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*Minnesota University Medical School*  
PROSPECTUS  
Expansion of  
University of Minnesota Medical School  
Programs in Undergraduate and Graduate  
Medical Education

July 12, 1968

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UNIVERSITY OF *Minnesota*

COLLEGE OF MEDICAL SCIENCES • MINNEAPOLIS, MINNESOTA 55455

Office of the Dean

July 12, 1968

Senator Harold R. Popp, Chairman  
Senate Interim Subcommittee on Medical Education  
State of Minnesota  
Room 238, State Capitol  
St. Paul, Minnesota 55101

My dear Senator Popp:

In response to the invitation expressed in your letter of April 16, 1968, I am submitting, on behalf of the University of Minnesota Medical School, our proposal for the Expansion of the University of Minnesota Medical School Programs in Undergraduate and Graduate Medical Education.

As indicated in the prospectus, this program is a portion of the Program for Expanding and Advancing Education for the Health Sciences in the State of Minnesota as adopted by the Board of Regents of the University of Minnesota on April 19, 1968. While it does not conform precisely to all of the criteria stipulated in the document prepared by your Committee, we believe that it will provide the people of Minnesota with the most rapid, the most effective, and most economical way of attaining the goals you have outlined.

We are grateful for the time and thoughtful attention you and your colleagues have devoted to this important matter on behalf of the people of our State. With best wishes, I am

Sincerely yours,



Robert B. Howard, M.D., Dean  
University of Minnesota  
College of Medical Sciences

EXPANSION OF UNIVERSITY OF MINNESOTA MEDICAL SCHOOL  
PROGRAMS IN UNDERGRADUATE AND GRADUATE  
MEDICAL EDUCATION

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Date: July 12, 1968

*Robert B. Howard*

Section A. ABSTRACT

This proposal submitted by the University of Minnesota Medical School constitutes a portion of the University of Minnesota's Program for Expanding and Advancing Education for the Health Sciences in the State of Minnesota, a comprehensive, long term plan for the development of additional opportunities for education for all of the health science professions and vocations.

Submitted herein are only those portions of the total University of Minnesota Program that relate to the training of physicians, at both undergraduate and graduate levels, within the University of Minnesota Health Sciences Center on the Minneapolis Campus and within the affiliated hospitals in the Twin Cities of St. Paul and Minneapolis.

The objectives of the program proposed herein are to increase both the number of places in the entering classes of and the number of students graduating from the University of Minnesota Medical School; to increase the number of graduate (residency) training opportunities in Minnesota; to establish a program in Family Practice and Community Health that will provide competent and attractive instruction in the emerging specialty of family practice and, in addition, carry out research with respect to the health care system and how it may be made most effective; to make equitable, within the limits of faculty influence regarding such matters, the distribution of physicians within the State for the medical care of people in rural and semi-rural areas, as well as those in metropolitan areas; and to improve the total Medical School curriculum.

The program presented is, in reality, six different but mutually supportive and inter-dependent programs. When implemented, they will accomplish the objectives stated above. They will, collectively, provide an additional 480 graduates from the University of Minnesota Medical School during the 1969-1979 decade. Emphasis is placed on the fact that this is over and above the number of students who will be graduating during this period on the basis of the current program. In addition, the proposed program envisions a total of approximately 120 additional graduate (residency) training opportunities in the University of Minnesota program with more than half



of them in the fields of family practice, internal medicine, and pediatrics.

Cost data, representing the best estimations we can make at the present time, are presented in a manner conforming to University of Minnesota budgeting practices and procedures.

INTRODUCTION

In response to the invitation extended by the Senate Interim Subcommittee on Medical Education, the University of Minnesota Medical School submits the following program for the expansion of the undergraduate and graduate programs in medical education under its sponsorship. The program or, more correctly, programs submitted at this time constitute a portion of the Program for Expanding and Advancing Education for the Health Sciences in the State of Minnesota, which was formally adopted as the position of the Board of Regents of the University of Minnesota on April 19, 1968. The latter represents a comprehensive, long-term plan for the development of additional opportunities for education for all of the health sciences: medicine, dentistry, nursing, and a multitude of allied health fields, both those currently well established and those that are only beginning to emerge. The total Program, as proposed by the Regents, takes account of the educational, fiscal, and health care resources of the State of Minnesota. When fully implemented, it would expand the total enrollments in all of the health science fields from a current level of 3500 to a total of more than 5000 students. The increment of more than 1500 students will include, in addition to undergraduate medical students, dental students, graduate students, nursing students, and students in occupational therapy, physical therapy, medical technology, dental hygiene, public health, x-ray technology and all of the other health science professions and vocations.

The portions of the total program of the Board of Regents submitted to the Senate Interim Committee at this time are those portions of the program that relate to the training of physicians, at both undergraduate and graduate levels, within the University of Minnesota Health Sciences Center on the Minneapolis Campus and within the affiliated hospitals in the Twin Cities of St. Paul and Minneapolis. In addition, the section dealing with costs of the program will outline the costs to the Medical School of the proposed increase in the size of the School of Dentistry; that is, the increased costs for instruction in basic sciences of increased numbers of dental students, instruction carried out by members of the faculty of the Medical School.

With this exception, the program being submitted to the Senate Interim Committee does not deal with the expansion of the other programs in the health sciences, but the importance of these other programs must be kept clearly in mind, especially in a day in which health care is so evidently a team effort, requiring the coordinated activity of a large number of individuals with special qualifications of one kind or another. Further, it should be pointed out that this submission does not deal with the programs proposed for Rochester or Duluth.

Section B. PROBLEMS

The problems confronting the State of Minnesota are similar to those confronting many other states in this nation. They may be stated relatively simply:

1. Minnesota needs to provide more opportunities for medical education for residents of this State. At the present time, the University of Minnesota Medical School, because of lack of facilities and staff, is in the position of turning away over 50 qualified Minnesota applicants each year. In 1966, 178 Minnesota residents gained admission to a medical school in the United States, either the University of Minnesota or one of the others. This represented 5.1 Minnesotans per 100,000 population. While this is higher than the national average was for 1966 (4.5 entering medical students enrolled per 100,000 population) it was a less favorable ratio than that for residents of Arkansas (6.2), Nebraska (7.1), Kansas (5.5), and Iowa (5.3). In this connection, it is worthy of note that the American Medical Association and the Association of American Medical Colleges have jointly adopted the position that every qualified citizen of the nation should have an opportunity to seek a medical education, should he or she wish to do so.
2. Minnesota needs more physicians. Data from various sources make this clear. The study entitled Health Manpower for the Upper Midwest, sponsored by the Louis W. and Maud Hill Family Foundation of St. Paul and reported in June, 1966, serves as the principal basis for the expansion proposals being presented. The Commission carrying out the Health Manpower Study calculated that by 1975 Minnesota would "fall short by 207 to 269 of the number needed to maintain the present active physician population ratio." These calculations were based, in part, on an assumption of 140 physicians graduating each year from the University of Minnesota Medical School. This number is currently closer to 160, thus altering this assumption to a certain extent. Nevertheless, it seems reasonable to assume a short-fall of 200 to 250 in 1975 if no



further steps are taken. It should be emphasized further that this calculation of short-fall is also based on the assumption of maintenance of the current physician-population ratio. In light of increasing demands for medical attention, an even larger number of physicians would seem desirable.

3. Minnesota needs, in particular, an increased number of family physicians.

The Health Manpower Study, referred to above, testifies also to the declining proportion of physicians entering the field of general practice and the progressively smaller segment of the total physician population engaged in the practice of family medicine (general practice, internal medicine, and pediatrics).

4. Minnesota's physicians are not distributed geographically in such a manner as to serve most effectively the needs of the total population

of the State; rather, they are concentrated in the large population centers. Thus, whatever the extent of the physician shortage at the present time, it is most keenly felt in the rural areas and in the small communities, and it is likely to become increasingly severe in these areas.

Section C. OBJECTIVES -

The objectives of this proposal are as follows:

1. To increase substantially the number of placed available in the entering class of the University of Minnesota Medical School, in particular for qualified Minnesotans seeking entry into the field of medicine.
2. To increase substantially the number of graduates from the University of Minnesota Medical School, on the assumption that a student graduating from a medical school within the State of Minnesota is more likely ultimately to enter practice in this state than is a student graduating from a school in another state. Available data suggest that location of the medical school from which an individual graduates is an important factor in his later decision concerning practice location.
3. To increase substantially the size of graduate medical (internship and residency) training programs in the State of Minnesota, on the assumption that the individual who takes his graduate training in the State of Minnesota is more likely to enter practice in Minnesota than the individual who takes his graduate training elsewhere.
4. To establish a program in family practice and community health that will provide an effective, modern training program for individuals entering the field of family practice, which, increasingly, is now being recognized nationally as a specialty in its own right. We believe that such a program, effectively operated within the University of Minnesota Health Sciences Center and in affiliated facilities, will enable students to become competent and confident family practitioners and will prove to be attractive to a substantial portion of the student body, thus increasing the proportion of graduates entering the field of family medicine.
5. To make equitable, within the limits of faculty influence regarding such matters, the distribution of physicians within the State for the

medical care of people in rural and semi-rural areas, as well as those in metropolitan areas. In this connection, however, it must be pointed out that medical school faculties have an extremely limited influence with respect to determining the exact practice location of their graduates.

Factors determining this location are, for the most part, not under the control of medical schools. Some factors are under the control of the medical profession, while others are under control or potential control of government agencies, local, state, and national. Further suggestions concerning the matter of physician distribution will be presented subsequently, but it deserves re-emphasis that it is not reasonable to place the prime responsibility for physician distribution in the hands of medical education. It is important to note, however, that medical faculty are aware of and concerned about this problem.

Section D. RELATIONSHIPS TO TRENDS IN MEDICAL EDUCATION  
AND MEDICAL CARE.

These relationships are discussed in the following section, Section E., in which the details of the programs are presented, for these details are relevant to the characteristics of the various programs.



Section E. DESCRIPTION OF THE PROPOSED PROGRAMS.

1. The programs. The following six programs are mutually supportive and inter-dependent. They represent, in essence, a "package" that, in turn, is a segment of a still larger "package" that constitutes the University of Minnesota Program for Expanding and Advancing Education for the Health Sciences in the State of Minnesota, as adopted by the Board of Regents on April 19, 1968, (See Appendix I), a program that encompasses the entire span of education for the health sciences and envisions programs in Duluth and Rochester as well as in the Twin Cities. The "package" herein presented, while representing a comprehensive and coordinated overall plan for the development of undergraduate and graduate medical education in the Twin Cities area, can be most effectively considered as consisting of six different programs, which, in turn, fall into three categories.

Category A.

Programs designed to increase the number of students admitted to and graduated from the University of Minnesota Medical School.

Program I. Expansion of the entering class size in the University of Minnesota Medical School. It is proposed that the University of Minnesota Medical School increase its facilities and faculty sufficiently to accommodate an entering class size of 200 medical students each fall, an increase of 40 over the present entering class size of 160. Such an expansion would provide additional opportunities for medical education for qualified Minnesotans and materially increase the number of individuals receiving their medical education in the State of Minnesota, enhancing the likelihood of their ultimate practice within the state.

Program II. Expansion of the number of students accepted by the University of Minnesota Medical School by transfer into the third year from the two-year

medical schools in North Dakota and South Dakota. At the present time, each year between six and ten students are accepted as transfer students from these schools. It is proposed that this number be increased from its present level to 30 or 35, a net increase of approximately 25 students transferring each year. This would increase the number of graduates from the University of Minnesota Medical School each year, with presumed ultimate benefit to Minnesota. The presumed benefit rests on the assumption that a student transferring from one of the Dakota schools and receiving the third and fourth years of his medical education at Minnesota is more likely ultimately to practice in the State of Minnesota than if he transfers to a school in Illinois, New York, or some other state. This is only an assumption, and there are no data that either support or controvert it.

It must be further pointed out, also, that an active recruitment program would be required to attract the Dakota students in the numbers indicated, for at the present time they have little difficulty in gaining entry into the third-year programs of any of the nation's medical schools. It would be necessary, at least, to offer them the opportunity to attend the University of Minnesota Medical School for the resident tuition fee, even if they are legally residents of some other state. It might be necessary to develop even further special scholarship attractions.

Program III. An accelerated program for undergraduate medical education.

The faculty of the University of Minnesota Medical School, through its Educational Policy Committee, is currently considering an accelerated program, which would be offered to students on an optional basis, whereby summer vacations and an elective period might be eliminated from the curriculum, with the result that the students electing to proceed in the accelerated program would graduate three years after enrollment, rather than the present four years. It appears at this time that this program will be feasible from the educational standpoint, and it seems to be finding favor with the

program, offered on an optional basis, would be that within a period of four to five years we would have graduated the equivalent of one extra class of medical students, that is, approximately 160 students. Special scholarships would almost certainly have to be made available for students electing such a program. It must be noted that the present laws of the State of Minnesota specifying a certain number of weeks of training for eligibility for medical licensure would have to be changed by legislative action in order to implement this program.

Category B.

