

The Role of a Tutorial System in Undergraduate Medical Education

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A tutorial system for first- and second-year medical students is now in its third year of operation at McGill University. The program was designed to meet the specific needs of McGill students. The aims and objectives were intentionally defined in a general way, application of detail being the responsibility of individual tutors and their groups of students. The main purpose of the program is the repeated exposure of students to the individual competence of outstanding teachers. A large majority of students and tutors favour the program. It has provided faculty members with insight into some of the problems of present-day medical education. The consensus is that, in the Faculty of Medicine at McGill University, the tutorial system serves an important role, complementing the normal curriculum.

IN September 1964 the Faculty of Medicine at McGill University introduced a tutorial system for first-year students. One year later this was extended to include the second-year class and now, in the third year of operation, most of the medical students at McGill have received tutorial instruction. We consider it timely to review the events that led to the establishment of this program at McGill, to describe its structure and function, and to assess its value and popularity.

HISTORICAL BACKGROUND

The initial impetus for the development of a tutorial program came from the Dean's Committee on Undergraduate Medical Education. In 1963 this Committee reviewed what were considered to be major limiting factors in medical student education at the University. The Committee reported one such limitation as follows: "There is, at present, very little opportunity for ready communication between students and Faculty. This is particularly evident at the time of the students' entry into medical school, where their individual strengths and weaknesses might be recognized with an eye to the maximum development of individual potential."

This statement translated into "committee language" some of the complaints and dissatisfactions that medical students had voiced re-

A l'Université McGill, existe depuis trois ans, le système du préceptorat pour les étudiants en médecine des première et deuxième années. Le programme des études a été créé pour couvrir les besoins spéciaux des étudiants de McGill. Les buts de ce système ont été intentionnellement formulés de façon très générale, l'application des détails étant laissée au jugement des précepteurs individuels et de leurs groupes d'étudiants. Le but principal du programme est de mettre fréquemment en contact les étudiants avec des professeurs connus pour leur compétence remarquable dans leur spécialité. La grande majorité des étudiants et des précepteurs sont largement en faveur du programme. Ce dernier a permis aux membres de la Faculté de mieux se rendre compte des problèmes que pose l'enseignement médical moderne. Les membres de la Faculté de médecine de l'Université McGill estiment unanimement que le système du préceptorat a un rôle important à jouer et vient compléter utilement la formation générale normale.

peatedly in recent years; in fact, the first move toward establishment of the tutorial system came from the students themselves. Many stated that they had passed through the four years of undergraduate education with no more than superficial personal contact with members of faculty. Some had never been invited into the home of any of their instructors. Others complained that in their final year there was no one to whom they could turn for a letter of reference that would provide anything more than their rank in class and the usual platitudes such as "sound moral and ethical character". Still others reflected that medical career guidance had come too late in their student years. Finally, disillusionment was widespread in the so-called "preclinical" years, when it seemed to the students that much of the curriculum bore only the vaguest relationship to care of the sick or to what they had expected to encounter in medical school.

In medical schools whose classes are small, or where the university is located in a relatively small community, the problem of student-faculty contact may not arise. But in a large urban university, the pressures on faculty members are so many and so great that informal meetings of students with teachers can seldom occur unless they are scheduled. With this in mind, the Dean's Committee recommended the establishment of a Permanent Committee on Undergraduate Medical Education, and suggested that one of its first functions should be the initiation of a tutorial

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system. The objectives and value of such a system were stated as follows:

General objectives.—The function of the tutorial is primarily to improve the level of education in the medical school, but it must not ignore the other aspects of the student's life which so profoundly influence the educational experience.

Its aims are: (a) To establish and foster a feeling of identity with the medical school through a close association with the faculty. (b) To assist in the orientation of the student towards university life. (c) To offer guidance and advice in matters pertaining to his career, including his medical education, his future profession, his personal affairs. (d) To maintain a sense of proportion in the various aspects of his medical learning and at the same time encourage his particular capabilities, interests and ambitions.

Specific objectives.—(a) To make available to the student such specific competence as the tutor possesses and where necessary to refer the student to the appropriate sources of knowledge, whether they be books, papers or people. General principles and interrelationships should be emphasized more than detail. (b) To provide a forum for the exploration of ideas, medical and paramedical. (c) To broaden the scope and accuracy of the assessment of the intellectual and personal attributes of the students.

