Health Sciences.

Sub-comm. begin work on spelling out staff + physical resource implications of program as soon as possible.

Begin by specifying kind + number. Later begin to talk about location with relation to other units

Special sub-comm to oversee writing of full-comm. pre-lim report:

Shepherd
Howard
Sheffer.
Weitzman

Covert - welcome
ASSOC Dean
✓ Physiologist

SUGGESTED AGENDA FOR LEARN COMMITTEE MEETING #11

MONDAY, SEPTEMBER 13, 1965

1. Welcome guests
   Dr. Mead Cavert, Assoc. Dean of Medical School
   Dr. Bobenreith from Chile (again) Bobenreith
   Dr. Eugene Grim will introduce his sub-committee members
   Mr. Westerman will introduce Mrs. Ritzen
2. For the record it will be noted that certain materials have been sent out and meetings have been held for which minutes are not available at this time.

SENT OUT SINCE THE LAST LEARN MEETING

1. Clinical Medicine Task Force July 19 (#5)
2. Public Health July 22 (#4)
3. Clinical Medicine Task Force August 2 (#6)
4. Public Health August 5 (#6)
5. Dentistry August 5 (#6)
6. Learn Committee August 9 (#10)
7. Public Health August 19 (#7)
8. Clinical Medicine August 20 (#7)
9.

MEETINGS HELD BUT REPORTS NOT AVAILABLE

1. Public Health September 1 (#8)
2. Basic Science September 7 (#4)
3. Clinical Medicine September 13, (#8)

MR. STEPHAN WILL SAY A WORD ABOUT PART II OF BRITISH COLUMBIA PAPER

3. In accord with request of last meeting, Dr. Anderson has been given another date for the public health sub-committee report, moving from September 27 to October 11. Dr. French and Mr. Stephan will report on September 27.

4. Discussion of next phase of this study, if time permits.

5. Perhaps after meeting get time from Howard, Schaffer & Shepherd for editing committee meeting around October 15.

COMMITTEE FOR THE STUDY OF THE PHYSICAL FACILITIES
FOR THE HEALTH SCIENCES

Minutes of Meeting September 13, 1965 (#11)

Present: Elmer Learn, Chairman, Winston Close, Lyle French, Edna Fritz, Sterling Garrison, N. L. Gault, Jr., Gertrude Gilman, Eugene Grim, Mellor Holland, Robert Isaacson, Ione Jackson, James Jensen, Richard Magraw, Erwin Schaffer, William Shepherd, Kathryn Ritzen, John Westerman.

Absent: Gaylord Anderson, Robert Howard, Frederic Kottke, James Stephan.

Guests: Manual Bobenreith, Dr. Mead Cavert.

NEXT MEETING SEPTEMBER 27, 1965, 3:30 P.M., 510 DIEHL HALL.

PRESENTATION BY: CLINICAL MEDICINE TASK FORCE - LYLE FRENCH, CHAIRMAN
HOSPITAL TASK FORCE - JAMES STEPHAN, CHAIRMAN

Revised timetable for future meetings:

September 27	Report of Hospital Task Force and Clinical Medicine Task Force
*October 11	Report of Nursing, Ancillary, and Public Health

*N. B: This meeting begins at 3:00 p.m. because three presentations will be made.

Sent out since the last Learn meeting:

1. Clinical Medicine Task Force July 10 (#5)
2. Public Health July 22 (#4)
3. Clinical Medicine Task Force August 2 (#6)
4. Public Health August 5 (#6)
5. Dentistry August 5 (#6)
6. Learn Committee August 9 (#10)
7. Public Health August 19 (#7)
8. Clinical Medicine August 20 (#7)

Meetings held but reports not available:

1. Public Health September 1 (#8)
2. Basic Science September 7 (#4)
3. Clinical Medicine September 13, (#8)

MINUTES:

Mr. Westerman introduced Mrs. Ritzen as his new assistant, taking Mrs. Furber's place.

The preliminary report of the Basic Sciences sub-committee was reviewed by Dr. Grim.

QUESTION: Regarding the division of Microbiology, shouldn't basic sciences be divided, taken out of medical sciences, and put into I. T. ? This has been discussed and would certainly affect space requirements. However, there are arguments against this proposal. It would sharpen the distinction between medical Physiology, for example, and basic Physiology. We have already made one step in this direction in the case of Microbiology and in designing separate courses for graduate students in some departments.

QUESTION: Would two types of Physiology be necessary - clinical and basic? That would depend on the individual's interest in different aspects of the sciences. We can already see a parallel in Engineering and the type of Math, Chemistry, etc. taught for that purpose. A division would mean that people in fundamental areas would be free to pursue their interests without concern for application. This is how the College of Biological Sciences grew up. There have been spikes of excellence in this area but no unit to represent the overall program. There are two ways in which an individual in Biological Sciences can contribute to the overall biological sciences:

1) He can be a direct member of a faculty of a college;
2) He can maintain dual citizenship and draw on the excellence in a clinical field.

QUESTION: Has dual citizenship worked out well? It has worked well in I T. It is too early to say in the College of Biological Sciences.

COMMENT: Some instances of dual citizenship in the medical school have also worked out well in a very limited way. We'll have to develop this more because of the way in which the University is developing. In CLA, Chemistry, Math, Physics have worked well. Research funds would decrease, however, if members of the medical sciences transferred to the Biological Sciences College.

COMMENT: Even though this dual citizenship has worked well in it, I would fear that there would be a tendency to play one department off against the other.

QUESTION: Where would the clinical student fit into basic Physiology or another biological science? He would be channeled toward a more clinically oriented professor.

QUESTION: What would be the nature of the administrative problem if Basic Sciences were split into clinical and fundamental divisions? None really. Many members of the Basic Sciences Department would abhor any move out of the Department, or teaching a separate course to graduate students. There is

no unaminous support for this move or separation.

QUESTION: To what extent does the Basic Science Department have liaison with undergraduate student requirements? There is only informal liaison.

QUESTION: Will dental students take more credits in Basic Sciences in the future; will the present 64 credits be increased to 98? Not immediately and completely, but they will approach 98 credits. For example, Neurophysics and Neuroanatomy for dentists will require a foundation in Mathematics.

COMMENT: If this committee accepts the Dental sub-committee proposals, then we are accepting an added teaching load in the Basic Sciences Department.

QUESTION: Is the emphasis on the graduate student in Basic Sciences proper in view of the need to broaden the source of physicians, nurses, and technicians? I would also wonder about the tuition gap between medical students and graduate students. The purpose in establishing the Biological Sciences College is to develop a springboard for the undergraduate to start on a higher level. Up to now the undergraduate's background has been lacking, so consequently the graduate student has needed more instruction.

QUESTION: If the undergraduate is better prepared for graduate work, won't he still devote most of his time to research? Yes.