Program designed to increase the number of attractive opportunities for graduate medical education.

Program IV. Expansion of program in graduate medical education. At the present time, the University of Minnesota offers approximately 600 graduate medical education opportunities, more familiarly known as "residencies", in the Twin Cities. These include residencies offered at the University of Minnesota Health Sciences Center and at a number of affiliated hospitals, most notably the Hennepin County General Hospital, the Minneapolis Veterans Administration Hospital, and St. Paul-Ramsey Hospital. Private hospitals in both St. Paul and Minneapolis also participate, but on a smaller scale. It is proposed that the total number of residencies offered be increased by 20% or 120 positions, to a total of 720. The increased numbers of positions offered would be principally at the affiliated hospitals, in particular Hennepin County General Hospital and St. Paul-Ramsey Hospital, but the further development of residency programs in private hospitals is also anticipated. More than half of the additional residencies offered will be in the fields of family practice (see Program VI below), internal medicine, and pediatrics.

Category C.

Programs designed to alter the nature of the medical education program.

Program V. Revised Medical School Curriculum. The Medical School at the

review of the four year curriculum for medical students leading to the M.D. degree. This study has been undertaken in the context of national trends in medical educational programs and methods, developing trends in medical care and practice, current developments in American medical education, and expressed needs for more physicians, especially family practice physicians, in the State of Minnesota. A large group of faculty members have participated extensively in this study and development of a new curriculum; however, major responsibility and initiative have resided in the Educational Policy Committee, chaired by Dr. Richard V. Ebert, Professor and Head of the Department of Medicine.

At its first meeting in October, 1966, the Educational Policy Committee agreed that medical curriculum review and revision should be approached essentially de novo with the intention of improving and changing the entire four year medical curriculum as a total educational process, not merely reshuffling existing courses in a minor, patchwork fashion.

Following almost one year of extensive hearings, discussions, and presentations on medical education, curriculum, and trends in medical practice from a wide spectrum of knowledgeable and interested sources, the Educational Policy Committee presented a draft outline of a new curriculum for medical students at a seminar-retreat of the Medical School Executive Faculty in October, 1967.

Several trends and concepts, presented to and discussed by the faculty at that time, emerged as important and urgent reasons for developing a more modern, foresighted, efficient, and attractive curriculum for medical students, the future physicians of the next generation. The principal trends include the following:

1. The rapid increase, frequently termed an "explosion", in medical knowledge during the past two decades has inevitably resulted in an acceleration of the general professional and medical trend toward specialization of the individual physician and the organization of



2. With the increasing affluence and sophistication of our society, there has been an insistent public demand for better medical care for all citizens. There is a particularly urgent and expressed need for a greater proportion of physicians specializing in family practice or other fields directed toward delivery of primary health care.
3. It is educationally sound to consider the entire spectrum of medical training, undergraduate and graduate, as an educational continuum. It has been proposed that medical schools should participate increasingly in setting the policies, standards, and programs for all phases of education in this continuum, not only the four years of undergraduate medical education.
4. Medical education and medical school faculty should serve as much more than simply a vehicle for transmitting information to the medical student. The process of medical education should develop student attitudes conducive to the improvement of the medical profession and the delivery of high quality medical care. These attitudes should include motivation for continuing education, a humane and understanding approach to the patient and a sense of responsibility toward society which recognizes the need for the profession to serve effectively all of the people in that society.

Having recognized these dynamic trends in medical education and medical care, the Educational Policy Committee established several principles or basic concepts to be incorporated into a revised medical curriculum for training future physicians.

These principles and concepts are as follows:

1. A "core" curriculum of essential medical knowledge. The curriculum will present to all students in as efficient, stimulating, and relevant a manner as possible, the currently existing basic body of medical knowledge, in the basic science and clinical science fields, which should be shared by all medical students as an essential medical background before they begin divergence of their educational pathways and concentra-

2. Development of an elective-"track" system. The medical school has a responsibility for training several types of physicians to meet the needs of the community, all of whom will increasingly have extensive post-M.D. training before entering practice in their specialty fields. The elective-"track" system permits advanced medical students who have made a tentative or firm career decision to pursue educationally their special interests during the last one and one-half years of their undergraduate medical education. They would not only select courses and clinical experiences particularly pertinent to their future fields of specialty interest, but they would also acquire additional more advanced knowledge, beyond the general core, in those areas of basic medical sciences which are especially crucial as wellsprings of knowledge to their chosen clinical fields. This "track" system is of great importance in developing the Family Practice Program, (See Program VI, below) since medical students expressing preference for or developing interests in that career would be encouraged to pursue those interest in a relevant elective course program during the latter portion of their undergraduate medical education.

A medical school utilizing this elective-"track" system becomes, in effect, a medical university with latitude for exploration by medical students of their special interests and abilities in terms of their future medical careers. This medical multiversity approach would seem far preferable to the alternative of developing one medical school to train scientists and medical specialists, while another school trains exclusively family physicians.

3. Emphasis on the importance of self-education and continuing medical education.

A new medical curriculum must develop in each student the desire for continuing education throughout the physician's professional career, because changing patterns of health care and rapid advances in medical science and technology make it impossible to predict with accuracy the

nature of medical practice in which these physicians will participate in the 21st century.

4. Greater emphasis on encouraging humanity and understanding in the future physician. Toward fulfillment of this objective, the curriculum should provide extensive opportunity for early contact of medical students with patients and clinical medicine in a setting placing emphasis on understanding of social, psychological, and economic, as well as medical, aspects of human problems.
5. A close relationship should be fostered between medical students and their faculty. Establishment of a viable, effective faculty adviser system would be a positive factor in shaping the goals and influencing the aspirations of each medical student as he selects his elective-"track" program and prepares for his future role as a physician.
6. A closer integration and connection of basic medical science concepts and knowledge with clinical teaching.
7. In the overall curricular program, increased flexibility and tailoring of the program to the educational and professional needs of the individual medical student.

Curriculum content and the present status with respect to adoption and implementation are presented in Appendix II.

Program VI. Establishment of a program in family practice and community health.

The Educational Policy Committee of the University of Minnesota Medical School, in undertaking its study and revision of the Medical School curriculum, gave first priority attention to the question of family practice. A Subcommittee on Family Practice and Community Health was appointed, which included not only members of our faculty but two distinguished physicians who have practiced general or family medicine in Minnesota for a number of years. The Subcommittee recommended the establishment of a Program in Family Practice and Community Health, and this recommendation was endorsed by the Educational Policy Committee and subsequently on December 4, 1967, by the Executive Faculty of the Medical School.

A Division of Family Practice and Community Health was established within the Department of Medicine as a vehicle for further planning of this program, and the recommendation is being made that this unit become a full-fledged Department within the Medical School during the 1968-69 academic year. The program is now in the developmental phase, which is being financed by a one-year grant from the Hill Family Foundation of St. Paul for the period July 1, 1968, to June 30, 1969. Full implementation of the program, with respect to both undergraduate and graduate aspects, will occur on July 1, 1969, assuming that the program has been financed.

The philosophical basis for the establishment of this program is the recognition that family medicine is, indeed, a specialty, just as are internal medicine, obstetrics, ophthalmology, etc. It is a broad specialty, to be sure, and its basic body of knowledge thus more difficult to delineate than that of the more narrow specializations. Yet it is obvious that it requires skill and competence equal to or surpassing the skill and competence required in the traditional specialty areas. At the national level, recognition of family practice as a specialty area is taking place, and within the next year or two the establishment of an American Board of Family Medicine (or Practice) seems likely.

Recognizing at the outset that the medical student in the academic medical center often has little or no opportunity to work with or to be materially influenced by a physician rendering primary medical care, the Medical School faculty determined that the program must be offered within the University of Minnesota Health Sciences Center. Once the program has been established, aspects of it will also be offered at various affiliated or associated units, including hospitals and clinics, within and beyond the Twin Cities, but it is vital that it have major representation within the Health Sciences Center comparable to that of other traditional specialty disciplines. Those responsible for development of the program are currently further refining the body of knowledge to be taught and making the other arrangements for the full



implementation of the program in July, 1969.

One of the most important aspects of the latter is the development of a clientele for whom the staff of this Department will serve as family physicians. The University Hospitals, like other similar institutions elsewhere, has served patients on a strict referral basis, except in emergencies, up to this point in time. The result has been an ever increasing proportion of patients with highly complicated illnesses or injuries and a group of patients quite unrepresentative of the usual practice. Such a group of patients obviously does not lend itself to the development of a family practice program, hence the necessity to develop a specific clientele, limited in number but reasonably representative of a cross-section of the populace, for the teachers in our family practice program to serve as primary or family physicians.

Each undergraduate medical student will relate to certain aspects of the program in family medicine and community health during each of the first three years of medical school. During the first two years this instruction will largely be in the behavioral and preventative aspects of family medicine, while the third year will include a mandated experience in family medicine, comparable to the experiences in the other major specialty areas. In accord with the new overall curriculum of the Medical School, fourth-year medical students will choose from a number of "tracks" that will lead to their future career goals. One such track will be the family practice track, and we anticipate, on the basis of expressions of student interest, that a substantial proportion of our students will choose this track.

The program also includes the development of a residency program that will meet the requirements of whatever certifying board may be established in this specialty field. The first group of residents will be recruited for the more or less specific purpose of constituting the future faculty of the program. The leaders of the program will seek to recruit individuals who have been in general practice for four to seven years and who are willing to return

for the additional academic experience that will enable them to be effective teachers in the program.

While the teaching and practice of clinical medicine will obviously be the prime responsibility of the members of this Department, they will also have scholarly functions, different in kind from but equivalent in academic respectability to the functions of the other, traditional Departments. In particular, it will be the faculty of this Department that will carry out all important, much needed studies on health care and its delivery. It will be this group that will be responsible for setting up models in which new approaches can be tested or in which new kinds of health care personnel can be evaluated for effectiveness of their contribution. The group has already joined in sponsorship of a study of rural health care, which has been carried out under the direction of Mr. Bright M. Dornblaser, Professor and Director of the Program in Hospital Administration. The full report of this rural health care study will be available to the Department of Family Practice and Community Health within the next 4 or 5 months.

It should be emphasized that the family practice program is, at the present time, essentially a unique program. No program exactly like it is currently in existence, although a few other schools are in the process of developing somewhat similar programs that, like this one, have followed some of the suggestions of the so-called Millis and Willard Reports. In any event, all such programs are in their formative stages, and the University of Minnesota can justifiably claim a position of leadership in this important area.

Appendix III includes the full report of the Subcommittee on Family Practice and Community Health and two recent memoranda from the Director of the program. These are highly relevant to consideration of the family practice program.

2. Retention and distribution of physicians within Minnesota. The factors affecting the career choice and practice location of a graduate of the University of Minnesota Medical School (indeed, for the graduate of any medical school) are multiple and exceedingly

School has control or potential control of a small proportion of them, and these are probably not the most influential. The faculty of the Medical School recognizes, nevertheless, that it has an obligation to take whatever measures it can to secure retention and distribution of our graduates under conditions that will be most beneficial to the people of the State of Minnesota. The following policies and procedures, designed to accomplish this objective, are either currently in practice or constitute portions of one or another of the programs proposed above:

- a. Selection of medical students on a geographic basis. The University of Minnesota currently accepts 90 to 95 percent of its entering class from students who are residents of the State of Minnesota. The remainder are almost exclusively from the neighboring states, usually from economic areas quite directly related to Minnesota. Very few students from distant states are accepted. Within Minnesota, our reviews of students origin have shown repeatedly that, although not the result of a conscious effort, the number of students coming from rural areas and from small communities is proportionate to the relative population of those areas. There is no preponderance of the students from metropolitan areas.
- b. Selection of students on basis of potential interest in family and/or rural practice. This is much more difficult than the selection of students on the basis of geographical factors. To date, no factors have emerged that allow us to predict with anything approaching certainty which students will be interested in family practice or in practicing in a small community. Statements they make on their applications in this respect are notoriously unreliable as indicies of their future interests. Even if we could identify such psychological factors, we would be hard pressed to reject a demonstrably capable student on the basis that a psychological test showed him insuffi-

with respect to this matter is the role of the student's wife in defining or altering his potential interest in family and/or rural practice. No means of controlling this factor has been elucidated as yet.) Nevertheless, we plan to continue to examine in a systematic way whatever factors we can identify as motivating the student to enter family and/or rural practice, with the hope that at least we may be able to capitalize on such motivation wherever it does exist. The Department of Family Practice and Community Health will pursue such studies, in conjunction with the Office of the Dean of the Medical School.

- c. The expansion of the program in graduate medical education (residencies), envisioned in Program IV above, will offer more residency opportunities within the State of Minnesota, thus encouraging Minnesota graduates to take their graduate training in this area, with the expectation that this will increase the proportion eventually practicing within the State. (The additional residency opportunities will, of course, also increase the number of graduates of other medical schools attracted to Minnesota.)
- d. The development of the Department of Family Practice and Community Health and its total program will, we have full confidence, result in the attraction of a substantially larger proportion of our students to the field of family medicine than has entered general practice during the past ten to fifteen years. The program recognizes family practice as a specialty and prepares the student in such a way that he will have full confidence in his ability to practice this broad spectrum of medicine, either solo or within a group. He will be confident that he is just as well trained for his specialty as is his colleague who has selected a narrower specialty, and he will have seen effective and competent family practitioners operating within the framework of the University of

Minnesota Health Sciences Center as models or examples to inspire him. In addition, he will have seen and worked with similar teacher-practitioners in affiliated facilities, as well.