Following upon this report a Permanent Committee on Undergraduate Medical Education was established. This Committee in turn appointed a six-member Tutorial Sub-committee, under the chairmanship of Dr. Robin Hunter. The Sub-committee was charged with organizing the specific details of a tutorial system for McGill University's Faculty of Medicine. Existing systems at other universities were examined, including those at Cambridge, Oxford, Harvard, Yale, Birmingham (England), Washington, Cleveland (Western Reserve), and Rochester (N.Y.). It was concluded that the program for McGill medical students should be tailored to their specific requirements, while drawing on experience at other universities for guidance.

Student opinion which was solicited during interviews of groups of students from the first and third years centred on a feeling of not belonging, fear of failure in first year, increasing depression with the growing masses of uncorrelated factual material, and rapid evaporation of their ideological aims. There was strong general enthusiasm for the tutorial system, and the students themselves made many practical suggestions for its operation.

Selections and appointment of tutors.—In July 1964 a letter was sent by the Dean to all faculty members asking whether they would be willing to become faculty tutors. Of 148 faculty members who replied, 114 (77%) expressed interest in serving as tutors. Thirty were selected, without regard to faculty rank or specialty, to serve during the first year of operations; each was assigned a group of four or five students. Appointments were made on an annual basis, subject to renewal by both parties.

Composition of student groups.—The groups were mixed, each containing students from several categories, including local (Montreal), other Canadian, from the U.S.A. or other countries, and women. It soon became apparent that groups comprising five students were too large for ideal tutorial sessions and, therefore, all have been limited to a maximum of four students.

Frequency and duration of meetings.—It was recommended that first-year tutors should meet with their students every two weeks, and this has proved satisfactory. When tutorials were introduced into the second year, in 1965, both students and tutors considered that less frequent meetings were required; these groups now convene once a month. It was recommended that sessions should last for one hour; in fact, many last for at least two hours.

Content of sessions.—It has been emphasized from the beginning that tutoring does not constitute part of the formal curriculum, the main objective being individual appreciation of the competence of faculty members who are good teachers and who understand the requirements of individual students. Each tutor was provided with an outline of the preclinical curriculum and timetable, as it was felt that in some instances he might wish to introduce his students to clinical or laboratory material which would complement the curriculum and correlate textbook learning. No attempt has been made to dictate the content of the sessions, which is best determined by the special interests of students and tutors in any particular group, but a list of suggested activities was circulated to the tutors. This list included discussions concerning current affairs of medical, paramedical, or general interest; debates in the tutor's place of work, either hospital or laboratory; lectures by invited speakers; introduction to community health resources; guidance in intracurricular and extracurricular reading; and group or individual discussion of careers and of problems, academic, financial or personal.

Attendance.—Student attendance at tutorial sessions is not compulsory, but it has been the policy of the Tutorial Sub-committee to enquire

reasons for frequent absence, in case this should reflect correctable faults in the student or the system. It was thought that the tutorial program should be considered as experimental during its first two or three years of operation, and that students, particularly in the first year, should not be permitted to withdraw from the program without explanation. Accordingly, first-year students wishing to withdraw were required to apply to the Dean's Office for an interview with the Tutorial Sub-committee at which they could state their reasons. Second-year students were permitted to withdraw merely by crossing their names off a list which was posted at the beginning of the year; four second-year students did this during the current year.

ASSESSMENT OF RESPONSE TO THE TUTORIAL PROGRAM

The program has been assessed in four ways during the first two years of its operation.

Personal contact with tutors.—Members of the Tutorial Sub-committee met with each of the tutors early in the academic year. It was ascertained that initial meetings with students had been held, and an attempt was made to detect any individual or group difficulties at the outset. Tutors were advised to inform the Sub-committee of any problems that might arise.

Group discussions.—Twice a year, early and late in the academic session, the Dean has sponsored dinner meetings for all faculty tutors, for the informal exchange of ideas and experiences regarding the content and relative success of various tutorial activities, and for the discussion of problems brought to light by the system. In addition, luncheon meetings of tutors have been convened in each of the three McGill teaching hospitals early in the academic year, to ensure that individual groups were functioning smoothly.

Questionnaires.—Surveys of student and tutor opinion were conducted during 1964 and 1965. Information solicited concerned frequency and duration of meetings, regularity of attendance, estimates of success and enthusiasm both for the general program and for specific activities, sources of dissatisfaction, estimates of the value of the program, and the desirability of continuing the tutorials.

Student attendance was generally good and consistent. Ten students (8.3%) in the first-year class and 11 in the second-year class were habitually absent. These absenteeisms usually did not disrupt the groups.

An estimate of the tutors' and students' opinion of the tutorial system is provided in Table I.