QUESTION: Is it difficult to get staff to teach Basic Sciences to undergraduate medical students? No.

QUESTION: Do you get complaints from medical students about the availability of professors? Yes, they feel like second class citizens, but that may not be completely well-founded. There is a basic difference between the medical school curriculum, in which students are taught in large groups, and the graduate school, in which students learn as apprentices.

Some committee members feel that too much attention to detail in the Basic Sciences curriculum is not necessary for all of the students, so there should be some separation between medical and graduate students, and also between courses for future practitioners and researchers.

QUESTION: Do graduate students have to be included in Medical Sciences? It is possible that the research efforts of the professors could be moved to a separate area, while they would still teach in the medical complex.

QUESTION: What proportion of graduate students are doing clinically related research? We don't have the answer to that; it's hard to draw the line. A fair fraction (1/4 - 1/3) of the full-time graduate students are M. D. 's and many are surgical residents.

It is the rule of the Physiology Department that a student must spend full-time in the Department if he is to receive credit for a minor in Physiology. The real value of the Physiology minor is that it teaches a student how to do research work.

Many of our Ph. D. surgeons have done their theses in Physiology.

QUESTION: There are severe space needs in the medical complex. Do we have to expand the Biological Sciences in the same ratio as the rest of the medical school? Does it have to be expanded in the medical complex? Perhaps it doesn't matter much one way or another, since the Department is far-flung now. However, if the Department is physically separated from the medical complex, then the professor needs to travel to the medical complex to instruct undergraduate students. Since the professor would still spend most of his time in his office and laboratories, this would further remove him from the medical students. (A significant amount of time does, nevertheless, go into training medical students.)

With more students anticipated, more staff, perhaps from the College of Biological Sciences and the St. Paul campus, will be needed to help with the teaching load.

QUESTION: The fact is that if we continue to grow, we're going to run out of space to put research laboratories next to students. The basic question is what departments and what functions can go out on the periphery in the course of growth, and what departments and functions must absolutely remain in the medical complex area? One obstacle to separation is that the medical student would be further removed from the faculty.

COMMENT: The College of Biological Sciences operates on both campuses. Also, the major theme of your report is that the Basic Sciences render minor services to the medical student. Therefore, maybe you should physically relocate your programs so you will be with the bulk of your students - the graduate students.

QUESTION: Wouldn't this magnify the division between undergraduates and graduates? Close contact between the undergraduate and the professor motivates further research on the part of the undergraduate. Won't this be decreased? Perhaps. We may also see a decrease in the number of M. D. 's pursuing graduate work. Also, I would like to emphasize that we do spend a fair amount of time with the medical student.

QUESTION: Is there a limit to expansion upward? If it takes a configuration of 30 floors to accomplish our objectives, what are the barriers? The barriers are traffic, parking and general congestion. A rule of thumb is one square foot of office space for one square foot of land. This is for other teaching areas and may not be true of the medical school. I'm just saying thirty floors may not work.

QUESTION: Is the assumption true that vertical separation is less harmful than horizontal separation? I ask this question because I am not sure that stacking your units insures the kind of integration you are talking about.

QUESTION: For any use there is an optimum population for any given area. This is fairly well established for Education. The ratio of total gross floor area to land area for campus design is 1:1. Is this true for medical schools?

QUESTION: Why isn't Human Genetics, a collaterally interested field, mentioned in the Basic Sciences Sub-Committee Report? Cyrus Barnum had some information about this and now that's been lost. There is no change in program or space requirements. Behavioral Sciences is not mentioned in this report either. It would be de-

sirable to have Microbiology come into the Basic Science complex.

QUESTION: How does the Department of Genetics relate to the College of Biological Sciences? Dr. Learn suggested that the Basic Sciences Sub-Committee meet with Dean Howard and Dean Caldecott to work out relationships with the College of Biological Sciences. What Basic Sciences says to Biological Sciences will have a considerable effect on its role and development. The Sub-Committee needs to take a harder look at this relationship. We will do this. That is a good idea to have a meeting.

QUESTION: Dr. French believes that in the future (1) medicine will be practiced according to body systems and (2) specialists will specialize more and family practitioners will be braoder. Therefore, do we need to teach such detailed courses to medical students? Since the specialist can compete with the graduate student, why not have two courses: one for medical students and one for specialists/graduate students? Perhaps we don't have to have such detail. My own opinion jibes with your statement. I think the Basic Sciences should have courses primarily for the practitioner and for the graduate students. However, I do think the graduate course should always be open for the qualified and motivated medical student. Dean Schaeffer thought there should be two Basic Science curriculums to meet the needs that have been discussed, but the graduate student course should be open to the medical student with sufficient background and motivation.

Dr. Magraw saw the need for three curriculums for the undergraduate, the graduate and the specialist respectively. The role of each should be carefully considered before planning appropriate curriculums. Dr. Magraw noted the language used in the previous distinction between the practitioner and the specialist. It was mentioned that in nursing, additional science preparation should be provided in the paramedical fields. It was also noted that the demand for more specialized courses collides with the desire of the Basic Science Departments to consolidate the courses.

QUESTION: Might not the sub-committee reports boomerang when the now absent faculty return and review the reports, since they had no part in composing them? It's up to the committee chairmen and administration to make known the representative nature of the sub-committees, thereby securing faculty approval and acceptance.

The basic question still to be resolved, the primary objective of the committee reports, is to determine the optimum configuration of the Health Sciences complex, regardless of size. It was also pointed out that the committees who have reported should proceed on with the work of identifying the number of labs, classrooms, offices and staff necessary to carry out the programs.

It was also noted that the report on October 15th will be a draft, not the final report. In fact, it is likely that this first draft may bear little resemblance to the final draft. One reason is that there has been a wide variation in the approaches to the problem. Also, the committees will have to interact with the reports of the other subcommittees.

As to the question of faculty consultation, that is the task of the group here. Remember a large number of people (66) are already involved in this study. You really couldn't ask the total faculty to wade through the paper that has gone out of these committees. Therefore this group must educate the faculty that this committee is fair and representative, and it is simply impossible for all of the faculty to be in on all

the discussions, although they should have a voice in the process through the efforts of our (66) committee members.

Dr. Learn said that a letter would be forth coming with guidelines for the second part of the assignment.

The committee was reminded that the next meetings would take place September 27 and October 11.

Respectfully submitted,

John Westerman
Executive Secretary

September 10, 1965

TO: Members of the Committee for the Study of Physical Facilities for the Health Sciences

The attached material is a preliminary report of the Basic Sciences Subcommittee prepared in the format suggested by Dr. Learn's memorandum of June, 1965.