Certainly this kind of program should be attractive. It is the expectation of the faculty that 60 to 65 percent of our graduates will elect to enter one or another of the family medicine areas, i.e. the emerging area of family practice, internal medicine, or pediatrics. Since well trained family practitioners of the sort described will have ample opportunities of a challenging nature in the metropolitan areas, there is no assurance that they will choose to practice in smaller communities.

- e. Practice in a small community is often deemed undesirable because of the factor of professional isolation. Strengthened programs in postgraduate medical education; incorporating modern techniques for communications such as TV linkage of the community hospital with an academic medical center, are being planned and should help to dispel the feeling of professional isolation that a physician might otherwise feel in a small and relatively remote community.
- f. Studies to be carried out under the auspices of the Department of Family Practice and Community Health may very well show how group practices may be set up so as to serve most effectively a region consisting of a number of small communities. This would be another way of minimizing the factor of professional isolation.

As pointed out in the introduction, agencies other than medical schools and their faculties have substantially more influence over both the career choices and the geographic distribution of physicians. The medical profession as a whole obviously has a key role to play. If the medical profession accords top prestige to one kind of practitioner and withholds it from another kind, it is obvious that a disproportionate large segment of students will be attracted toward the former and away from the latter. The medical profession should formalize its recognition of family practice as a



specialty by a final approval of the development of a National Board of Family Medicine (Practice) within the next year or two. It must use its collective influence to make certain that fees provided for the services rendered by the family practitioner give recognition of his special skills and background to the same extent as do the fees of other specialists. The medical profession, which in general controls the activities of the state licensure boards, should make certain that potential practitioners in the state do not get rebuffed and discouraged by rudeness or apathy encountered at the time of application for licensure. The licensure procedure should be cordially receptive to all applicants and should expedite, with a minimum of delay and "red-tape", licensure of obviously qualified individuals.

Government agencies similarly have substantial potential interest in influencing both career choice and, particularly, geographic location of physicians.

Local governments in communities desiring to attract a physician must first carefully appraise their assets. The community of declining population where the bank and theatre have recently closed is unlikely to attract a physician, no matter what the medical profession or the medical schools might do. Local governments should consider incentive plans such as the provision of clinic facilities or the provision of special scholarship funds to medical students in return for the understanding that the student return to practice in that community for a stipulated period. Local communities must be prepared to abandon a totally parochial approach and join with other nearby communities of similar size to attract a physician or small group of physicians who could serve an entire area.

State governments could devise incentive plans for medical students, again in the form of scholarships in return for a mandated return to practice in a certain kind of community following completion of the medical education program (and military service, in most instances.) State governments could also devise tax incentive plans that would appeal to practicing physicians. If it is determined that the public interest is indeed served by having physicians practice in communities of a certain type, tax incentives are just as appropriate to serve such a public interest as they are in the case of attracting industry. Thus, physicians serving in communities of



a population of 2500 or less might have one-half of their State of Minnesota income tax obligation remitted.

The federal government could develop similar tax incentives if it were determined that the national welfare would be served by a somewhat similar distribution of physicians. The federal government could subsidize the development of group practices serving small communities. It could provide support for the development of post-graduate medical education programs that would encourage physicians to locate in small and relatively remote communities. (Indeed the Regional Medical Program offers promise of such possibilities.)

The foregoing are examples of incentive programs that could be developed to attract physicians into a particular type of practice or geographic area. Legislation directing physicians to practice in certain areas or to engage in certain types of practice is theoretically possible but is repugnant to a free society. Class legislation of this sort would be difficult to bring about. One possibility worth considering, however, is a National Universal Public Service Act which would require two years of public service from every citizen between the ages of 20 and 30. For some individuals this would be military service, for others a "peace corps" type of activity. For those gaining admission to medical school, the service could be rendered after completion of the medical training and in such location as might be directed by appropriate national and local authorities given the responsibility for determining needs.

3. Institutional Considerations. The University of Minnesota Medical School is a constituent unit of the College of Medical Sciences, which in turn is one of the professional colleges of the University. Currently, the Dean of the College of Medical Sciences is also the Dean of the Medical School, but the Associate Dean of the Medical School serves as its Executive Officer. It is likely that within the coming year the two posts, Dean of the College of Medical Sciences and Dean of the Medical School, will be separated. The Dean of the College of Medical Sciences is responsible to the President of the University, but he reports through the various University Vice-Presidents on matters under their respective jurisdictions.

The University of Minnesota Medical School is fully accredited by the Liaison Committee on Medical Education, the official accrediting body for medical schools, which represents the American Medical Association Council on Medical Education and the Association of American Medical Colleges. The proposals for expansion in the size of the Medical School must be presented for review by the Liaison Committee before continuing accreditation can be assured.

The clinical programs of the University of Minnesota Medical School are carried out within the University of Minnesota Health Sciences Center and within the following affiliated hospitals: Hennepin County General Hospital, St. Paul-Ramsey Hospital, Minneapolis Veterans Administration Hospital, Childrens' Hospital of St. Paul, Fairview Hospital, Mount Sinai Hospital, Northwestern Hospital. The major affiliations are based on written agreements or memoranda of understanding that have been approved by the Board of Regents and by the Governing Board or Governing Agency of the major affiliate. During the course of the coming year all affiliations, whether major or limited, will be based upon formal agreements. Selection of students for admission to the University of Minnesota Medical School is the responsibility of the Executive Faculty of the Medical School, which has delegated this function to a duly elected Medical School Admissions Committee. The Associate Dean and Executive Officer of the Medical School serves as the chief staff officer for this committee. The committee bases its judgments on college records, various test scores indicating intellectual capability, especially in the scientific fields, recommendations from people acquainted with the applicant, and, in many instances, personal interview. A more detailed statement concerning Medical School admissions is presented in Appendix IV

Section F. ESTIMATED TIMETABLE FOR  
IMPLEMENTING THE PROPOSED PROGRAMS

Contingent upon the availability of the necessary physical facilities and appropriate funding, the various programs described above can be accomplished in accord with the following schedule:

- 1969 - Initiation of Program VI, Establishment of a program in Family Practice and Community Health. Result: Introduction of specific instruction in family practice into the undergraduate medical curriculum; first residents in family practice begin graduate program and will complete it in 1971.
- 1969 - Initiation of Program V, Revised Medical School Curriculum. Result: The improvement in the undergraduate curriculum.
- 1969 - Initiation of Program IV, Expansion of program in graduate medical education. Result: Gradual increase in the number of residencies offered under University auspices in the Twin City area with a total of 720 (120 more than the present number) reached in approximately 1974.
- 1970 - Initiation of Program II, Expansion of the number of students accepted by the University of Minnesota Medical School by transfer into the third-year from the two-year medical schools in North Dakota and South Dakota. Result: Approximately 25 additional graduates from the University of Minnesota Medical School each year.
- 1970-75 - Implementation of Program III, An accelerated program for undergraduate medical education. Result: During a five-year period the equivalent of a full additional class of medical students (approximately 160) should be graduated.
- 1973 - Initiation of Program I, Expansion of the entering class size in the University of Minnesota Medical School. Result: An increase from 160 to 200 in the number of students accepted into the entering class, thus increasing substantially the opportunities for medical education available to qualified Minnesota students; consequent increase, by essentially the same number, the number of students graduating, beginning in 1977.

Summary of additional graduates of the University of Minnesota Medical School during next decade when all of the foregoing constituent programs are implemented:

<u>Year</u>	<u>Number of Students</u>	<u>Source of Students</u>
1972	25	Addl. Dakota students entering in 1970.
1973	25	Addl. Dakota students entering in 1971.
1974	25	Addl. Dakota students entering in 1972.
1975	25	Addl. Dakota students entering in 1973.
1976	25	Addl. Dakota students entering in 1974.
1977	65	Addl. Dakota students entering in 1975, plus Addl. freshmen admitted in 1973.
1978	65	Addl. Dakota students entering in 1976, plus Addl. freshmen students admitted in 1974.
1979	65	Addl. Dakota students admitted in 1977, plus Addl. freshmen students admitted in 1975.
1970-75	160	"Extra" class graduated as a result of accelerated program.

Total additional students 1969-79, 480

Section G. METHODS FOR EVALUATING THE PROPOSED PROGRAM.

Standard testing methods, currently in use by the faculty of the University of Minnesota Medical School, will continue to be used and improved. These include tests developed by our own faculty and outside examinations, notably the National Board of Medical Examiners.

We are well aware of the fact that current examination methods succeed only in measuring the students' ability to deal with the material presented to him in the instructional setting and that they do not necessarily reflect the quality of his future medical practice. We are intensely interested in current attempts, notably those of Dr. Paul Sanazaro, to develop a test which will measure the quality of medical practice. The staff of the Office of the Dean of the Medical School and the faculty members responsible for the development of the Program in Family Practice and Community Health are particularly interested in developing appropriate means for testing not only quality of practice but effectiveness of the teaching program as well. Our ability to develop such testing program will depend upon the availability of staff over and above those required for the educational program itself. The development of good testing programs is notoriously time-consuming and requires dedicated staff people who can devote their major or total attention to this effort. To date the University of Minnesota Medical School has not been in a position to provide this kind of staff support.

Section II. COST OF THE PROGRAM

Prefatory note. The cost data provided are based on the assumption that, prior to the initiation of any of the programs indicated, the basic funding of the educational program of the University of Minnesota Medical School has been brought up to standard. At the present time, the basic funding of the program is grossly below the level of funding provided by comparable states for their medical schools, many of which are not considered to be as distinguished as this school. Even the State of Mississippi provides a substantially larger amount of state funds per medical student than Minnesota does. The data in Appendix V afford a basis for comparison of the support by the state for various other medical schools, largely in this part of the nation. At the time of the last accreditation survey of the University of Minnesota Medical School, the administration was warned that the level of support by the state for a program of this magnitude was dangerously low. (The relevant segment of the accreditation survey report will be found in Appendix VI). The situation has deteriorated since that time. At the present time only 26% of our faculty is supported by funds provided by the State of Minnesota for the teaching program. We believe that a soundly financed medical school faculty is one in which at least 65% of the total faculty effort is supported by basic institutional funding.

Our present, substantial dependence upon outside funds, especially federal research funds, for support of our basic educational program is unhealthy from the standpoint of development and maintenance of a sound instructional program. Sharp cutbacks in the extent of federal programs now face us with an even more dangerous situation. If an accreditation survey were to be made of the University of Minnesota Medical School today, there is serious doubt as to whether we would receive unqualified, full approval of the present program, given the current circumstances of funding. An accreditation visit must be carried out before any enrollment expansion is undertaken. For these various reasons, it is imperative that the funding of the University of Minnesota Medical School from state sources be brought up to standard before consideration can be given to any expansion program.



Capital Costs. Implementation of the various programs outlined above is dependent upon the acquisition of additional facilities. The Board of Regents has presented the building request related to the development and expansion of the health sciences on the Minneapolis campus. Preliminary planning funds for this building program were appropriated by the 1967 Legislature, and such planning is under way. The 1969 Legislature will be asked to provide construction funds, which will be matched by federal funds. The University's health sciences building request relates to programs in all of the health sciences, not just medicine. It is a prerequisite for all of the programs described herein.

Certain aspects of the programs described may also require capital expenditures with respect to affiliated hospitals, notably St. Paul-Ramsey and Hennepin County General Hospital. Substantial further study must be given by all agencies concerned in order to provide definitive information concerning these building needs, the proportions directly related to the educational process, and the agency or agencies that should be expected to bear the expense.

