior	4	0	2	0

Teaching methods. A view of the responses in the aggregate revealed that the three most frequently used teaching methods were lecture-discussion—43 courses; small group discussion—36 courses; and case studies—13 courses. Other methods mentioned were interviewing of patients, videotapes, rounds, films, and fieldwork. The three most frequently combined methods were lecture-discussion with case study—21 courses; small group discussion with lecture-discussion—19 courses; and small group discussion with case study—12 courses.

The lecture-discussion method was used most often by the teaching teams and the behavioral scientists. Physicians favored small group discussions. However, as the following table shows, for each category of teacher, the frequency of the teaching method of choice was not significantly greater than that of the next most frequently selected method.

Teaching method	Number of courses in which assigned teacher was—: Physician	Behavioral scientist	Team
Lecture-discussion	11	11	20
Small group discussion	12	5	17
Case studies	6	7	10
Rounds	0	0	7
Interviews	2	2	6
Videotapes	2	1	3
Fieldwork	1	0	0
Films	0	0	1

Required versus elective courses. Another way of looking at the behavioral offerings is according to whether they were required or elective. Forty-three (67 percent) of the courses were listed as required and 18 (28 percent) as elective; three courses were not identified in this respect. Of the 43 required courses, 23 were taught by a team, 11 by behavioral scientists alone, and 8 by physicians alone. Of the 18 elective courses, 11 were taught by physicians alone, 6 by behavioral scientists alone, and only one by a team.

When the required and elective behavioral science courses were distributed according to the year of medical school, 24 (55.9 percent) of the 43 required courses, and 10 (55.5 percent) of the 18 elective courses were found to be offered in the first year. These numbers declined in the second year to 15 (34.8 percent) of the required courses and 1 (5.5 percent) of the elective courses. In the third year of medical school, only 3 (6.9 percent) of the 61 behavioral science courses offered were required, and only 1 (5.5 percent) was offered on an elective basis. In the fourth year, no behavioral science courses were required, but eight were offered as electives.

Length and effectiveness of course. The duration of the 34 different behavioral science courses offered to first year students, whether required or elective, ranged from 1 week (1 course) to 36 weeks (12 courses). The median duration was 19.5 weeks, with an average meeting time of 2 to 3 hours per week. Thus, on the average, a first year medical student received a behavioral science orientation for slightly more than half of the first year of study. Of the 16 different behavioral science courses offered in the second year, the duration ranged from 1 week (2 courses) to 36 weeks (3 courses), with a median of 11.2 weeks and an average meeting time of 2 to 3 hours per week. These figures work out to the equivalent of a quarter and a half of behavioral science orientation in the second year of study.

These data raise the question as to whether the periods of exposure to the behavioral sciences are long enough to achieve the desirable outcomes listed at the beginning of this paper. Perhaps only a prospective study over time of the students completing the various courses will yield a definitive answer to this question.

General Comments

In telephone conversations with several respondents, I found that the perceived effectiveness of the courses varied according to the respondent's primary professional orientation. Respondents who were physicians viewed the impact of the courses favorably. Respondents who were behavioral scientists perceived the impact as negligible. This rather interesting contrast may be, on the one hand, a reflection of differences in the quality of behavioral science courses from one medical school to another. On the other hand, it may reflect the respondents' perceptions of their own roles in the medical school setting. Further study is needed to sort out these variables.

1. The behavioral science component has the grestest impact when it is carefully and purposefully integrated into the medical school curriculum at the time that the curriculum is being planned. When the component is

"fitted in" after the basic array of physical science and clinical courses is in place, integration of the behavioral science courses is less than effective, and consequently their impact is lessened.

2. When behavioral scientists are selected to teach in medical schools, they should have had prior firsthand work experience in the health field and should have a clear understanding of the medical school setting, its priorities, needs, and orientation. Too often the uninitiated behavioral scientist fails to adapt his or her teaching to the needs and concerns of the student physician, which results in little or no communication from taking place, and minimizes the potential impact of the course.

Another way of viewing the behavioral science component is to juxtapose the results of this study against the recommendations of "Teaching Behavioral Sciences in Schools of Medicine. Summary Report" (*1*). In that report, 33 recommendations were categorized under the following headings: Curriculum Context and Control, Behavioral Science Content, Teaching Methods, Administrative Arrangements, Medical Profession, The Behavioral Science Disciplines, The Community, The University, and The Role of Government. Since my survey of the 23 medical schools did not address all the areas for which recommendations were drawn up, in this paper I consider only those recommendations that apply.

Curriculum context and control.

2. We recommend that behavioral science be established as a basic science in all areas or fields of medicine (*1b*).

Since all responding schools required at least one exposure to behavioral science, recommendation No. 2 is apparently being followed, at least minimally.

3. We recommend that the behavioral science content in the medical education of physicians be distributed longitudinally and evenly through the total educational experience, including premedical, basic science, clinical training, and continuing education phases (*1b*).