The members of the Subcommittee are:

Ellis Benson, Professor, Laboratory Medicine

Richard Bond, Professor, School of Public Health

Gerhard Brand, Associate Professor, Microbiology

Isabel Harris, Assistant Director, School of Nursing

Robert Isaacson, Associate Professor, School of Dentistry

Joseph Larner, Professor, Biochemistry

Lee Wattenberg, Associate Professor, Pathology

John Westerman, Executive Secretary, Committee for the Study of Physical Facilities for the Health Sciences

Eugene Grim, Chairman
Basic Sciences Subcommittee

There are six major basic medical science departments at the University of Minnesota: Anatomy, Biochemistry, Microbiology, Pathology, Pharmacology, and Physiology. Three additional disciplines are sometimes added: Behavioral Science, Biostatistics, and Human Genetics. This report will be concerned primarily with the major six.

I. Role of the Basic Medical Sciences

Almost all of the activities of the six departments can be categorized under teaching or research. With the exception of Pathology, they have essentially no service functions.

A. Teaching

Outsiders, including members of the University Community outside the basic medical science departments, probably consider the primary function of these departments as teaching of medical students with the instruction of all other students falling into a decidely secondary position. In reality, fully as much emphasis, and probably more time and effort, is placed in the training of graduate students as in medical student teaching. In addition, large blocks of time are devoted to instruction of students of dentistry, medical technology, nursing, pharmacy, physical therapy and dental hygiene. Several of the departments also play a significant role in elementary biological instruction for students from the College of Liberal Arts and the Institute of Technology.

B. Research

Again probably contrary to most outsiders' views, the basic medical science departments do not limit their research to investigations on basic problems closely related to applied clinical research; that is, they are not concerned exclusively with basic medical research. A large, if not major, fraction of the research is involved with fundamental biological mechanisms which may be far removed from the normal or abnormal functions of the human patient. This does not mean that the research does not have ultimate implications for human health, but it is of a nature that the outsider might expect it to be carried out in a college of biology rather than in a medical school. At the University of Minnesota, as at many other universities, a substantial fraction of all fundamental biological investigations are carried out in the Medical School.

II. Objectives of the Basic Medical Sciences

A. Teaching

One of the major philosophical problems facing the basic medical science departments is concerned with the relative emphasis to be placed on the teaching of graduate, medical, dental and undergraduate students. Since the departments are in the Medical School, most faculty members consider their primary function to be medical student teaching despite the fact that a greater part of their time and effort goes in most instances into graduate instruction. In large part the greater emphasis on graduate teaching is the consequence of the use of the apprenticeship method as opposed to the more economical lecture system in medicine; however, despite their stated beliefs, many professors tacitly consider the training of future investigators and academicians to be more important than teaching the complexities of basic science to prospective physicians. In addition, graduate training is more consonant with the fundamental nature of many of the professors' research projects. These are sometimes so far removed from clinical medicine that the medical student may have little interest or understanding. It seems reasonable to conclude that one of the objectives of the basic science departments will continue to be to provide a first-class education to both medical and graduate students although changes in relative emphasis may occur.

Another teaching objective is to provide an appropriate amount of knowledge of basic medical science to students of dentistry and the other health fields. What is appropriate must be determined by a continuing close liason between the basic science departments and the schools or divisions sponsoring the students. It may be appropriate to increase the quality and/or quantity of this effort in the future, especially if there is a continuing increase in the reliance on paramedical personnel in the treatment of patients. This is particularly true in the case of dentistry where the anticipated future role of the graduate dentist will require an increased basic science background.

Some learning in elementary principles of biology is important to students in CLA and IT. In some respects, the basic medical science departments are better equipped to fulfill this purpose at the present than the undergraduate biology departments. For this reason, Microbiology and Physiology presently have a significant involvement in such courses. Whether this will increase or decrease in the future is difficult to predict, depending as it does on the development of the new College of Biological Sciences.

One of the major objectives in teaching is to maintain high quality instruction in the face of rising numbers of students; and, indeed to at-

tempt to improve by trying new teaching techniques.

B. Research

The major research objective of the basic medical science departments is to provide a milieu in which individual professors can carry on research in the fields of their primary interest. Such a milieu includes not only adequate physical facilities and equipment, but also stimulation from the presence of other well-trained and highly motivated investigators.

Although directed research is frowned upon, it is considered desirable to build departmental staffs such that all major aspects of a particular basic scientific discipline are always under investigation. This has important implications in the instruction of all students, medical, graduate and others, since it means that teaching is usually performed by a professor with much more than a textbook background in his topic. Such broadly knowledgeable departments in these days of proliferation of information must necessarily be large.

III. Programs in the Basic Medical Sciences

Present

A. Teaching

1. Medical

One hundred and fifty students spend parts of 2 to 3 quarters in each of the 6 major departments for a total of 98 credits. In addition, they take 3-credit courses in behavioral science and biostatistics.

2. Graduate

The number of graduate students has increased from three- to four-fold in the last 10 years. Approximately, one quarter of these have the M.D. degree. Most departments are close to their capacity for handling of graduate students, capacity being determined by a ratio of 4 to 6 students per professor which is generally thought to be maximal for high quality instruction. Although in broad outline, the graduate program is set down by the Graduate School, the particular courses, seminars and research activities participated in by the students is usually determined at the departmental level.

3. Other Health Fields

The six major departments provide 1 to 3 courses per year for

100 dental students for a total of 64 credits. Most of the departments participate in teaching students of nursing (about 120 per year), medical technology (60) and pharmacy (60). In addition, some 25 physical therapists and 40 dental hygienists receive instruction in two or three of the departments.

4. College of Liberal Arts, Institute of Technology, Institute of Agriculture

Two departments have a major involvement with these students. Microbiology offers a 5-credit course twice a year which is attended by 350 to 400 students from CLA and IA. Physiology has a 2-quarter, 6 or 10 credit sequence for some 120 IT students and another 5-credit course taken by 100 to 150 students of CLA and IA.

B. Research

Research programs are determined almost exclusively by the individual professor. They vary from paper and pencil studies of mathematical models to experiments on basic molecular mechanisms in completely artificial systems to observations on the function of normal human subjects. Some indication of the magnitude of the overall program is shown by the total budget for research in the six major departments of more than $2,500,000.00.

The relation between faculty research and graduate teaching programs is so close that they cannot be separated. A large part of the training of a graduate student comes from his participation in the research program of his faculty advisor. The intimate relationship is no better shown than by the fact that if external grants were removed, graduate training would nearly cease to exist.

Another educational feature of the research programs is the postdoctoral, non-degree training of fellows.

Future

A. Teaching

There will obviously be quantitative changes. Medical student class size will likely increase to 200 if not more, and similar if not disproportionate increases can be anticipated in the classes for others in the health science fields. The increase in number of graduate students is likely to be closely related to changes in size of the staff; the ratio of 4 to 6 students per professor will probably be maintained. Parenthetically, it might be noted that many faculty members of the basic

science departments believe that there should be no limit on the number of qualified graduate students accepted into the school and that the staff size should be adjusted accordingly. Future programs for undergraduates in CLA and IT depend on the development of the College of Biological Sciences.