Operating Costs. Our best current estimates of the operating costs associated with the previously described programs are presented below. They are based on 1968-69 faculty and civil service salary levels. They are presented in accord with the budget policies and practices of the University of Minnesota, i.e., they include faculty salaries, stipends for teaching assistants and medical fellows, salaries for civil service personnel other than maintenance personnel, and costs of supplies and equipment directly related to departmental, academic functions. They do not include building maintenance costs, general administrative expense, library costs, and the costs of other similar activities that, within the University of Minnesota, are provided centrally. It deserves to be emphasized again that these are costs related only to programs for the instruction of physicians, undergraduate and graduate, and do not include costs of teaching programs in dentistry (except information is provided concerning costs of providing basic science instruction to proposed additional numbers of dental students), nursing, public health, and the various other health sciences. The costs indicated are incremental and recurring, except where non-recurring costs have

## Operating Costs

Program I: Expansion of Entering Medical School Class Size

Implementation Date: 1973

Recurring costs, 1973-74		\$597,729
Faculty	27.6 positions	\$444,259
Teaching Assistants	7.4	38,035
Civil service	16.8	82,088
Supplies		32,547
Recurring costs, 1974-75		597,729
Total recurring costs for biennium, 1973-75 (and subsequent)		1,195,458
Non-recurring costs, equipment		117,660
Total costs, recurring and non-recurring, for biennium 1973-75		1,313,118

## Operating Costs

[Program IA: Medical School costs related to Expansion of Dental  
School Entering Class Size

Implementation Date: 1973

Recurring costs, 1973-74 \$140,885

Faculty	5.7 positions	\$90,601
Teaching Assistants		
	4.0	20,481
Civil service	3.6	18,786
Supplies		11,017

Recurring costs, 1974-75 140,885

Total recurring costs for biennium, 1973-75  
(and subsequent) 281,770 ]

## Operating Costs

Program II: Expansion of Number of Transfer Students from Dakota Schools

Implementation Date: 1970 (2nd year of biennium)

Recurring costs, 1970-71 \$190,000

Faculty	10 positions	\$160,000
Civil Service	5	24,000
Supplies		6,000

Total recurring costs for biennium 1969-71 190,000

Total recurring costs for subsequent biennia 380,000

## Operating Costs

## Program III: Accelerated Undergraduate Program

Implementation Date: 1969

Recurring costs 1969-70 \$179,200

Faculty	10 positions	\$160,000
Civil service	4 positions	19,200

Recurring costs 1970-71 179,200

Total recurring costs for biennium, 1969-71  
(and subsequent) 358,400

## Operating Costs

Program IV: Expansion of Programs in Graduate Medical Education  
 (Exclusive of Family Practice Program, Program VI)  
 Total - 90 Residency Positions

## A. Implementation Date for First Increment of 30 Residencies: 1969

Recurring costs, 1969-70			\$232,200
Faculty	6 positions	\$ 96,000	
Civil service	3 positions	14,400	
Stipends for residents (30)		120,000	
Supplies		1,800	

Recurring costs, 1970-71			232,200
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Total recurring costs for biennium 1969-71			464,400
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## B. Implementation Date for Second Increment of 30 Residencies: 1971

Recurring costs from 1969-71 biennium			464,400
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Recurring costs, 1971-72			232,200
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Recurring costs, 1972-73			232,200
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Total recurring costs for biennium 1971-73			928,800
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## C. Implementation Date for Third Increment of 30 Residencies: 1973

Recurring costs from 1971-73 biennium			928,800
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Recurring costs 1973-74			232,200
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Recurring costs 1974-75			232,200
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Total recurring costs for biennium 1973-75 (and subsequent)			1,393,200
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### Operating Costs

Program V: Revised Medical School Curriculum

Implementation Date: 1969

Assuming that the basic funding of the educational program of the University of Minnesota Medical School from State sources has been brought up to standard as outlined to University and State officials in other documents, no additional funds will be sought from the State for implementation of the revised curriculum.

## Operating Costs

Program VI: Establishment of Program in Family Practice and Community Health

Implementation Date: 1969

Recurring costs, 1969-70			\$294,408
Faculty, physicians	8 positions	\$158,000	
Faculty, non-physicians	3	38,692	
Civil Service	5.5	25,716	
Stipends for residents (5)		60,000	
Unassigned instruction		6,000	
Supplies		6,000	
Recurring costs, 1970-71			444,372
Recurring costs from 1969-70		294,408	
Additional:			
Faculty, physician	2 positions	32,000	
Faculty, non-physician	2	23,692	
Civil service	1	4,272	
Stipends for residents (5)		60,000	
Stipends for interns (5)		30,000	
Total recurring costs for biennium, 1969-71			738,780

Implementation Date for Full Program: 1971

Recurring costs from 1969-71 biennium			738,780
Recurring costs, 1971-72			96,800
Faculty	2 positions	\$32,000	
Civil service	1	4,800	
Stipends for residents (5)		60,000	
Recurring costs, 1972-73			96,800
Total recurring costs for biennium 1971-73 (and subsequent)			932,380

APPENDIX I

A PROGRAM FOR EXPANDING AND ADVANCING EDUCATION FOR THE HEALTH SCIENCES IN  
THE STATE OF MINNESOTA

-The position of the Board of Regents of  
the University of Minnesota

The Regents of the University of Minnesota recognize the need for educating increased numbers of health science professionals. There is need for an increased number of physicians, and particularly for physicians who will practice family medicine in the State of Minnesota. There is an equal and perhaps greater need for increased numbers of dentists. There is a compelling need for increased numbers of professionals in allied health fields. In order to assure the most rapid and economical response to these needs, the Regents make the following recommendations:

I. The First Step

Implementation of the plan presented to and supported by the 1967 Legislature for developing health science facilities and staff on the Twin Cities Campus of the University of Minnesota.

This step will:

- A. Develop a Department of Family Practice and Community Health.  
The Department will educate undergraduate medical students for family practice, provide residency training for physicians entering this specialty field, and explore new patterns for providing health care. These explorations will include the study of appropriate and effective use of technical personnel requiring less training than physicians.
- B. Expand the entering medical class from 160 students to 200 students.
- C. Increase the intake of third year transfer students from the Dakota schools.
- D. Develop an annual graduating class of approximately 225 physicians.
- E. Expand the existing dental class from 110 students to 150 students.

- F. Expand total enrollments in the allied health science fields from 2000 to 3500 students.
- G. Expand the use of clinical facilities in affiliated hospitals in the metropolitan area. Such expansion will make possible the program described above. It will also bring additional interns and residents from other medical schools into the state, thus increasing further the number of physicians likely to practice in Minnesota.

The Regents consider step I essential to meeting the health profession needs of the state. It is the most promising rapid method for providing the numbers and types of health professionals required. It also provides the necessary basis for further development of clinical education and residency programs in the St. Paul-Ramsey Hospital under circumstances which could lead to the creation of a major Division of the University of Minnesota Medical School in St. Paul.

## II. A Next Step

Establishment of a clinical training program in St. Paul-Ramsey Hospital for 100 undergraduate medical students and a like number of residents.

Given the concurrence of the appropriate St. Paul and Ramsey County authorities, the Regents will advocate the development of this program. They envision the development of a teaching hospital with visibility, identity, and substantial autonomy in the conduct of clinical education programs.

## III. Additional Steps

The Regents recognize that the health manpower needs of the state in the late 1970's and 1980's are likely to grow larger than those which can be met by the steps proposed in Sections I and II. They therefore propose immediate attention to the potential of Duluth and Rochester as sites for additional developments.

### In Duluth the Regents recommend:

- A. Establishment of graduate programs in chemistry and biology sufficient to provide the University base for medical school development.
- B. Establishment of collegiate programs in medical technology, physical

therapy, occupational therapy, nursing, and other allied health professions.

- C. Planning toward development of a preclinical (first two years) program in medical education in Duluth in the decade of the 1970's.
- D. Planning toward development in the 1980's of a clinical program in medicine.

Rochester:

The Regents applaud the intensive discussions now under way in the Mayo Clinic Board of Governors in Rochester centering on the possibility of establishing a medical school, or some expansion of undergraduate medical training with continuing expansion of graduate education, research, and basic science programs.

Clearly, a decision on the pattern and program for expansion in Rochester should be a decision of the Mayo institutions. The Regents, however, would be pleased to join Mayo in a study to explore the feasibility of establishing a distinguished traditionally oriented medical school in Rochester. Such a study should examine possible sources of support for capital costs, and study the possible formulae for public support of Minnesota students.

Ever mindful of the significant contributions to graduate medical education being provided in Rochester, the Regents believe that development of a comprehensive program of medical education by the Mayo Institutions offers a major promise for meeting urgent state, regional, and national needs.

IV.

This statement stresses the means by which Minnesota can respond promptly, efficiently, and effectively to present health manpower needs. At the same time it urges developments designed to cope with continuously expanding demands of the state and nation.

The Regents reaffirm and take pride in the quality of Minnesota's programs of education in the Health Sciences. To maintain the quality of these programs

and simultaneously provide new services to meet the urgencies of the hour will require substantial sums for additional staff and facilities. We earnestly believe the people of Minnesota will respond to the task at hand.

April 19, 1968



## APPENDIX II

### CONTENT OF PROPOSED NEW MEDICAL SCHOOL CURRICULUM; STATUS OF ITS ADOPTION AND IMPLEMENTATION

The Educational Policy Committee of the Medical School Faculty has developed a curriculum proposal which embodies the concepts and objectives described in Program V, Section E. There seemed to be general consensus among the faculty that further curriculum reform should proceed along the lines proposed in this draft curriculum outline approved in principle in October 1967. During the subsequent nine months, six faculty subcommittees, each assigned the development of one specific aspect of the proposed curriculum, have been placing flesh on the skeleton curriculum suggested by the Educational Policy Committee. A resulting detailed curriculum proposal will be presented to and discussed by the Executive Faculty of the Medical School at a retreat-seminar in fall 1968. If approved and adopted following that retreat, it is planned that the new medical curriculum will be inaugurated in fall 1969. In actuality, the guided elective-"track" portion of the new curriculum has been adopted and placed in operation for the 1968-69 senior medical year. Thus the M.D. graduating class of June 1969 is the first to experience the guided elective program, each senior medical student having selected a clinical faculty adviser to assist him in planning and carrying out his individual elective program.

An outline of the new curriculum follows:

#### Phase A - Introduction to Human Biology

1. Anatomy; Physiology; Basic Biochemistry; Basic Microbiology
2. Behavioral Science
3. Introduction to the patient

#### Phase B - Correlated basic and clinical teaching organized on organ, system or topical lines .

1. Introductory courses
  - a. Introduction to Pathology
  - b. Introduction to Pharmacology
  - c. Introduction to public health; statistics and biomedical computing
2. Integrated courses
  - a. Infectious disease
    - (1) Pathogenic microorganisms

- (2) Immune mechanisms
  - (3) Pathology
  - (4) Epidemiology
  - (5) Clinical aspects
  - (6) Chemotherapy
  - b. Disordered immune mechanisms
    - (1) Allergy
  - c. Inflammation and trauma
  - d. Cardiovascular
    - (1) Pathology and Pathogenesis
    - (2) Epidemiology
    - (3) Pathologic Physiology
    - (4) Introduction to clinical aspects
    - (5) Drugs used in cardiovascular disease
  - e. Lung including respiratory physiology
  - f. Special topics in Clinical Biochemistry
  - g. Kidney
  - h. Gastrointestinal
  - i. Hematology
  - j. Endocrine and Metabolism
  - k. Nervous System
  - l. Musculoskeletal including an introduction to Orthopedics
  - m. Eye and ear with an introduction to Ophthalmology and Otolaryngology
  - n. Skin
  - o. Reproduction including an introduction to Obstetrics and Gynecology
  - p. Genetically determined disease
  - q. Growth and Development
  - r. Oncology
  - s. Radiation and nuclear medicine
  - t. Abnormal Psychology
- 3. Laboratory work
    - a. Pathology
    - b. Pharmacology
    - c. Laboratory Medicine
  - 4. Interviewing and physical examination

Phase C - Core clinical curriculum

- 1. Basic Medical Clerkship
  - a. Internal Medicine
  - b. Family Medicine (clinic experience)
  - c. Pediatrics (medical)
  - d. Psychiatry
  - e. Neurology
  - f. Dermatology
  - g. Rehabilitation
- 2. Basic Surgical Clerkship
  - a. General Surgery
  - b. Pediatrics (Surgical)
  - c. Surgical Subspecialties including Ophthalmology, Otolaryngology, Orthopedics, Urology and Neurosurgery
  - d. Anesthesiology
  - e. Obstetrics and Gynecology
  - f. Radiology and Radiotherapy

Phase D - Track curriculum (Guided Electives)

1. Family Practice
2. Medicine - Pediatrics
3. Surgical
4. Research (M.D., Ph.D. Program)
5. Neurology and Psychiatry
6. Laboratory Medicine; Pathology
7. Undifferentiated

These programs will all include one quarter of basic science (15 credit hours) as well as clinical work.

APPENDIX III - (a)

REPORT OF THE SUBCOMMITTEE ON FAMILY PRACTICE AND COMMUNITY HEALTH

University of Minnesota Medical School

October, 1967

## I. Establishment of Need for a Family Physician

During recent years a significant number of major reports have been published dealing with various aspects of this problem. Some of these are listed in the attached bibliography.<sup>1-8</sup> They deal with the problem from various viewpoints. The most frequent viewpoints presented are as follows:

1. That there is an increased need for all types of physicians because of an increased demand for medical services by the public. The usual factors thought to be responsible for this increased demand are listed below:<sup>5-7</sup>
  - a. The population growth.
  - b. Larger numbers of older people with their increased utilization of the health care apparatus.
  - c. The physician has more to offer each patient in terms of increased range of therapeutic devices and increased numbers of preventive measures to explore.
  - d. Widening of concerns in public health areas.
  - e. Increased affluence of the public with resultant ability to pay for the medical services they may need.
  - f. Increased awareness of the public of recent advances in medicine with the resultant desire to have these advances made available.
  - g. Increased tendency toward specialization with reduction in numbers of patients seen per physician.