Clearly, a considerable discrepancy exists between recommendation No. 3 and current practice. The survey showed that more than half of the behavioral science courses offered were confined to the first year of medical school, and that with each succeeding year the number of courses offered tailed off markedly.

4. We recommend that a major portion of behavioral science content be introduced with emphasis upon conjoint teaching, and with reiterative representation from these major areas of expertise—biological sciences, behavioral sciences, and clinical medicine (*1c*).

In respect to recommendation No. 4, again there is a gap between the recommended and the actual practice. Although conjoint teaching was the most frequently mentioned arrangement in the schools surveyed, it was not the only way in which behavioral science was taught, as the second table on page 175 shows. The reinforcement of teaching via clinical medicine and the biological sciences occurred in only a small number of schools (see "Case studies," "Rounds," and "Fieldwork").

Behavioral science content.

7. We recommend that the behavioral science content offered to medical students include theory, empirical findings and methods (often contrary to conventional wisdom) from each of nine content areas—behavioral biology, behavioral medicine, personality dynamics, psychosocial growth and development, physician-patient relationship, sociocultural aspects of illness and treatment, health services, health and society, and methods and techniques (*1d*).

The total array of course offerings identified by the respondents seemed to fit the categories in recommendation No. 7, but no one school's offering compared favorably with what is recommended.

Teaching methods.

11. We recommend the vigorous development of self-instructional units in the behavioral sciences and that these units be shared among schools with similar or developing curricula (*1e*).

No mention was made of self-instructional units by any of the respondents. It was assumed, therefore, that none had been instituted at the time of the survey.

12. We recommend that the methods of problem solving and problem-oriented learning be emphasized in behavioral science teaching at all levels in the training of physicians (*1e*).

Those schools employing the case study method and the small group method in teaching behavioral science complied with recommendation No. 12. However, since these schools did not comprise the entire group surveyed, this area is another in which change is indicated.

Faculty.

14. We recommend that physicians and behavioral scientists should collaborate in developing curriculum, in teaching, anl in selecting the best educational methods in presenting behavioral science content to medical students (*1f*).

It could be inferred that the kind of collaboration described in recommendation No. 14 took place in those institutions where team teaching was identified as a teaching modality. However, since team teaching was so identified by only part of the respondents, this area becomes another where change is indicated.

16. We recommend the establishment of a department of behavioral sciences of human behavior with the full range or

responsibilities, support, and prerogatives afforded to the departments in the medical school (*1g*).

None of the respondents satisfied recommendation No. 16.

Conclusions

If the aforementioned recommendations are regarded as criteria against which to measure the status of behavioral science courses in medical schools, the survey results suggest that among the cohort of respondents, there is considerable room for improving that status. Clearly, the stature of behavioral science aspired to in the "Summary Report. Teaching Behavioral Sciences in Schools of Medicine" was not attained in the schools surveyed. Since the intent of the survey was not to ascertain why behavioral science was being handled as it was found to be, one can only guess at the reasons that its stature was less than desired. The constraints of time and money, coupled with such internal factors as bias, failure to understand what a behavioral science orientation could contribute to the medical student, and lethargy may account in large measure for this circumstance. Nevertheless, if the survey helps to narrow the gap between the hoped for and actual status of the behavioral science component of medical school curriculums, this outcome will be serendipitous.

Reference

1. Kennedy, D. A., Patishall, E. G., and Fletcher, C. R.: Teaching behavioral sciences in schools of medicine. Summary report. Contract No. HSM 110–69–211 between the American Sociological Association and the National Center for Health Services Research and Development. Rockville, Md., July 1, 1972, vol. 1: (*a*) pp. 28–33, (*b*) p. 38, (*c*) p. 39, (*d*) p. 46, (*e*) p. 50, (*f*) p. 54, and (*g*) p. 61.

SYNOPSIS

HURSTER, MADELINE (Queens College): *Behavioral science offerings of selected U.S. medical schools. Public Health Reports, Vol. 96, March–April 1981, pp. 173–177.*

As part of the planning for a medical school to be situated in Queens County, N.Y., a questionnaire was sent to 50 randomly drawn U.S. medical schools to gather information on the behavioral science segment in their curriculums.

Behavioral science courses comprised part of the curriculums of all 23 responding schools and were most often based in the departments of psychiatry and departments of community medicine. Physicians and behavioral scientists appeared to be equally involved in teaching them. Lecture-discussion, small group discussion, and case study were the teaching methods most often used singly. The most popular combination method was lecture-discussion with case study, followed by small group discussion with lecture-discussion. Behavioral scientists seemed to favor lecture-discussions and physicians, small group discussions, but the difference was not statistically significant.

Most of the behavioral science courses were offered in the first and second years of medical school. The number of both the elective and required behavioral science courses peaked in the first year and then dropped off sharply in each successive year. These courses were also longest in the first year and became shorter in each successive year.

Perceptions of the effectiveness of the behavioral science courses seemed to depend upon the respondent's primary professional orientation. Respondents who were behavioral scientists seemed to view the impact of the courses as negligible, whereas physicians had a more favorable view of their impact.