With respect to qualitative changes, there should be continuing review of the curriculum and experimentation with new techniques. Curriculum changes might take the form of combining 2 or more basic science courses into a single integrated course, more effective correlation with clinical topics, some redistribution of credit hours, or inauguration of completely new courses. Changes in methodology might include adoption of programmed learning in some form, increased use of teaching aids like films and video tape, greater reliance on laboratory demonstrations as opposed to student experiments, etc. Any such alterations should presuppose the development of adequate means of measuring the consequences.

The changing roles of dentistry and other health professions may necessitate considerable upgrading and/or introduction of new basic science courses for students in these disciplines.

At present in most departments, the basic medical school course is also taken by graduate students. It seems likely that these two groups will be separated in the future with the medical course stressing general principles and clinical applicability and the graduate course concerning ifself with the more detailed and complex mechanisms underlying the general principles.

B. Research

Future programs in research will be determined by individual investigators. It does seem likely that the trend will continue toward more fundamental investigations and away from those aspects closely related to an application.

September 22, 1965

TO: Members of the Committee for the Study of Physical Facilities for the Health Sciences

Enclosed is a preliminary report of the Clinical Medicine Task Force, prepared in the format suggested in Dr. Learn's memorandum of June, 1965.

The Task Force is part of the Clinical Medicine and Hospital Sub-Committee, chaired by Dr. N. L. Gault, Jr. Members of the Clinical Medicine Task Force are:

Richard W. Anderson, Professor of Psychiatry

Nancy L. Cook, Assistant Professor of Nursing

Robert J. Gorlin, Professor of Dentistry

Richard C. Lillehei, Assistant Professor of Surgery

Richard M. Magraw, Professor, Department of Psychiatry & Medicine, Director, Comprehensive Clinic Program

Paul G. Quie, Assistant Professor of Pediatrics

Wesley W. Spink, Professor of Medicine

Dennis W. Watson, Professor of Microbiology

John H. Westerman, Executive Secretary, Committee for the Study of Physical Facilities for the Health Sciences

Lyle French, Chairman
Clinical Medicine Task Force

STATEMENT OF CLINICAL MEDICINE TASK FORCE FOR PRELIMINARY REPORT TO LEARN COMMITTEE

SEPTEMBER 22, 1965

INTRODUCTION

The committee was faced with a difficult assignment in planning the future growth and development of the clinical departments, and relating these developments to space needs. One of the difficulties was that there was no written plan to build on. The existing patterns and philosophy of the school had to a certain measure been built on the efforts, hopes and aspirations of strong individual faculty members. In other words, an unwritten legend. Some of these members have expired, moved on or are about to retire. Five chairmen will retire within three years.

The methodology used to develop this report was to call on the incumbent chairmen to appear before the committee and outline the past, present and future programs for their departments. The following individuals appeared before the committee:

Gerald T. Evans	Clinical Laboratories	May 24, 1965
Donald Hastings	Psychiatry	June 14, 1965
John A. Anderson	Pediatrics	July 9, 1965
Harold O. Peterson	Radiology	July 19, 1965
Robert Barr	Director, State Board of Health	Aug. 2, 1965
Cecil Watson	Medicine	Aug. 20, 1965
Owen H. Wangensteen	Surgery	Sept. 13,1965
John McKelvey	Obstetrics	Sept. 14,1965

The committee had ten meetings. A representative from most of the clinical departments was included on this committee. At the outset, this clinical representative was asked to work with his chairman, solicit the views of members of his department, and keep posted on the literature and developments relating to his specialty. Each committee member was asked to draft a program for his department, describing where the department is at present and where it would like to go in the future.

It is important to emphasize that the responsibility for this report rests soley with the committee. The report represents the best judgment of the committee about what the developments of the future should be, and are likely to be, taking into account the views of the department chairman, faculty members, evidence from the literature, developments in other medical centers, and outside pressures.

I. ROLES

A. The primary role of the clinical medicine departments is to EDUCATE MEDICAL STUDENTS AND GRADUATE STUDENTS in the theory and practice of clinical medicine. This role involves a recognition of the need to serve the people of the State through the preparation of physicians. Most of the medical students are from and for the State, but the training and financing of graduate students may relate as much to the nation as to the State. Another obligation is to participate in the training of associated professional personnel.

B. Clinical departments also have the important role of carrying on RESEARCH PROGRAMS THAT WILL EXPAND THE HORIZONS OF KNOWLEDGE AND PROVIDE AN ENVIRONMENT IN WHICH MEDICAL STUDENTS AND GRADUATE STUDENTS WILL PARTICIPATE AND HAVE THE OPPORTUNITY TO PURSUE INDEPENDENT INVESTIGATION PROJECTS. This role includes degrees of participation, such as student exposure, part-time faculty projects, and full-time career investigators.

C. All medical care in the medical center is the responsibility of the clinical departments and such departments fill certain service obligations to the people of Minnesota. It is essential THAT THE DEPARTMENTS PROVIDE EXEMPLARY CARE TO THE PATIENTS in the medical center setting. Elements of this care are preventive medicine, diagnostic medicine, and therapeutic medicine. The provision of care relates closely to the teaching and research roles.

D. Members of the clinical departments provide a CONSULTATION SERVICE TO THE HEALTH PROFESSIONALS OF THE REGION AND INDEED TO WORLD HEALTH. Opportunities for POST GRADUATE MEDICAL EDUCATION are an important function.

E. A product of the above roles is the obligation to CREATE AN ATMOSPHERE IN THE STATE in which clinical medicine can be stimulated and developed. Part of this role comes from the fact that Minnesota is the only medical school in the State.

II. OBJECTIVES

A. Teaching

1. To DEVELOP A COMPREHENSIVE APPROACH to the individual patient, recognizing the potentialities of the HEALTH TEAM CONCEPT, and assist the student in acquiring the necessary skills, attitudes, and principles of knowledge to give the best possible care. This in no way compromises the importance of the individual physicians responsibility for the individual patient.

2. To INTEGRATE THE APPROACH TO TEACHING recognizing responsibilities to other associated health professionals and units of the University. An integrated approach would contain an awareness of the range of student preparation and is carried on in varied locations in the area.

3. To BE SENSITIVE TO THE METHODOLOGY OF TEACHING in order that the talents of the faculty be used to the maximum extent and the student be put in the best possible learning environment.

4. To TRAIN GENERAL PRACTITIONERS of medicine who will give continuing medical care to individuals within his sphere of influence, to create an atmosphere where students may pursue SPECIALTY TRAINING FOR clinical practice or pursue CLINICAL SCIENCE training for basic clinical research or a combination of the above to prepare for a CAREER IN ACADEMIC MEDICINE.