- h. Increased urbanization and easier access to rural areas.
2. That there is an increased need for a new type of physician to be trained (family physician) who, by virtue of this unique training experience, will be better able to utilize his own skills for direct patient care and for health maintenance in his patients (preventive medicine), and will also be able to better utilize the entire medical manpower pool including personnel in the associated health professions. Development of a training program for this new type of physician should be directed toward increasing the effectiveness of each physician rather than solely toward graduating larger classes.<sup>2-5, 7-9</sup>

Rashi Fein summarized this second approach very well in an address to the Congress on Medical Education of the American Medical Association.<sup>9</sup> He reviewed the overall problem of physician shortage and demand for medical services from the above viewpoints and concluded that the present apparent disparity between demand for physician's services and availability of physician's services could be improved if the effectiveness of the individual physician could be improved. He was uncertain if an increase in size of the graduating class over the next eight years could even keep up with increasing demand in the absence of a program to increase individual effectiveness.

During the early deliberations of the committee, it quickly became apparent that these different types of needs were easily confused and that such confusion hampered the progress of the



discussions. It must be clearly defined that if we are addressing ourselves simply to the problem of apparent overall physician shortage, the solution is simply to train more doctors of all types. On the other hand, if the need is for training a different kind of physician whose function will be to make recent advances in health care more widely available to the patient, we must address ourselves to increase individual effectiveness rather than to merely increase gross numbers. It must be emphasized that simply adding more physicians to the numbers of those graduating each year is not the purpose of developing a curriculum to train a family physician. It seemed to the committee that the compelling reason for training a family physician was to attempt to better utilize all of the manpower of the health professions more efficiently by developing a body of knowledge that will make the family physician a more perceptive clinician and which will also make him more knowledgeable in the recognition and use of the various kinds of help available to him from associated health professionals. In other words, the need must be considered from the point of view of how the total job may be done most efficiently.

Although this is a very complex issue, one may understand the basic problem better by looking at it in what is perhaps an overly simplified view. For purposes of this discussion, we must examine the need of developing a training program for the family physician based on what is described by Dr. Richard Magraw as the division of

labor in medicine. This division of labor is partly what we are talking about when we are deliberating concerning the need for developing a program of family medicine and community health at the University of Minnesota. We have to examine the various health needs of the public, allocate appropriate personnel to fulfill these needs, and then decide whether there is a void present in the area of primary patient care (personal physician, primary physician, or family physician). When this is done, it becomes clear that the role of the first contact physician (family physician) cannot be filled by an incompletely trained person but rather that it must be filled by the most highly trained person that we are able to develop from our student group.<sup>5</sup>

In order to develop this idea further, one has to recognize that a large part of the total job done by physicians has been done by the general practitioner and is still being performed by general practitioners who are practicing today. However, it must be borne in mind that there are progressively fewer students choosing general practice as a career. It is stated that most medical school graduates prior to World War II entered directly into private practice after a year of internship, but that 80% of medical graduates today engage in special training before entering medical practice.<sup>1</sup> In addition to this, review of the history of various medical school classes subsequent to graduation reveals that many general practitioners leave general practice and return to a training center for graduate training in specialty areas of medicine. This attrition seems to

continue for as long as 8-10 years following graduation. The inevitable result of this will be that the public will put an increasing demand on specialists of medicine to fill the role that used to be filled by the general practitioner. This creates the paradoxical situation that physicians who are becoming increasingly specialized will be called upon by the public to fill a broader and broader role for some of their patients in the absence of specific training for this role. At the same time, general practitioners (as we currently define them) who remain in practice are going to have to limit their broad role more and more in the future in order to continue to perform effectively because they are not being trained appropriately for the job they are called upon to do.

The family specialist of the future should be a more effective physician by virtue of his training. He may see fewer patients than today's general practitioner per unit of time, but he will make more meaningful decisions in his office with fewer repeat office visits. Fulfillment by the family practitioner of a prevent health role should be one of the important vehicles which will reduce pressure on medical manpower. Also, it is possible that by recognizing and satisfying the patient's problem, the tendency for patients to seek out on their own the type of physician they think they need for their problem will be minimized. This should also reduce the overall pressure on medical manpower. For example, a patient with a tension headache could conceivably see an ophthalmologist, an

otolaryngologist, and a neurologist to resolve the problem of visual disturbance, sinus problems, or to rule out a brain tumor. A well-trained family physician available to this patient should be able to establish the diagnosis and clarify the problem for the patient in most instances thereby enabling the other three consultants to utilize their capabilities more fruitfully. Even if consultation were necessary, the family physician would make an appropriate referral and still use only one of the three consultants.

To conclude, the committee wishes to reemphasize the urgency of developing such a program. Because of the long period of training involved, it will take at least four years to develop a family physician even if we were to begin training him now.

## II. Definition of Function of the Family Physician

The family physician of the future must function directly in the provision of total medical care and in the supervision of total health care to all age groups. He must be willing to accept this responsibility on a continuing basis over prolonged periods of time. He should be directly involved in the provision of services most of the time and in a role of supervisory responsibility all of the time (through delegation where appropriate). He should be knowledgeable regarding availability of those services he does not provide. However, relinquishment of direct responsibility for certain services should not imply relinquishment of responsibility for total patient care.

These functions will be dependent upon a high degree of expertise in (1) disease prevention and health maintenance, (2) the diagnosis and management of common diseases (this should not be equated with trivial or simple diseases), and (3) interdisciplinary coordinative activity. His availability to the patient will be essential. In turn, availability to him of all health resources (hospital, individual professionals, agencies, etc.) will be necessary for maintenance of his role. This function is dependent on certain principles:

### 1. Availability

- a. Availability for treatment of patients for episodic illness as it occurs.

- b. Availability to assume continuing responsibility both in health maintenance and in care for more prolonged illnesses.
2. He should provide entry for the patient into the health care apparatus.
3. He must serve a coordinating function to guide the patient to other areas of help where necessary.
  - a. Into the associated medical specialties.
  - b. In consulting with other health professionals when necessary; this involves knowledge of functions of associated health professionals such as visiting nurses, clinical psychologists, social workers and family agencies.
4. Health maintenance. (This is closely related to his patient care function--in many instances it is indistinguishable from it--but for clarity, it will be discussed separately.)
  - a. He must be knowledgeable of health maintenance in the usual ways, i.e., preventive medicine, immunization, and so forth.
  - b. He should be knowledgeable regarding child and family development.
  - c. He should be knowledgeable regarding the effects of stresses of environment on health.
  - d. He should be available for consultation and express willingness to assume leadership in health maintenance at the community level.



Because of his unique role which gives him access to the total family, the family physician is in a key position to be most effective in primary preventive medicine. It is self-evident that successful primary prevention is one of the most effective ways of increasing the efficiency of the health care apparatus and of reducing the gap between supply of physicians and demand for services.

### III. Definition of the Body of Knowledge to be Incorporated into the Training of the Family Physician

The successes of medical education are well documented and widely publicized. These include the advances in basic knowledge and in technology which stem from the educational and research programs associated with increasing specialization during and subsequent to World War II.

There are many who feel that the greatest failure of medical educators during the same period was the failure to recognize the changing needs of the public (many of which stemmed from these same advances) and the failure to adapt their educational programs to these changing needs. This is probably one of the main reasons for the rapidly progressive decline in interest of the medical student toward choosing the general practice of medicine as a career. As an example of this, let us consider the general practitioner of the past and the difference in his training as compared to the probable training of the family practitioner of the future. It must be borne in mind that the family physician about whom we are talking today will be practicing in the year 2000. Consequently, he must be trained in a different manner from the way in which we have been training physicians to the present time. Many reasons have been given to explain the decline in attractiveness of general practice to medical students of today. It is not necessary to recount all of these reasons again, but we should consider one reason that seems pertinent

and which is not emphasized very often.

As one looks back on the recent history of medicine, there seems to be agreement that general practice was at its zenith in the late 1920's and 1930's, probably until World War II. During this time the general practitioner was trained as an undergraduate medical student and as an intern and went into practice directly from his internship. The important point is that he did receive training for general practice as an undergraduate and as an intern which was comparable to that of most of his colleagues and which was adequate for the period in which he was to begin his practice.

Subsequent to World War II, interest in specialty training increased and a progressively larger number of students went into specialty training following internship instead of into practice. In addition, it is probable that the character of undergraduate medical education and of the internship gradually changed due to the subtle influence of the knowledge that more students were taking additional training after internship. Consequently, all other forms of practitioners except for the general practitioner, were trained formally in an identifiable discipline. Of all the areas of medical practice, general practice is the only area in which no satisfactory specific training for the job to be performed is available despite the fact that this job is the broadest and most difficult of all. This is probably an important factor in explaining the declining appeal to the medical student of general practice as a career. It probably also accounts for the discouragement of many general practi-

tioners after they have practiced for a few years. Therefore, in any consideration of a training program for family physicians this factor must be borne in mind and positive emphasis must be made that the trainee in this program will be provided a highly specific training program which incorporates a unique body of knowledge for the job which he will be expected to perform. This really is the basis for the statement that a new specialty is being created.

It then becomes our obligation to carefully define the body of knowledge that will be transmitted to the student in the course of his training which will give him a function distinct from that of other physicians.

In the early deliberations on this problem, the committee decided that the most reasonable approach would be to list the life cycle of the individual and the life cycle of the family, and then to look at each portion of the life cycle with the objective of defining need which might be fulfilled by the family physician. This was done. As a result of this approach, the committee defines in broad outline the body of knowledge of the family physician as follows:

1. Knowledge of the physician's role as a clinician. This includes specific definition of the doctor-patient relationship. It also includes a definition of the nature of agreements arrived at with patients. It should also include definition of the proper use of consultation with other physicians (doctor-doctor relationship) relative to definition of responsibility toward the patient.

Also incorporated into this relationship is knowledge of the scope of the areas of interest and ability of other health professionals such as clinical psychologists, sociologists, visiting nurses, as well as knowledge of the function of various social agencies (governmental and non-governmental) that may be located in certain communities. Definition of the various types of patients' roles should also be a part of this knowledge (the different types of patients' roles in a medical sense as well as in a social sense).<sup>6</sup>

2. Knowledge of the natural history of disease, particularly of common diseases, both relative to the disease state and also relative to the influence of disease on the patient and the patient's family (both immediate and extended), and also relative to the influence of external factors (environmental factors outside the family) on the disease process. In addition to description of the natural history of the fully developed disease process itself, considerable emphasis should also be placed on factors involved in the genesis of the disease so that preventive measures may be taken prior to the development of clinical symptoms. This is of particular importance in the pediatric area. It is felt that in this area the preventive role should be stressed maximally. It is felt that there is currently lack of knowledge of the dynamics associated with development of illnesses which begin in the period between conception and birth. The student

should be made knowledgeable of the physiology of pregnancy, the implications of change upon the mother and the child, the genetic combinations of the parents, the effects of virus infection and drug ingestion on the pregnant woman. He should also be well versed in psychosocial and cultural combinations including such factors as inter-racial and inter-faith marriages because of their effects on the developing child. He should have an understanding of normal interpersonal relationships so that he can recognize deviations from the normal and better understand family structure. Another period in the life span where some of these kinds of influences are of considerable importance from point of view of preventive medicine is the early middle-aged adult.

It must be re-emphasized that the term common diseases should not be equated with trivial diseases.

3. Knowledge of treatment of total illness in a holistic manner. This is another important area of uniqueness of the family physician if he is trained according to these concepts. Both by virtue of his training (through recognition of the multiple factors influencing the natural history of a disease) and by virtue of his unique experience with the patient's family over prolonged periods of time, he will be in an excellent position to select the most appropriate treatment from the various possibilities that usually must be considered.



This also includes understanding the importance of assuming continuing responsibility for his patients. Continuing responsibility involves the ambulatory setting, the hospital setting, and the home setting. In order for the student to do this effectively, the training program must be developed in such a manner that the trainee's environment will simulate as closely as possible his future practice environment. If this environment is to be developed, there must be built into the administrative aspect of the Division of Family Practice clear understanding relative to the availability of such areas as an effective ambulatory care unit, ready access to the hospital in the form of a separate hospital service, and the manner in which consultation is used.

4. Knowledge of epidemiology and statistics is necessary to enable the clinician to assess the significance of various factors altering the pattern of well being of the individual and of the family and to enable him to fulfill his role in preventive medicine. This knowledge will also be helpful to aid the family physician in judging quality of medical papers.
5. Knowledge of the dynamics of family development and of individual developmental crises and their influence on the well being of the patient is necessary. This should involve study of various behavioral sciences such as clinical psychology, cultural anthropology, psychology of aging, comparative religion, comparative psychology of various

socio-economic strata, psychology of chronic illnesses, and psychology of dying. It is suggested that the student begin with a broad course in contemporary American family life, including social and religious attitudes regarding conception control. Such a background would enable the future physician to talk freely and knowledgeably with his patients rather than to merely tell the patient what he learned from his own family experiences. The student should be exposed to the attitudes of pregnant women, the emotional acceptance of the unborn child, the importance of the father in giving emotional nurturance and support. Normal individual development, patterns of family life, and individual reactions to stress and disease should be presented. This area could also include a study of psychiatric illness and emotional reactions which would be a broad course rather than the teaching of specific psychiatric syndromes.