TABLE I.—OPINIONS CONCERNING THE FIRST TWO YEARS OF OPERATION OF THE TUTORIAL SYSTEM IN THE FACULTY OF MEDICINE, MCGILL UNIVERSITY

	1964-1965	1965-1966	1965-1966
	First-year class (%)	First-year class (%)	Second-year class (%)
<i>Tutors</i>			
Overall response:			
Favourable.....	93	93	93
Unfavourable.....	7	7	7
Should the tutorial system continue?			
Yes.....	96	89	74
Doubtful.....	4	7	19
No.....	0	4	7
<i>Students</i>			
Overall response:			
Favourable.....	89	75	73
Lukewarm.....	8	20	22
Unfavourable.....	3	5	5

Fortuitously, 93% of the tutors from each of the three groups reported a generally favourable experience. There was a good deal of conformity between tutor and student opinion: in summary, the majority of the students and tutors thought that the tutorial system was successful and worth continuing. Tutors were asked also whether they favoured extension of the tutorial system beyond the second-year class: 50% were opposed, 30% uncertain, and 20% in favour. This response was in agreement with the opinion of the Tutorial Sub-committee, that tutorials should not be extended beyond the second-year class. It is assumed that third- and fourth-year students may return to their previous tutors when they feel the need to do so.

Class meetings.—At the beginning of the year the system was outlined to the students at their initial welcoming meeting with the Dean. On several occasions, a member of the Tutorial Sub-committee met with the entire first- or second-year class. Other meetings were held periodically to discuss problems which had arisen and to hear suggestions to improve the program.

DISCUSSION

The tutorial experience has been enjoyable and stimulating for the majority of students and tutors. However, the desire to diversify the content of individual tutorial sessions induced a feeling of uncertainty in several tutors as to the aims of the program: they would report that their meetings with the students had been pleasant but that they were not sure what benefit was accruing to the students. It is of interest that such expressions diminished as the year progressed.

Two factors quickly emerged as the chief determinants of success: regularity of meetings and advanced planning of the content of each tutorial session. Several other factors also contributed to the success of the tutorials. It was found that meetings at which a meal was provided (at the hospital, tutor's home, or occasionally at a restaurant) were less formal and more informative. The majority of first-year students preferred that their tutor be a clinician rather than a basic scientist, obviously welcoming the opportunity to relate knowledge acquired from the preclinical curriculum to clinical situations. In the current academic year, all but one of the first-year tutors are clinicians. Some activities which were particularly popular included spending part of a day with a practising physician (general practitioner or specialist), observing obstetrical deliveries, visits to selected in-patients, and tours of rehabilitation centres and hospitals.

A variety of personal problems were brought to light through the medium of the tutorials. These problems generally fell into one of three categories—financial, emotional and academic. Many tutors ascertained early in the academic year which of their students were in financial need and referred them to the Committee on Scholarships and Bursaries. A few emotional difficulties were revealed early in each session. In some instances these were handled competently by the tutor; in others, the student was referred to the Student Mental Health Service.

As stated earlier, most students and tutors voiced the opinion that the tutorial experience was a valuable one. Quantitative assessment of specific values is difficult and necessarily subjective. Nevertheless, this was attempted during the academic years 1964-65 and 1965-66. Tutors and students were asked to estimate the value of such aspects as medical education, general education, orientation to the curriculum, and personal guidance by assigning ratings on the scale 0 to 10. The results were strikingly non-specific, indicating great variability of opinion concerning the relative merits of the program. Although the range of opinion was far too wide to permit statistical analysis, there was agreement by students and tutors that useful objectives had been achieved in the following areas:

Fellowship between faculty members and students.—The value of the relationship was endorsed by tutors and students. During the second year many tutors were consulted by members of their previous year's group.

Early contact with the clinical environment.—Most tutors and students thought the system a valuable means of correlating curricular material

with the findings in sick patients and as an early introduction to the multiplicity of career opportunities in medicine. It is interesting to note that a first-year student poll in 1964-65 showed that two-thirds favoured being tutored by a practising clinician and one-third by a basic scientist; when the same poll was repeated a few weeks later with the same class, 92% favoured a clinical tutor.

Benefits to the students.—The tutorial system stimulated interest and initiative, an aspect which was rated highly in various ways by many tutors and students. In a few instances the tutors considered that they had retrieved deserving students from certain failure.

Benefits to the tutors.—It rapidly became apparent that the value of the tutorial system is not restricted to the students. Many tutors gained fresh insight into personal and professional aspects that they had taken for granted. A few typical comments may be quoted:

"I think I can see that the teaching of basic sciences is too rigid, compartmented and detailed, with little relevance or relationship, in many instances, to the practice of medicine. In addition, I have learned again to identify with students and to be interested and sympathetic to their problems and attitudes."