5. To offer and make available a program to assist the practicing physician improve and acquire requisite skills in his area through OPPORTUNITIES IN CONTINUING EDUCATION.

6. A summary objective would be to create in the student an ATTITUDE OF ETERNAL DISSATISFACTION with the state of today's knowledge and develop within the student the DESIRE FOR SELF-IMPROVEMENT and critical analysis.

B. Service

1. To PROVIDE AN EFFICIENT SERVICE, WITH COMPETITIVE SYSTEMS, AND EXEMPLARY PROFESSIONAL CARE in an environment conducive to excellent patient care and patient convenience. The service role cannot rest on exemplary care alone in the future.

2. To PROVIDE EXEMPLARY CONSULTATIVE SERVICE, and yet be sensitive to the demands of the patients which will effect our existing relationships.

3. To assist the medical profession of the State by SETTING HIGH STANDARDS OF PRACTICE through the service we provide.

4. To SHARE INFORMATION about patterns of care with appropriate medical agencies and individuals.

5. To offer the patient COMPREHENSIVE consultative services. These services include a well-developed ambulatory and in-patient program.

C. Research

1. To ADVANCE THE KNOWLEDGE of clinical medicine with a WELL-SUPPORTED basic and applied research programs.

2. To ATTRACT AND RETAIN outstanding investigators by PROVIDING AN ENVIRONMENT conducive to research.

3. To come to the assistance and aid of COMMUNITY HEALTH NEEDS through research programs.

4. To EXPERIMENT WITH PROFESSIONAL EDUCATION CURRICULA and methodology of learning to achieve educational goals. This objective also includes the consideration of facility use and design, and efficient utilization of the time of the faculty and the students.

5. To carry out basic and clinical research as it potentially relates to the IMPROVEMENT OF MEDICAL CARE.

INTRODUCTION TO PROGRAM REPORT

There are certain common threads running through all of the department reports. One could start off with the question, why teach clinical medicine? The purpose of the clinical teachers is to take a large volume of knowledge from a number of different resources and then apply it to the individual patient. In teaching students this technique, the clinical educators really act as integrators or synthesizers and are teaching the students decision making. In this close personal interaction, the student is also forming an attitude about patient care and developing a concept of responsibility for another human being. These attitudes are largely influenced by the actions of the clinical teacher.

Along with these attitudes and decision making abilities, the student is taught skills - how to do something by practice. In planning space requirements, one of the considerations to keep in mind is, what does teaching the practice of medicine imply in terms of programs, equipment, staff and space?

There have been these trends in the reports of the department chairman.

1. The need to strengthen the affiliations with community hospitals. This strengthening is needed to provide sufficient clinical experiences in quantity as well as the scope of disease conditions. It would also have the effect of nurturing academicians and involve the clinical staff in a meaningful educational experience. This trend, according to most department chairmen, would meet the need for improved educational programs in the affiliated institutions. It would also lighten the excessive teaching load imposed on the University Hospitals faculty and patients. Some individuals believe that University Hospitals should not increase in size (or add very few beds at most) because there is some limit beyond which the teaching and service programs will suffer.

THE COMMITTEE WOULD AGREE WITH THE NEED TO STRENGTHEN AND EXPAND AFFILIATIONS provided these conditions are held to:

a) University control of all faculty appointments.

b) Adequate support by the affiliated institution for research space, equipment and personnel. WE CONCLUDE

THAT FACULTY MEMBERS WILL NOT WANT TO WORK WITH AFFILIATED HOSPITALS UNLESS AMPLE RESEARCH OPPORTUNITIES ARE AVAILABLE. This conclusion does not preclude the individual faculty member who wants to devote full-time to teaching and service, but does point out the need for research opportunities to be available to all.

c) Adequate support by affiliated institutions for teaching staff.

d) Adequate arrangements so that the student will be allowed to have responsibility for the care of the patient. This means the medical staff of the affiliated institution must cooperate in making beds available and support the student in his prime responsibility role.

Although the committee agrees wholeheartedly with the suggestion that affiliated community hospital programs be strengthened and expanded, the COMMITTEE REJECTS THE NOTION THAT NO MORE BEDS ARE NEEDED AT UNIVERSITY HOSPITALS OR THAT WE HAVE REACHED AN ABSOLUTE CEILING ON SIZE. This medical center has long passed the point of being a small, informal, everybody knows everybody institution. To cry "hold, enough" is to ignore the pressures of today and tommorrow and may even be a romantic or inaccurate reflection of the past. We would agree that it would be unwise to provide for all future clinical expansion at this institution. The point is that we are not talking about an increase to 2000 beds in the next 20 years, but should not be afraid of an orderly expansion of---say 200 beds. Educational needs for beds now exist in Eye, Surgery and Neuro Surgery. As larger staffs are added to the smaller specialties, one can predict even a greater pressure for beds.

If additional faculty are added across the board to accommodate 200 students per class, this could increase the pressure for beds. If existing beds are transferred from general use to categorical research programs, this would increase the pressure for beds. The concept of categorical research cannot and must not be ignored. If the population of this state increased to 5 million people in 1975, as has been projected, this will increase the pressure for beds. If this center intends to demonstrate to the students a true range of comprehensive care, one could envision the addition of nursing home and motel type beds. Medicare and DeBakey legislation could increase the pressure for beds. A new attractive outpatient facility, which we actively support, could attract more patients and this could increase the pressure for beds. If we are to approach the 10 beds per student, more beds will be needed. The existing beds were assigned before we went into the intensive phase of graduate training. These are just some of the reasons we reject the notion that no more beds at this institution will be needed.

2. Another theme is the prediction that <u>research activities would continue to grow, but that the amount of growth would be unpredictable</u>. WE ACCEPT THIS EVALUATION OF FUTURE RESEARCH PROGRAMS. However, we may be able to help the space planners by projecting our departmental needs on at least a 7 - 10 year basis. THE IMPORTANT CONSIDERATION IN RESEARCH SPACE IS THE QUESTION OF WHETHER IT IS TIME TO CONSIDER CONSOLIDATING RESEARCH ACTIVITIES IN A SEPARATE BUILDING.

We have taken the latter course already in the development of Diehl Hall space and surgical laboratories. Should all of the center research activities be pulled out (where possible) or just the animal quarters? We can't answer this question but can state that we have been able to operate with the separation we now have. However, this is not the most desired arrangement. An integrated office, research and clinical area, is the ideal arrangement even if separate areas are necessary. Therefore, we conclude separate research facilities should be considered by the planners.

3. A third idea has been that University support for departmental teaching, resident and clerical personnel has been inadequate in the past and must be improved in the future. Elements of the support that will be needed include more square footage for departmental activities (particularly office space), more budgetary support for personnel and supplies, and direct support of educational costs.