6. Intensive training in history taking, not only from point of view of outlining a specific syndrome, but from point of view of determining what brings a patient to the physician should be included.<sup>6</sup>
7. Knowledge of skills and contribution to be expected from other health professionals.
8. Continuing attention must be given to improved techniques for continuing education of the physician. This should include studies of different forms of practice (such as small

group practice in smaller communities) which would enable the physician to leave the community at intervals for periods of study as well as for periods of recreation.

As one views the needs of the public from the present specialty structure of medical practice, it would seem that the greatest deficiency is in the medical aspect (in the broadest sense of the term medical). It is felt that the family practitioner should be extremely knowledgeable of principles of pediatrics, psychiatry, internal medicine, surgery and behavioral sciences in order to function effectively. Relative to the surgical specialties, it is felt that he should be well grounded in surgical principles so that he can recognize indication for surgery and can perform good pre- and post-operative care when necessary. He should also be trained to handle emergency situations.

The committee feels that the basic training should be the same for all of the trainees who participate in this program. It recognizes that there will be different needs for different regions. However, it is felt that toward the end of the training, most trainees will have made a decision as to where they are likely to practice. A period of six months elective time will be left in the program so that any special training necessary to fulfill the needs of the area where the student chooses to practice may be accomplished.

#### IV. The Training

The committee felt that the manner in which the training program for family practice and community health is developed will be of critical importance to the success of the program. The members of the committee agreed with the frequently stated opinion that one of the important factors in attracting students to this program will be that it be given equal consideration with other programs for time in the undergraduate curriculum. It is felt that contact with the various medical disciplines influence the student in his career decision as he progresses through his medical training. Consequently, it is felt that he should have contact with the family practice and community health program at intervals throughout his undergraduate training. The committee also felt that at least one of the areas of study should be introduced during the premedical training program at Minnesota. There was agreement among the committee members that it would be important to have an active program with which the student could identify during the entire course of his training.

As the discussions progressed, it became apparent that the training program would have to be considered from two points of view. It would first have to be developed in terms of the ultimate goals of the program and then would have to be developed also from point of view of an initial transitional program during which time a staff and physical plant could be developed. The training program from point of view of ultimate goals was discussed initially.

## ULTIMATE GOALS

The undergraduate medical curriculum was considered first. The course titles listed below represent an attempt to extract from the previous section on the body of knowledge certain courses which would include the material necessary to develop this body of knowledge. The course titles and their place in the curriculum are listed below:

Last Year of Pre-Med: The Contemporary American Family (Elective, but Recommended)

The committee felt that this course should be set up in cooperation with the Family Study Center. It should include patterns of family life, family developmental crises and individual developmental crises. The course material should develop as the product of ongoing discussions between the faculty of the Family Study Center and the faculty of the Family Practice and Community Health Program. It should be oriented heavily toward problems that arise in medical practice.

First Year of Medical School: Patterns of Contemporary American Culture

This should also be taught with a medical bias rather than presenting a review of the total field in depth. This course would encompass clinical psychology, comparative psychology, psychology of aging and dying, comparative religion and cultural anthropology. The content of this course also should be developed through conferences between the staff of the family practice

program and members of the behavioral science departments who will be responsible for teaching the material.

Second Year of Medical School: Epidemiology, Statistics, History Taking, Preventive Medicine, Individual Reactions to Stress

Third Year of Medical School: Study of the total illness in a holistic manner.

Definition of the physician's role, the patient's role, the doctor-patient relationship, and the doctor-doctor relationship. Further discussion of acquisition of primary data. This would include also definitions of responsibilities and capabilities of other health professionals and of various agencies. This should be presented in a seminar type course rather than in a didactic lecture course. During the first three years, the student may have limited and gradually increasing access to patients and their families, but would have no direct medical responsibility.

During the third year, a clerkship program would be implemented during which time the student would begin to learn clinical application of principles studied in earlier years. During this time he would begin to assume increasing patient responsibility. During this time attitudes and skills would be developed by observation and example. The student would begin to develop knowledge in recognizing and caring for common diseases. Disease prevention would be emphasized. This would be done in an ambulatory setting, hospital setting, and home setting. Various clinics, seminars, and conferences would be made available to the student.



The committee felt that this portion of the undergraduate training program should be the same for all medical students. The committee was of the opinion that it was still advisable to train a basic physician initially, but is uncertain at this time at what point in his training the student will begin to diverge into the area of his career selection. It is assumed that it will begin at some time during the fourth year of medical school. At this point those students interested in making a career of family practice would select the family practice track.

#### GRADUATE TRAINING PROGRAM

The graduate training program will begin at the conclusion of four years of medical school. The family practice track will probably begin sometime early in the fourth year of medical school. The fourth year of medical school will probably consist of clinical work and basic science work. The committee felt that the graduate training program relevant to family practice should begin in the following manner:

The New Graduate. It is felt that the new graduate will require a certain period of time to develop further his skills and insights relative to patient care problems. Therefore, it is planned to have him undertake his initial responsibility in the inpatient department in a similar manner to the present-day intern. The duration of this period cannot be determined with certainty at this time, but it will probably be somewhere between 6-12 months after

graduation. This will be determined at least in part by the time at which he begins to track into the family practice program (i.e., if the tracking system began early in the senior year, he would probably be able to begin to acquire these skills during the last half of his senior year after his basic science work and after some further clinical clerkship experience.) Thus, it may be possible that his "internship" experience would be fulfilled six months after graduation. During the last two and a half years of the program, the trainee would serve in the capacity of a resident.

Residency Training Program. The resident will assume his responsibility in the ambulatory care unit, the hospital care unit, and in the home care aspects of family practice. As he acquires patients, he will accept responsibility for these patients and continue to assume responsibility for the same patients for the duration of his tenure with the program. He will see them for out-patient care and will advise them accordingly during these interactions. When it becomes necessary for the patient to be hospitalized, he will continue to assume responsibility for their hospital care. He will utilize this continuing relationship to implement principles of health maintenance. His relationship with the intern will be the same as the relationship between the resident and the intern at the present time in other departments.

Permanent Staff. The permanent staff of the family practice and community health program will function in an advisory capacity with the resident relative to the assumption of responsibility for members

families as patients. They will assume responsibility for the patient when they first meet the patient and will continue to assume responsibility for the duration of their tenure with the program. Whenever the house staff changes, the permanent staff members will continue to assume responsibility for this patient in conjunction with the new resident. The permanent staff will also assume responsibility for the patient both as an outpatient and inpatient with regard to decisions made relative to ongoing patient care. The relationship between the permanent staff and the house staff will be an advisory one in the same manner as the relationship between the permanent staff and the house staff in other departments at the medical school. It is emphasized that the ultimate decisions to management will be those of the permanent staff.

Students. During the period of clerkship the student will attach himself to the combination of permanent staff and resident and will follow the patients along with the permanent staff and resident both in an ambulatory care setting and in the hospital setting.

During the clerkship and graduate training program of the family practice and community health division, a program of seminars, conferences and rounds will be established.

#### AFFILIATED PROGRAMS

It is contemplated that affiliated programs will be established in conjunction with various other community hospitals in the Twin Cities and perhaps also with some group practices throughout the

state. The committee discussed the advantages of establishing a small unit in one of the communities located centrally in the state in the form of a controlled preceptorship in order that the trainee may spend a couple of months in this environment and see how rural practice can be performed comfortably. Although this was discussed only tentatively, it could be a desirable part of the program if a group could be solicited which would be interested in making available a consistent program for the trainees and whose members would be qualified by virtue of their own interest, experience, and training to be part of the staff of the Medical School. Faculty appointments should be given to these preceptors, and there would be frequent conferences between these preceptors and the medical school permanent staff.

Initially, the permanent staff of the program should consist of pediatricians, psychiatrists, internists and family practitioners. The family practitioners for the staff will be obtained gradually as trainees graduate from the program. (See below, page 28)

#### INTERIM OR TRANSITIONAL PROGRAM

The committee realizes that a program such as this is an ambitious undertaking and that it will have to be developed gradually. During the period of development it will be necessary to begin in a more conservative manner. The initial full-time staff would number somewhere between 8-10 persons. The initial resident group would number somewhere between 3-5 residents per year.

The students would have to be brought gradually into the program as it is developed. Initially, the students would be selected from those expressing an interest in family practice as a career. It is hoped that more and more students will be incorporated into the program with the ultimate objective of having all of the students in the class rotate through it for a brief period of time during their undergraduate clerkships.

#### SOURCE OF PATIENTS

A recurrent criticism of current medical education is that the student is trained for medical care in a context which is dissimilar to the context in which he will be practicing medicine subsequently. The reason given for this inappropriate training is the past custom of using indigent patients with which to teach students and house staff. Many feel that this leads to an experience in episodic dispensary care. In those institutions where all the patients are referred, it also frequently leads to single contact and disease oriented care. The committee feels that the purpose of this program would be much better served if the patients could be truly representative of a cross section of society from point of view of economic strata, cultural strata, intellectual capacity of the patients, etc. The committee also feels that this patient source should not be dependent upon referral if we are to assume continuing responsibility and if we are to attempt to teach principles of comprehensive and continuing care and principles of health

tenance. Therefore, the committee recommends seeking out a patient population which will fulfill these criteria. A number of methods for defining such a patient population were discussed. The group that seemed to lend itself best to this program is the group consisting of University faculty and employees and their families. It is felt that the possibility of having this group as a source of patients should be further explored. If it should not be possible to obtain this group, another consideration may be the employees and families of one of the local industries. Other defined populations will be developed in the affiliated units.

#### PHYSICAL FACILITIES

During the initial planning and developmental stages, physical facilities for the family practice program should be developed within the present University of Minnesota Medical Center in accordance with the need for space to service whatever patient load that the initial staff requires for a teaching model. The committee agreed that space should be provided for an outpatient lab with adequate staff and facilities to perform routine studies so that the attending physician can obtain information about his patient as quickly as possible. It is also felt that space should be provided for an x-ray department for obtaining chest films and films of long bones, etc., that these films would be available immediately to the staff for interpretation. More complex x-ray procedures such as gastrointestinal studies, requiring contrast studies, would be performed in



the x-ray department of the Medical Center. The x-ray films taken in the ambulatory care center of the family practice program could be collected at the end of the day and sent to the x-ray department for interpretation by the roentgenologist and for film storage. Space should also be provided for outpatient lab, electrocardiography and proctoscopic examinations.

The question of hospital bed facilities was also discussed by the committee. It is felt that during the initial stage of development of the program, the hospital bed situation would be quite labile and that only a rough estimate could be made of bed requirements. However, it was estimated that initial bed requirement would probably vary between 15-30 beds. If the program develops successfully, it is anticipated that it will become a popular and useful teaching program, both for undergraduate and graduate medical education. It seems likely that the size of the program may reach or exceed the size of some of the presently existing programs in other broad specialties relative to inpatient bed requirements. The committee feels that this should be kept in mind in regard to planning for a new physical plant.

**AFFILIATED UNITS.** (This is the second time this heading is used; see page 23)

The committee feels that the affiliated programs will have to await development until the program based at the University of Minnesota Medical Center is functioning efficiently. However, it will be both necessary and desirable to begin development of affiliated

programs as soon as possible. It is felt that some of the emergency room experience, which will be necessary as part of the graduate training program, may be obtainable at some of the community hospitals. It is also felt that one or two formal programs may be established throughout the state, where the trainee may have an opportunity to spend a portion of his time and directly observe rural group practice in action.

#### ACQUISITION OF INITIAL HOUSE STAFF

It must be realized that the developmental period of this program will be comparable to the opening of a private office and the development of a medical practice where none has existed before. The initial patient load probably will be relatively light and will then increase as members of the group selected as patients come to the program for medical care and are satisfied. Consequently, it is important that the program be initiated carefully and deliberately and that every effort be expended to assure a high quality of patient care. For this reason the committee felt that the initial house staff should be recruited in the following manner. The first group of residents should be young general practitioners who express willingness to come into the program and follow the two-year residency training program. These men should be recruited from practice and should have had enough time in practice (5-10 years) to be seasoned physicians. The purpose of the residency training program will be to give them time to develop their own ideas relative to the

purposes of the program. During this time they will be undertaking the type of training described in the above paragraphs. They will be attending seminars and conferences and rounds and will become acquainted with the staff of the program and the staff will become acquainted with them. This initial group will be recruited with the objective of staying on as part of the permanent staff upon completion of the training program. This will represent a financial sacrifice to this group and the committee feels that attempts should be made to obtain funds so that they can be subsidized at a higher salary level than the usual resident. A precedent has been set for this where residents who come into the psychiatry training program from medical practice are subsidized by the National Institute of Mental Health to the extent of \$12,000 per year. This original group of residents should number 5-6 per year so that after four years there will be 15-18 of them available for staff positions should this number be needed. When the program is running smoothly and when the patient load is adequate, an intern training program may be added. The interns could be recruited from members of the graduating class. Subsequent to this initial period, residents and interns will be recruited in the usual manner.