"Sympathy with the student; a realization that the curriculum is out of date; a horror at how exam-orientated the student is."

"The complexity of emotional forces at work on any medical student, particularly foreign, has been very striking."

"I have been impressed by the students' maturity of outlook and have therefore been willing to take their criticisms of the curriculum seriously."

Although the majority of tutors commented favourably on their experiences with the program, there were a few exceptions. One described his experience as "generally unrewarding", another as "largely a waste of time".

In arriving at an overall assessment of the role of a tutorial system in undergraduate medical education, it is useful to hazard certain predictions of the ultimate benefits of the program. Attempts to relate examination success to achievement in later life have yielded little correlation between the two. From this it might be concluded that the examination system provides little more than a short-term motivating drive. Hopefully, a tutorial system such as described above may provide a complementary long-term motivation, helping the student through his early struggles for survival and developing essential guidelines for his future life.

It is clear that the tutorials bring curricular problems and deficiencies into sharper focus, and provide an important channel of expression for student opinion on medical education. One can only speculate on the long-term benefits of such a program. Perhaps the tutor may help the student to create a philosophical background to the rigid storage and organization of the mass of preclinical detail. It may be that the student who is aware of the value of basic knowledge in clinical practice will be able to retain and relate a greater portion of this after completion of preclinical studies. Perhaps individual aptitudes will be recognized earlier and the ultimate choice of vocation will be made with a sounder

understanding. The concept of education as "what remains when the facts are forgotten" may be realized through the ability of some tutors to stimulate in certain students the attitudes that characterize good teachers, good scientists, good doctors, and good human beings.

The content of this report reflects the combined efforts of all past and present members of the Tutorial Sub-committee of the Permanent Committee on Undergraduate Medical Education: Dr. Robin Hunter (Chairman of the original Tutorial Sub-committee) and Drs. Y. Clermont, A. Dobell, Elizabeth Hillman, R. Hobkirk, J. M. McKenzie, L. McCallum and A. Thompson. Their essential contributions to the success of the tutorial program are acknowledged with gratitude.

A New School of Medicine is Born in Quebec

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The new Faculty of Medicine at the University of Sherbrooke accepted its first 32 students in September 1966. The four major objectives of the school are: (1) medical education with emphasis on learning rather than teaching; (2) research in three major fields of endeavour: basic, clinical and medico-social sciences; (3) optimum patient care; and (4) service to society. A new Health Sciences Centre houses the Medical School, a 420-bed hospital and multidisciplinary laboratories, and eventually will contain the paramedical schools, including a School of Nursing Sciences. The three major divisions of the Faculty are basic, clinical and medico-social sciences. The curriculum of the first two years is correlated and integrated within the "block" system, with participation from all three divisions.

La nouvelle faculté de Médecine de l'Université de Sherbrooke accepta 32 étudiants en médecine en septembre, 1966. Les quatre buts visés sont: 1) l'éducation médicale en insistant sur la formation; 2) la recherche dans trois domaines: les sciences fondamentales, cliniques et médico-sociales; 3) les soins spécialisés pour les malades; et 4) la participation active à la solution des problèmes de santé dans la société. Le nouveau centre loge la faculté de Médecine, un hôpital de 420 lits, des laboratoires polyvalents et dans un avenir rapproché, viendront s'ajouter les écoles para-médicales incluant une école d'enseignement du Nursing. Les trois grandes divisions de la Faculté groupent les sciences fondamentales, cliniques et médico-sociales. Le programme des études au cours de la première et de la deuxième année préconise la corrélation et l'intégration avec participation active des trois divisions.

IN September 1966, one year ahead of schedule, the Faculty of Medicine of the University of Sherbrooke admitted its first 32 students. Officially founded on February 15, 1961, it is the first School of Medicine established in Quebec since 1853 and the first east of Saskatoon to have its own University Hospital. It is situated on a 318-acre campus on the outskirts of the City of Sherbrooke, a few miles from the main university campus.

THE OBJECTIVES

The Faculty of Medicine is divided into three divisions: those of Basic Sciences, Clinical Sciences, and Social Medicine. All are housed

in the new Health Sciences Centre. The Faculty has four major objectives: medical education; fundamental clinical and socioeconomic research; patient management; and service to the community.

1. *Medical education.*—The Centre must offer appropriate surroundings to the medical student. By his active participation, he learns the fundamental principles applicable to the whole of medicine, develops a critical judgment based on the experimental method and utilizes these principles and these data with wisdom, ethics and humanitarianism in the solution of health and disease problems. He learns to appreciate different possible orientations: as a clinician, as

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