While we are in sympathy with this concern, it is only fair to note that this problem exists in every medical school complex. The fact is that society has yet to come to grips with the problem of realistically financing medical education.

The most realistic recommendation we can make at this time is that the INSTITUTION OFFICIALS THOROUGHLY VERSE THEMSELVES IN THE DIMENSION OF THIS PROBLEM AND PRESENT AN EDUCATIONAL AND ACTION PROGRAM TO THE APPROPRIATE PEOPLE TO SOLVE THIS PROBLEM.

4. The fourth theme has been that the government inspired categorical approach to bed utilization will upset the existing concepts of bed assignment in this institution.

WE RELUCTANTLY CONCLUDE THAT THE INSTITUTION MUST WORK AROUND THE PROBLEMS RAISED BY THIS DEVELOPMENT, NEVER LOSING SIGHT OF THE BASIC OBJECTIVES OF THIS SCHOOL.

It should be pointed out we now have categorical programs in the transplant and cardiovascular fields. A logical extension of such programs may be stimulated by government and private grants. Therefore, we may well see a different pattern of organization developing within the medical school.

5. There has been a general concern about the lack of general or family practitioners. WE SHARE THIS CONCERN AND DESIRE FOR THIS SCHOOL TO WORK TOWARD THE DESIGN OF A PROGRAM TO MEET THIS NEED.

6. Another theme is that the trend toward specialization will not decrease but increase. This may lead to consideration of different categories of faculty as well as the development of two types of curriculum. WE URGE THIS DEVELOPMENT BE THOROUGHLY INVESTIGATED.

7. Themes developed or mentioned, but not discussed by our group, are the need for a more active emergency department in support of the educational program in surgery. With improvement of basic salaries for faculty and the value placed on research (with generous support by outside agencies), there has developed a trend for faculty members to be unwilling to take time to provide services to patients. This limits the ability to render comprehensive care and reduces the interdepartmental approach to patient care.

8. A trend with which we are in substantial agreement is the notion that MEDICAL PRACTICE OF THE FUTURE WILL RELY MORE AND MORE ON OTHER HEALTH PROFESSIONALS. This team approach has certain implications in terms of space and teaching facilities that will be required.

9. There has not been a thorough discussion of the relationship with the basic sciences programs, but there has been a general recognition of the need for good correlation between the clinical and pre-clinical curriculum. It is difficult to project the space implications of this.

Our committee notes the implications of the basic science report and urges the availability of graduate level training for those students who will be going into the highly specialized clinical areas.

10. Our committee has had reference to proposed program changes in dentistry. The explicitness of these changes has not developed to the extent we can project space implications. However, closer liaison with the clinical portion of the dental school seems likely. It is possible in the future development of health sciences that one should take into consideration the advantages of more closely relating the training in dentistry and medicine, even to the extent of making dentistry a specialty of medicine.

11. A trend as strong as (1) the need to affiliate and (2) the unpredictable growth in graduate and research programs, has been the emphasis on ambulatory care programs. We recognize the importance of the clinic directors report and urge a rapid implementation of the findings of this report. The construction of a new out-patient facility is of the highest priority in the clinical and hospital area.

September 27, 1965

TO: MEMBERS OF THE COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES FOR THE HEALTH SCIENCES

Enclosed is a preliminary report of the Hospital Task Force, prepared in the format suggested in Dr. Learn's memorandum of June, 1965.

The task force is part of the Clinical Medicine and Hospital Sub-Committee, chaired by Dr. N. L. Gault, Jr. Members of the Hospital Task Force are:

James B. Carey, Associate Professor of Medicine

Donald Cowan, Professor and Director, University Health Service

Gerard W. Frawley, Associate Director, University Hospitals

Gertrude M. Gilman, Director, University Hospitals

Norman O. Holte, Professor of Oral Surgery, School of Dentistry

Florence J. Julian, Director, Nursing Service, University Hospitals

Robert J. Laur, Instructor, Program in Hospital Administration

John H. Westerman, Executive Secretary, Committee for the Study of Physical Facilities for the Health Sciences

James W. Stephan
Chairman, Hospital Task Force

- D R A F T -

STATEMENT OF HOSPITAL TASK FORCE FOR PRELIMINARY REPORT TO THE LEARN COMMITTEE

SEPTEMBER 27, 1965

A. INTRODUCTION TO THE REPORT

We would like to emphasize that a major conclusion to be drawn from this preliminary report is the fact that we are concerned with a large scale space expansion program that has significant implications in carrying out the changing role and objectives of the hospitals. This report, in combination with the clinical medicine and other sub-committee reports, clearly points out the need for an overall space study and the formulation of a long-range plan which is based on coordination among the respective units. It appears that the immediate requirements can be quickly and fairly adequately ascertained, but the long-range needs can only be an educated guess. This means that land on which to grow is one of the most important factors and could be of such overriding importance that conceivably an entirely new site could be required. The close relationship between hospital beds, ambulatory care facilities (out-patient and emergency department) and clinical office facilities and clinical research facilities could very well predicate an entirely new approach to the physical facilities required.

We should also like to point out the limitations of this report. Many parameters relating to the expansion needed are missing. While it can be concluded that this is a major expansion program, we don't know how many graduate students, pre- and post-doctoral, there will be in the next 10 - 20 years, how many undergraduate students there will be, how many continuing education courses will be offered for health science workers, how many faculty members, how many beds are needed, how much research space is needed, what the relationship between the clinics and dentistry will be, what the effect of health legislation will be, and in general, what demands the faculty and the community will place on the hospital. The Hospitals will have to be sensitive to the space implications as all the other units develop their programs and requirements. We do believe that this information which is now lacking can be made available in a relatively short period of time. Future efforts will be aimed at refining this document by filling in the gaps and by conducting a study of the existing facilities and an evaluation of future needs and uses for all existing buildings.

For the convenience of the reader, certain programs which affect a number of hospital departments have been summarized and listed under the headings of teaching, of future needs and uses for all existing buildings.

B. ROLES OF UNIVERSITY HOSPITALS

1. The primary role of University Hospitals is to PROVIDE AN ENVIRONMENT IN MINNESOTA FOR CLINICAL EDUCATION IN THE HEALTH SCIENCES. This role includes the provision of staff and facilities, for students from Minnesota, and secondarily for students in the region and the country. In making Hospital resources available to students of health sciences, most departments assume a teaching role for full-time students, and also carry on in-service training programs for hospital personnel or for other persons coming to the Hospitals for continuing education.