#### CLINICAL ATTENDING STAFF

The presence of a clinical attending staff in a program such as this may represent something of a contradiction. If one undertakes a program to provide continuing medical care and to provide

and teach the assumption of continuing responsibility in patient care, it is hard to visualize a role for a part-time teacher insofar as direct patient care provision is concerned. In the usual setting, the clinical staff attends episodically and at fixed intervals. If he is to assume responsibility for the total care of a patient, it is difficult to see how a patient's needs could be met under these circumstances. Therefore, it is felt that one consideration of utilization of clinical attending staff could be that they be utilized in either non-patient care areas (i.e., participation in seminars and conferences) or that they be utilized in the training areas where episodic care is being provided (i.e., during the house staff's emergency room experience.)

GRADUATE TRAINING PROGRAM IN REGARD TO SPECIFIC TIME ARRANGEMENTS FOR  
THE TRAINEES DURING THEIR PERIOD OF TRAINING

This section of the discussion of the training program must be viewed as a very tentative section and will almost certainly be revised as the overall program of family practice and community medicine develops. It is inserted simply as an example of how a student might progress through the training program from the time he finishes his medical school experience. It must be remembered that the students who come into this program will be coming from four different backgrounds. These are:

1. Minnesota students who take their internship in the family practice program.
2. Minnesota students who take their internship elsewhere and then return to the family practice program.
3. Students from other schools who come into the program during the internship year.
4. Students from other schools who take their internship elsewhere and then come into the program.

For this reason, the specific time sequence with which a student progresses through the training program must be very labile. With this lability in mind, the following tentative program is offered:

A. Medical School (Minnesota student)

It is our understanding that during the fourth year of medical school the medical student will have made his career choice and will be discussing a program for the fourth year with an advisor from the

area of his career choice. An advisor in the family practice program may suggest the following:

1. Three months of basic science which would probably be in one of the behavioral sciences.
  2. Three months on a medical clerkship.
  3. Three months on a pediatric clerkship.
  4. Three months on a family practice clerkship.
- B. Internship year in the family practice program.
1. Six months of inpatient training.
  2. Six months of total patient care both in the ambulatory care unit and the inpatient service combined.
- C. As an alternative, the internship year may be taken in either a medical internship, a pediatric internship, or in some of the approved mixed internships. This would be determined by consultation between student and advisor.
- D. Residency Training Program - first year
1. Assumption of complete continuing responsibility for patient care in the office, hospital and home setting, with his staff consultant.
- E. Second Year
1. The first three months of the second year could be a continuation of the same experience or experience on one of the other hospital services such as medicine, pediatrics or psychiatry.



2. A second three months would be emergency room experience in one of the affiliated hospitals. A third and fourth quarter of the second year are designated as elective time and the student could choose further experience in basic science, family practice, medicine, pediatrics or OB. This would be determined by his particular interest and also would be determined to some extent by where he planned to practice.

Throughout the training period a series of conferences, grand rounds, seminars and lectures will be made available.

It must be emphasized that the above sequence can and will be altered depending on the background of experience of a particular student. In addition to the above, the committee feels that the Family Practice and Community Health Division should assume a responsibility relative to continuing education of the graduate trainee from the program.

The following diagram is another way of expressing a possible progression of a student through the family practice program, both from Minnesota and from an outside school.

Minnesota student  
(comes at end of 3rd year)

Student from other school  
(comes at end of 4th year)

3 months basic  
science

3 months medical  
clerkship  
3 months pediatric  
clerkship  
3 months family  
practice clerkship

OR

6 months family  
practice clerkship  
3 months medicine or  
pediatric clerkship

INTERNSHIP

Family Practice Internship  
6 months hospital  
6 months total family  
practice program

OR

Medicine or  
Pediatrics or  
Mixed

RESIDENCY

3 months medicine  
or pediatrics  
3 months emergency  
room  
12 months family practice  
. 6 months elective

OR

15 months family practice  
3 months emergency room  
6 months elective

(elective: family practice, medicine, pediatrics,  
obstetrics, basic science, psychiatry)

BIBLIOGRAPHY

1. Coggeshall, L.T.: Planning for Medical Progress through Education. A report submitted to the Executive Council of the Association of Medical Colleges. (April) 1965.
2. Millis, J.S.: The Graduate Education of Physicians. Report of the Citizen's Commission on Graduate Medical Education. (August) 1966.
3. Willard, Wm. R.: Meeting the Challenge of Family Practice. The Report of the Ad Hoc Committee for Family Practice of the Council on Medical Education of the American Medical Association (September) 1966.
4. The Core Content of Family Medicine. G.P. 34:225-245, (November) 1966.
5. Cope, O. and Zacherias, J.: Medical Education Reconsidered. Report of the Endicott House Summer Study on Medical Education. Philadelphia: J.B. Lippincott Company (July) 1965.
6. Magraw, R.M.: Ferment in Medicine. Saunders; January, 1966.
7. Darley, Ward: Medicine, Money and Manpower - The Challenge to Professional Education. New Eng. J. Med. 276:1414-1423.
8. Peterson, Osler, L. and Fahs, Ivan J.: Health Manpower for the Upper Midwest. (June) 1966.
9. Fein, Rashi.: The Economist's View. J.A.M.A. 201:849-851. (September 11) 1967.

A. Abstract.

1.) Objectives.

The objectives of this new department within the Medical School are as follows.

a.) To develop and implement a training program for the purpose of training a physician in the principles of Family Medicine and Community Health. The Subcommittee on Family Practice and Community Health has already planned the basic program. This plan represents an attempt to define a discreet and unique body of knowledge peculiar to the family physician. This body of knowledge emphasizes both expertness in the natural history of and in the treatment of common diseases and in principles of health maintenance, as well as expertness in recognizing how his effectiveness in practice may be enhanced by appropriate use of associated health professionals.

2.) The steps of the procedures to be followed in this development are as follows.

a.) Planning of the program (this has already been done and is reported in detail in the Report of the Subcommittee on Family Practice and Community Health of the University of Minnesota Medical School dated October, 1967. A copy of this report is appended.

b.) Staff acquisition, remodeling of proper patient care areas, development of undergraduate curriculum as well as a graduate training program which will lend itself to the teaching of this new body of knowledge, training of the future teachers of the department, making arrangements with certain affiliated units outside of the University Hospitals to help in the teaching program, defining and acquiring a patient population which would be appropriate for this kind of training program, and working with insurance companies in trying to develop a realistic method by which the patients of this program will be able to pay for the services they receive.

c.) Implementation of the program in July of 1969.

B. Problem. In its broadest sense, the problem to which this program is addressed is the frequently stated and well documented finding that our health care delivery system is presently inadequate to meet the demands for health services and that the demands are growing more rapidly than we will be able to fulfill them unless we deviate from our present method of operation. The present deficiency has been defined both in terms of too few personnel (physicians as well as associated health professionals) and in terms of inefficient utilization of the skills that are available. We feel that the compelling reason for training a new kind of physician (family physician) is to attempt to better utilize all of the manpower of the health professions more efficiently by developing a body of knowledge that will make the family physician a more perceptive clinician and which will also make him more knowledgeable in the recognition and use of the various kinds of help available to him from associated health professionals.

C. Objectives. Our specific objectives in attempting to train a physician well versed in Family Medicine and Community Health at the University of Minnesota are as follows.

1.) It has been shown in the report entitled Health Manpower For the Upper Midwest (page 63 and also figures 10 and 11) that the more broadly trained physicians (i.e., general practitioners) tend to distribute themselves more evenly throughout the state than do those trained in specialty areas of medicine. It is felt that the family practitioner would be a broadly trained physician and would tend to follow this same trend. It is also stated in the same report (page 52) "Since internship and residency appear consistently as positive association or influences on the physician's practice location, it would seem that if a state were able to enlarge or strengthen its postgraduate opportunities it would then be more likely to keep the physicians it educates as well as to attract others". Since the training program in Family Medicine and Community Health will incorporate internship and residency training, as well as undergraduate training, it is felt that this also might influence a higher proportion of its trainees to stay in the state.

2.) A second objective is to attempt to reverse the trend of the last several decades in which fewer and fewer of the medical graduates, both nationally and at Minnesota, have elected general practice as a career goal. This tendency is well documented in all of the recent reports (Health Manpower For the Upper Midwest, Planning For Medical Progress Through Education, The Graduate Education of Physicians, Report of the Ad Hoc Committee on Education For Family Practice, and most



recently the Report of the National Advisory Commission on Health Manpower). During the period of planning of our program, considerable effort was expended in an attempt to gain insight into why general practice had lost desirability as a career goal for the student. Many reasons have been given for this. Two reasons which we felt were of extreme importance are elaborated on pages 10 through 12 in the Report of the Subcommittee on Family Practice and Community Health. We feel that if we have assessed this problem correctly that this new program will again attract medical students to choose Family Practice and Community Health as a career goal in increasingly larger numbers. Since there is no background of experience to draw from in assessing how many students in a given class would elect this career, we can only speculate on the basis of student interest currently. I have discussed the program with a number of Minnesota students in the junior and senior year, as well as with students in several other medical schools. Solely on the basis of these discussions, I would estimate that successful implementation of the program would at least have a chance of attracting between forty and fifty percent of the total medical school classes after the program has been in effect for a long enough period of time that the students accepted it as a permanent part of the Medical School.

3.) Another objective is to attempt to reverse the growing discrepancy between demand for medical services and availability of personnel to deliver these services. It is recognized that it will be important to train increasing numbers of physicians in the future in order to help keep pace with the increasing demand. However, it is also recognized that this would be an inadequate solution if it were the only solution proposed. Rashi Fein projects the probable increased demand over the next decade as well as the probable increase in size of the national graduating class, and states that he is uncertain if this projected increase in size of graduating classes could even keep up with the increasing demand in the absence of a program to increase individual effectiveness. In another projection, he shows that simply increasing the effectiveness of the individual physician by three percent would be the same as adding an extra graduating class over the next decade. If sufficient attention is given to this matter of increasing physician effectiveness by virtue of appropriate training programs, it is likely that the individual effectiveness could be increased by considerably more than three percent.

Another important factor that must be considered in reducing the gap between the demand for services and availability of services is that of preventive health maintenance. It is



obvious that early anticipation of health hazards with early initiation of measure to remove the hazard could be of considerable assistance in reducing demand for medical services through the medium of preventing development of symptomatic disease. The term "health hazard" is used in its broadest sense and includes psycho-social stresses, environmental hazards (both from point of view of accident prevention and from point of view of such things as the epidemiology of carcinoma of the lung, the epidemiology of degenerative heart disease, etc., as well as the more traditional aspects of preventive medicine).

4.) A long-range objective is to establish a better program for continuing education of the practicing physician through the mechanism of utilization of community resources for the training program with interchange between the practicing community and the medical school faculty.

5.) Another objective is to incorporate into this program a continuing study of the effectiveness of the educational process as well as of the effectiveness of the health care delivery system that is being taught. Initially, this will be the main research emphasis of the staff. We feel that this should be a dynamic program which is sensitive to the changing needs of the public. We recognize that our initial program represents a starting point and that it will probably be modified year by year as we gain experience with it. As part of this research program, it is planned to attempt to incorporate a model through which we can study effectiveness of rural medical care in the future.

D. Relationship to Trends in Medical Education and Medical Care.

As the Subcommittee on Family Practice and Community Health attempted to define the necessary body of knowledge to be incorporated into this program, we were keenly aware that we were attempting to predict needs of the future rather than to define needs of the past. We recognized that the graduating trainee from this program would be practicing medicine in the year 2000. We attempted to define his function both relative to urban and rural medical care in this context.

Our feeling relative to recent trends in the production and distribution of physicians in Minnesota is already stated under Objectives above.

This program relates intimately to future developments in the pattern of health care delivery. One of the greatest challenges facing medical educators and the medical profession in general stems from the recognition that if future medical manpower needs are to be fulfilled,

a re-definition of the responsibility of the physician is indicated. This is clearly implied in Rashi Fein's book entitled "The Doctor Shortage - An Economic Diagnosis". The critical point in this re-definition is that an accurate determination be made of those things the physician does which, by virtue of his peculiar training and experience, he is uniquely qualified to do and should continue to do. An equally accurate determination must be made of those things that the physician now does which could be done by personnel of different training and experience backgrounds. Some of these responsibilities could be carried by presently existing associated health professionals. It is probable that new kinds of health professionals will have to be trained to perform some of the other tasks. These decisions should be made in a deliberate and objective way with the sole objective being the ultimate best interest of the public. In a sense, the program of Family Medicine and Community Health represents a beginning attempt to re-define the role of the general practitioner in terms of the family practitioner of the future and to prepare him specifically for those areas of medical practice in which he will be most deeply involved.

This program also will lend itself well to an on-going study of the health care system, with specific reference to the physician's place in it and to the responsibilities he should continue to assume as future needs become clearer.