2. The service role of University Hospitals is to PROVIDE HEALTH CARE FACILITIES, EQUIPMENT AND PERSONNEL TO ASSIST THE HEALTH SCIENCE PROFESSIONS in the patient care, education and research programs. Because of many highly qualified health science professionals in the College of Medical Sciences and the Dental School, the University has the unique capability of providing the most advanced health care services, especially advantageous for patients with complex health problems. The University Hospitals therefore have the role of providing those hospital services necessary for the most advanced preventive measures, diagnosis, treatment and rehabilitation of illness on both an in-patient and out-patient basis. This role is further influenced by the fact that University Hospitals are designed as the only Base Hospital in the "Minnesota State Plan for Hospitals, Public Centers and Related Medical Facilities" as developed by the Minnesota Department of Health.

Through State Legislation and University Administrative rulings, University Hospitals have a role of PROVIDING HOSPITAL CARE FOR SPECIFIED GROUPS. At present, these groups include:

a. Indigent patients residing in the State of Minnesota, whose care is authorized and supported by the counties and referred by a physician.

b. Patients who are referred by their attending physician to a faculty staff man or the Hospitals for diagnosis and care. These patients may be full pay or part pay.

c. Students enrolled in the University and members of the faculty and staff who are referred by the University Health Service Staff.

3. Besides the supportive service research role mentioned in B., University Hospitals may have a future role of INVESTIGATING THE ORGANIZATION AND DISTRIBUTION OF HEALTH CARE SERVICES and the CONDUCT OF RESEARCH RELATED TO HOSPITAL MANAGEMENT.

4. As a product or total of the above roles, the University Hospitals must have an awareness of the further role of SERVING AS AN INFLUENTIAL EXAMPLE AND SOURCE OF LEADERSHIP FOR THE ADVANCEMENT OF HOSPITAL CARE for citizens of Minnesota, the region, and the nation.

C. OBJECTIVES OF UNIVERSITY HOSPITALS

1. TEACHING OBJECTIVES

a. To PROVIDE EXEMPLARY FACILITIES AND SERVICES THAT MEET THE NEEDS OF THE EDUCATIONAL PROGRAMS of the College of Medical Sciences and the School of Dentistry, and administer these services in an effective manner.

b. To STRENGTHEN AND EXPAND IN-SERVICE TRAINING PROGRAMS for Hospital personnel and CONTINUATION EDUCATION PROGRAMS for appropriate health science personnel in the area. The Hospitals will develop and participate in these programs. It is intended that the Hospitals play an active role in the education of health science personnel by providing and developing competent personnel to assist in the teaching. In this capacity, the Hospitals may be identifying new areas for participation and cooperation in educational programs.

c. To STIMULATE AND PARTICIPATE IN THE DEVELOPMENT OF A COORDINATED INTEGRATED PLANNING EFFORT among the health science educational programs at the University.

d. To IMPROVE AND DEVELOP COOPERATIVE PROGRAMS OF COMPREHENSIVE PATIENT CARE, which would include a health plan for the patient and reflect in hospital practice what has been taught in the educational programs where such an objective is consistent with the mission of the Hospitals.

2. SERVICE OBJECTIVES

a. To CREATE AN ENVIRONMENT WHICH WILL ENHANCE THE HEALTH CARE of the patient. This service will require a recognition of the dignity of the patient and call for personalized hospital care by a skilled staff.

b. To PROVIDE A HIGH QUALITY OF HOSPITAL CARE IN A DEMONSTRATIVELY EFFICIENT MANNER. This must be done in a way to meet the objectives of the health sciences educational programs and also be capable of serving as a model for service programs that could be adopted by other hospitals in the state.

c. To BETTER ORGANIZE AVAILABLE PATIENT DATA so that the data may be readily available to appropriate members of the health sciences profession.

d. To INTEGRATE UNIVERSITY HOSPITALS SERVICES WITH OTHER STATE HOSPITAL AND HEALTH RESOURCES to the end that the referral system and continuity of care objective are enhanced and the total health plan for the patient may be made operative.

e. To PROVIDE LEADERSHIP TO THE HOSPITAL FIELD in developing the full potential of hospital based services and integration of all other community services. It is hoped that this action would elevate standards of hospital services throughout the state.

f. To ATTRACT AND RECRUIT THE BEST QUALIFIED PERSONNEL to the staff of University Hospitals and thereby serve as a source for hospital leadership in the region.

3. RESEARCH OBJECTIVES

a. To CONTRIBUTE NEW KNOWLEDGE AND UNDERSTANDING ABOUT PATTERNS OF HOSPITAL CARE and the role to be played by University Hospitals in a rapidly changing environment.

b. To investigate the Hospital services that are provided to determine optimum ORGANIZATION OF HOSPITAL SERVICES AND TEST HYPOTHESES ABOUT THE ECONOMICS OF HOSPITAL SERVICES.

c. To DEFINE HOSPITAL SERVICE AND TO INVESTIGATE THE DETERMINANTS OF HIGH QUALITY HOSPITAL CARE.

d. To conduct research in coordination with members of the clinical staff in high quality patient care.

e. To conduct research in Hospital administrative services.

D. PROGRAMS OF UNIVERSITY HOSPITALS

1. Service

a. Determination of the need for expansion of hospital beds, services and supportive facilities, consistent with the needs of educational and research programs and consistent with the legal obligations to serve as a prime referral center. This includes giving recognition to such factors as the constantly changing educational and research needs, the demographic characteristics of the service area, the availability of alternative resources for medical and hospital care, and the constantly changing state of medical knowledge and techniques.

b. Definition of the optimum intrahospital distribution of beds, services, and supportive facilities to provide a spectrum of properly sized, supported and coordinated units ranging from intensive care through nursing home levels with extension on to ambulatory and home care services. A preliminary estimate of short term bed needs for the immediate future, based on the current need and demand for beds by clinical services, is approximately 200 in addition to those currently under construction in Masonic Memorial.

c. Recognition must be given to the necessity of reinforcing exemplary medical care with exemplary hospital care, recognizing the dignity of the individual and the social and economic needs of the patient.

d. Development of ambulatory care facilities and services in a comprehensive manner which will give proper consideration to the emerging medical, organizational, and educational environment. This development must also give recognition to the necessiry of reinforcing good medical care with thoughtful attention to other patient needs and demands, such as:

1) Efficient appointment and scheduling systems
2) Provision of necessary care in the shortest possible time consistent with educational needs
3) Adequate parking, transportation and traffic patterns
4) Necessary housing and dining facilities

This concept will requite a well organized, well staffed department, combining the resources of the entire medical school and hospitals. We are grateful for the excellent report by the Clinic Directors Committee and are wholeheartedly in favor of their conclusions and recommendations.

e. Maximization of individualized patient care, giving recognition to the increasing sophistication and articulation of service demands by the public, greater freedom of choice of vendor for medical care by a larger segment of the population, and the desire to offset any possible tendency toward the dehumanization of hospital service as the technology of patient care becomes increasingly "machine" oriented.

f. Identification of cost centers for hospital services including a delineation of costs for formal and informal educational efforts, acquisition of support and transfer of costs to other appropriate sources.

g. Utilization of automatic data processing capabilities in comprehensive application to the Hospitals' operation.

h. Revision of accounting systems to provide improved efficiency in all phases of the fiscal operation of the Hospitals.

i. Development of equipment and supply distribution systems, methods and facilities to incorporate a more closely coordinated approach to purchasing, warehousing, inventory control distribution, efficiency and cost control.

j. Encouragement of cooperative associations with allied academic fields related to the operation of hospitals, e.g. Public Health, Dentistry, Social Work, Industrial Engineering, Sociology, and others.

k. To cooperate with the Dental School in improving the hospital dental services for outpatients and inpatients.