There are no examples of programs exactly like this one at the present time. Although it follows in a broad way the suggestions of the Millis Report and the Willard Report and incorporates many of the recommendations of the National Advisory Commission on Health Manpower, it is a unique program. At the present time there are approximately twenty-two such programs being developed in the United States. All of these programs are in their formative stages. I have reviewed many of these programs and have visited some of them, and find that each of them tends to place its major emphasis on slightly different segments of the program. I hope that it will be possible to maintain close cooperation among the various faculties of these programs so that gradually a common training pattern for family practitioners may be developed.

This program represents a change from the classic pattern of physician education in that a medical school model of Family Practice will be provided and will be kept visible to the student through his undergraduate years as well as during the graduate training program. To the best of my knowledge, it represents the first attempt to teach an integrated body of knowledge that is identified with Family Practice and Community Health within a division of the Medical School and by a separate faculty specifically trained in this area.

E. Description of the Proposed Program. Attached find the Report of the Subcommittee on Family Practice and Community Health of the University of Minnesota Medical School dated October, 1967. This describes in considerable detail the underlying philosophy and basic concepts of education and medical care upon which the program is based, as well as the content of the curriculum, with emphasis on the unique didactic, clinical, and research features designed to specifically assure achievement of the program objectives.

1.) It is our intent to recruit an entirely new faculty for this program. The initial faculty will consist of a small core representing Internal Medicine, Pediatrics, Psychiatry, and General Practice. We plan to utilize certain of the behavioral scientists on a consulting basis in order to help teach the body of knowledge to the initial faculty. We intend to recruit the remainder of our staff from men who are presently engaged in active general practice. This group will enter into a period of training, during which time the body of knowledge will be presented to them in an integrated way so that they can subsequently teach the essentials of Family Medicine and Community Health to the subsequent students and house staff. We felt that this was a new discipline and that currently there are no Family Practitioners as defined by this program. Therefore, we felt that it would be essential to the success of the program to train our own faculty.

2.) Certain portions of this program will be taught to all of the medical students in the first, second, and third years of their undergraduate experience. At the end of the third year, the students will make a choice as to their future career goal. Those who choose Family Practice will be given an advisor from the faculty of the Family Practice program and will continue to pursue this career for the remainder of their undergraduate training program and graduate training program.

As was mentioned earlier, it is indicated in the Report on Health Manpower For the Upper Midwest that the more broadly trained physicians tend to distribute themselves more equitably throughout the state. The product of this training program will be a broadly trained physician. It is also stated in the report that graduate training programs tended to be a strong determining factor in where a physician chooses to practice. It is our hope that having a graduate training program as part of the Family Medicine and Community Health program will cause a greater proportion of the trainees to choose Minnesota as a place for their future practice.

F. Estimated Timetable for Implementing the Proposed Program.

The time between the date of this report and July of 1969 will be spent in developing the program along the lines outlined in the Report of the Subcommittee. The initial staff will be recruited. A remodeling program will be undertaken in order to provide an ambulatory care center as well as an in-patient service. The initial resident staff will be recruited. A patient population will be defined. An insurance program will be developed for this patient population. Negotiations will be continued with various community facilities in an attempt to develop affiliated training programs within the community. The target date for implementing the program is July of 1969. Since we will be able to begin with a resident staff as well as with undergraduate students, and since the residency training program is of two years' duration, the total time estimated from the implementation of the program to the production of the first graduates is two years.

G. Methods for Evaluating the Proposed Program. We are currently attempting the formulation of a research design to attempt to define the quality of the teaching program, the quality of delivery of health care, and also to attempt to determine the effect of one kind of a teaching program as compared to other kinds of teaching programs on the development of medical students. Because the purpose of this study project will be to attempt to add new insights in methods of evaluating quality of the teaching process, methods of evaluating quality in the patient care process, and methods in evaluating the effect of a training program on the student himself, it is apparent that this represents a very difficult type of evaluation. However, we feel that the importance of this kind of study is great enough that we plan to assign a portion of our staff to this project so that we will be ready to collect data at the time of implementing the program.



UNIVERSITY OF *Minnesota*

MEDICAL SCHOOL • DEPARTMENT OF MEDICINE  
DIVISION OF FAMILY PRACTICE AND COMMUNITY HEALTH • MINNEAPOLIS, MINNESOTA 55455

June 21, 1968

TO: Robert B. Howard, M.D., Dean

FROM: B. F. Fuller, M.D.

This memorandum is in response to our conversation on June 18th when we discussed the submission of the Family Medicine and Community Health proposal to the Senate Interim Subcommittee on Medical Education. I would add the following comments to page 2 of the report I submitted to you as part of the first objective.

The Subcommittee on Family Practice and Community Health recognized that another problem which directly related to Family Practice was that of attracting the practitioner to the rural communities. We felt that we would have to study this problem in two steps. The first step would be the training of the practitioner. The major portion of this report deals with the details of the training program. The second step in the solution of the problem of attracting physicians into rural communities would seem to be to attempt to define the reasons why physicians may not be as interested in establishing their practices in rural communities currently as they have been in the past. Many reasons have been suggested for this. Of the many reasons that have been given, the Subcommittee felt that the following were the most pertinent.

1. Professional isolation of the physician as he becomes more and more involved in and preoccupied with the medical problems of his community. This is a reason that will become progressively more important because of the more rapid advances made in medical knowledge contributing to the rapid rate of professional obsolescence of the physician who is unable to keep up with the current advances.
2. Incarceration of the physician within the confines of the community in which he is practicing. This is related to No. 1 above in that the single physician in a small community finds it progressively more difficult to leave the community for defined periods of time, either for study or for vacation. As he assumes more and more continuing responsibility in patient care he finds it difficult even to leave for a matter of two or three days if there is no one to substitute for him during his absence. I have talked

with a number of general practitioners who have left small communities and two of them have stated very clearly that the problem of the small community was not that of hiring one physician but that of hiring two physicians simultaneously if they hoped to have medical care in their community.

3. Lack of sufficient support (both from other physicians as well as from associated health professionals) which is becoming progressively more necessary in the effective provision of medical care.

As the Subcommittee examined these reasons, together with all of the other reasons that have been suggested (educational facilities, cultural opportunities, personal preferences of the physician's wife or of his growing children, etc.), it seemed almost inevitable that this trend of physicians away from isolated rural communities would continue in the foreseeable future unless imaginative planning could remove the above-mentioned problems. It was suggested that a study be made with the objective of attempting to determine if at least a "medical urbanization" of the rural community could be accomplished in such a way that the professional isolation and incarceration of the physician could be avoided. It was hoped that regions could be found throughout the state which could be studied from point of view of population density and in which a population center could be found which would be not more than thirty minutes from the majority of residents of the region. If such a geographic division of the state were possible we felt that we could then establish a central area in which all of the physicians could cluster and practice rather than having them scattered individually throughout the larger area. This would enable them to have intra-professional support as well as providing a large enough group to enable them to have help from the associated health professionals. The Subcommittee requested that a study of rural health care be made and this is being done under the direction of Professor Bright M. Dornblaser of the program in Hospital Administration. It is our hope that we can continue to work cooperatively on this project with the ultimate goal of finding a location within the state in which we could establish a model in order to see if some of the present trends could be reversed.



## APPENDIX IV

### ADMISSION POLICIES OF THE MEDICAL SCHOOL

Information published annually in the Medical School Admission Requirements handbook of the Association of American Medical Colleges, the most widely distributed and used source of information on United States Medical Schools and their admission policies, is presented to interested, prospective students and applicants as follows:

#### Selection factors

Acceptance is based primarily upon ability and scholarship as indicated by college records and various selection tests, and upon personal qualifications as evidenced by recommendations of persons who know the applicant well and, in some cases, by personal interview. Preference is usually given to qualified residents of Minnesota and regional states having no four-year medical schools. Nonresidents may be accepted if their scholarship and other qualifications indicate that they have outstanding potential for the study of medicine. Race, color, religion, national origin, and sex are not factors in consideration for admission. The Medical School bulletin contains further detailed information on admission requirements and application procedures. Interviews with the Admissions staff are granted when requested.

Responsibility for selection of medical students resides with the Medical School Admissions Committee, one of the standing committees of the Executive Faculty of the Medical School. This Committee consists of nine medical school faculty members, generally representative of the basic and clinical science fields. The Committee includes a psychiatrist and a consultant clinical psychologist with special expertise in testing and measurement techniques for professional personnel selection. The Associate Dean and Executive Officer and the Assistant Dean of the Medical School serve as non-voting executive staff to the Admissions Committee. To assure balance, continuity, and distribution of interest and experience on the Committee, each member serves a five-year term, with one or two members rotating off the Committee annually.

Evidence of the strong preference accorded qualified residents of the State of Minnesota is provided in the statistics on the applicant group and the accepted class. Of 619 applicants for the fall 1968 entering class, 56 per cent were

residents of Minnesota. One hundred and fifty five Minnesota residents had been offered positions in that class by March 1, 1968. Of the 160 students expected to register for the fall 1968 freshman medical class, 140 are residents, or 88 per cent. In general, the percentage of freshman medical students in the process of entering during the past 10 years has varied from 85 to 95 per cent. Although the Admissions Committee has not established any quota system with respect to geographical origin within the State of Minnesota, nor indeed has it been guided in selections by that factor, in general the distribution geographically of accepted Minnesota resident students has corresponded roughly with the urban-rural distribution of the State's population.

Secondary preference is accorded residents of the upper midwest region, especially non-residents from North Dakota, South Dakota, and eastern Montana, regional states which do not have four-year medical schools. In addition, the Medical School has an agreement with the two-year medical schools of the University of North Dakota and the University of South Dakota through which, for the period 1960 through 1966, transfer places in the junior medical class have been assured for satisfactory students designated by those schools from their graduating second year classes. In 1967 and 1968, this transfer agreement was extended to an assurance of up to nine places for each of the two schools, the transferring students to be appropriately distributed over the scholastic range of the transferring class.

In addition to the applicants initially offered positions in the freshman medical class, the Admissions Committee selects 30 to 40 "alternates", who were placed on a "stand-by" basis. These alternates are informed that they may be offered a place in the medical class at a later date should previously accepted students withdraw and thus relinquish their places. For the past two or three years, the Admissions Committee has regarded the applicants they have designated as alternates to be adequately qualified for medical school admission. The qualifications of this alternate group provide an indication of the availability of sufficient numbers of qualified applicants to fill a future expanded entering class of 200 students at the University of Minnesota Medical School, without compromising the general standards

of academic and personal qualifications for medical school admission. Annually a few alternates are enrolled in the entering class by September in replacement of students who have withdrawn. In addition, a few alternates annually receive acceptances from and enroll in other medical schools in the United States.

Revised data \*  
September 27, 1968

APPENDIX V

Comparison of Funds  
Appropriated by State  
for Medical Education  
1967-68

<u>State University</u>	<u>Medical School Budget from state sources</u>	<u>No. students in entering class</u>	<u>Total Students 1967-68 *</u>	<u>State funds per student</u>
Washington	\$ 5,973,461	81	326	\$ 18,323.50
Colorado	4,262,930	86	339	12,575.92
Iowa	5,099,000	127	488	10,440.77
Wisconsin	3,800,000	104	402	9,452.74
Michigan	6,342,886	210	797	7,958.45
Mississippi	2,000,000	85	306	6,535.95
MINNESOTA	3,132,134	160	630	4,971.64
South Dakota (2 yr.)	412,520	44	93	4,435.70

Note 1: All budgets are comparable in that they include medical school budgets only, excluding hospital budgets, schools of nursing, schools of public health, etc. All institutions provide building maintenance from other, central funds. All medical schools in institutions listed have some teaching responsibilities for dental and/or nursing students, arts college students, etc., except Colorado, which has no such responsibilities. Mississippi has no dental school. The Colorado budget includes tuition and research overhead, which are directly received and budgeted in that medical school.

Note 2: If the funds requested to correct current deficits with respect to academic and civil service positions were made available, the above figures would be as follows:

MINNESOTA	7,267,506	160	630	11,535.72
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\* Data previously submitted related previous year's enrollments to current budgets. When 1967-68 enrollment figures became available the "State funds per student" ratios were updated and are presented here.

APPENDIX VI

Excerpt from  
Report of Survey of  
University of Minnesota  
College of Medicine

"It is observed that the basic science departments are functioning largely as University departments with the usual amount of undergraduate teaching found in a large university and not as graduate school departments, as is true in many other schools of medicine. The medical student, in some of the departments, tends to be lost in the midst of the mass of teaching efforts and the surveyors fear a dilution of the efforts of senior faculty in this widely-graded program in education. This complex function is expected to operate on minimal budgets and minimal space for the teaching activities. In particular, it is recommended that there be general increases in all departmental budgets for services rendered, and that there be improvement in space allotments to each department if general university teaching functions are to be continued."

"Supply budgets are particularly low. A substantial amount of supplies and expendable materials for teaching purposes are now being paid out of research grants."

Survey by the  
Liaison Committee on Medical Education  
Representing the  
American Medical Association  
and the  
Association of American Medical Colleges

April 3-6, 1961