2. Teaching

a. Cooperation with the various units of the College of Medical Sciences and associated Hospital and Health Care Programs to strengthen the contribution of University Hospitals in the total educational endeavors of the University of Minnesota.

b. Expansion of the in-service training program on a Hospitals-wide basis to provide adequately trained personnel for non-professional hospital functions, including recognition of the possible support such efforts could lend to improving non-professional hospital skills on a statewide basis.

c. Interpretation of the Hospitals' multiple roles in teaching, research and service to interested individuals and organizations including medical staff and employees, citizens of the state of Minnesota, state and national legislative bodies, state and national administrative agencies, local, state and national hospital organizations and allied groups.

3. Research

a. Establishment of a formally organized, supported and coordinated effort to conduct research in hospital administrative services.

b. Assistance by every means possible to the members of the Clinical and Basic Science faculty in the conduct of their research.

c. Establishment of specific research into methods analysis (operations research).

Appendix

Reports from individual Hospital Departments

(This information will follow)

COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES FOR THE HEALTH SCIENCES

SUGGESTED AGENDA - SEPTEMBER 27, 1965 (#12)

1. Welcome guests

2. CChairmen will introduce sub-committee members. Recognize Dr. Gault as overall chairman.

3. No special business but expect to have some information about the second phase of our study at the next meeting. A reminder, next meeting is October 11, at 3:00 P.M.

4. Sent out since last meeting

a.	Public Health	September 1 (#8)
b.	Basic Science	September 7 (#4)
c.	Learn Committee	September 13 (#11)
d.	Clinical Medicine	September 14 (#9)
e.	Hospital Task Force	September 15 (#7)
f.	Ancillary	September 16 (#3)
g.	Ancillary	September 20 (#4)

(1) Dr French
(2) Mr Stephan

Meetings held but reports not available

a.	Clinical Medicine	September 13 (#8)
b.	Hospital Task Force	September 20 (#8)
c.	Dental	September 21 (#7)

DR Wm Stewart - New Surgeon General

apologize for lateness -
comment re: trappin -

COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES
FOR THE HEALTH SCIENCES

Minutes of Meeting September 27, 1965 (#12)

Present: Elmer Learn, Chairman, Lyle French, Edna Fritz, N. L. Gault, Jr., Gertrude Gilman, Eugene Grim, Mellor Holland, Robert Howard, Robert Isaacson, Richard Magraw, Erwin Schaffer, Anne Wirt (for William Shepherd), James Stephan, Kathryn Ritzen, John Westerman

Absent: Gaylord Anderson, Winston Close, Sterling Garrison, Ione Jackson, James Jensen, Frederick Kottke

Guests: Richard Anderson, Manual Bobenreith, Nancy Cook, Gerard Frawley, Norman Holte, Florence Julian, Robert Laur

NEXT MEETING MONDAY, OCTOBER 11, 1965, *3:00 P.M., 510 DIEHL HALL

PRESENTATION BY: NURSING SUBCOMMITTEE - Edna Fritz, Chairman
ANCILLARY SUBCOMMITTEE - Frederick Kottke, Chairman
PUBLIC HEALTH SUBCOMMITTEE - Gaylord Anderson, Chairman

*N.B. This meeting begins at 3:00 P.M. because three presentations will be made.

1. Dr. Learn welcomed the guests to the meeting and recognized Dr. French as the Clinical Medicine Task Force Chairman and Mr. Stephan as the Hospital Task Force Chairman.

2. Since the parent committee meeting of September 13, the following minutes have been posted to members of the committee:

a.	Public Health	September 1 (#8)
b.	Basic Science	September 7 (#4)
c.	Learn Committee	September 13 (#11)
d.	Clinical Medicine	September 14 (#9)
e.	Hospital Task Force	September 15 (#7)
f.	Ancillary	September 16 (#3)
g.	Ancillary	September 20 (#4)

3. The following sub-committee meetings have been held for which minutes were not available on September 27:

a.	Clinical Medicine	September 13 (#8)
b.	Hospital Task Force	September 20 (#8)
c.	Dentistry	September 21 (#7)

4. Note: The new Surgeon General, Dr. William Stewart, was a guest at a Clinic Director's seminar on January 8, 1965. The paper, entitled "Trends in Ambulatory Care" was distributed to the committee members in February, 1965. It may be worthwhile re-reading.

AMH.3p

5. Dr. Learn turned the chair over to Dr. French who introduced members of his sub-committee. Dr. French made his main presentation from a report prepared and approved by the Clinical Medicine Task Force for the members of the Committee for the Study of Physical Facilities for the Health Sciences. A copy of the report is appended to these minutes.

The committee questioned the meaning of "competitive systems" in reference to providing efficient and exemplary patient care, as stated on page 3 under B. 1. of the report. That reference means caring for the patient's convenience in competition with other health care units in the state. Consideration of the patient in making access to care convenient is necessary for the University Hospitals to remain a good teaching and research institution.

QUESTION: Isn't this concept included in the phrase, "exemplary patient care"? Dr. Gault felt that "exemplary medical care" included this idea. However, the idea of consideration for the patient is so important that it is worthwhile to spell it out. Competitive systems which are considerate of the patient must take into account questions such as transportation (where does the patient park?), admissions (are they rapid and efficient?), laboratory tests (can the patient undergo tests easily because of the way in which the Medical Center is organized?). Dr. Learn defined "competitive systems" as striving for care on a basis competitive with other health care systems. Dr. Howard urged that that section of the Clinical Medicine report be revised on the basis of Dr. Learn's definition. Mr. Stephan thought that having a clear idea of the meaning of "competitive systems" was important in envisioning the type of facilities needed.

Section B. 2. of the report under Objectives concerning Consultative Service, was also discussed. The University Hospitals may not always be a physician-referred institution, in the present sense, considering the trend of recent legislation, the concept of disease centers and, for example, the way in which the Cancer Detection Center now operates.

Dr. Learn suggested that discussion of the Clinical Medicine Report be limited to ten minutes, to allow ample time for the Hospital Task Force Report.

Dr. Howard congratulated Dr. French and his co-workers on the report.

QUESTION: In regard to the need for increased research facilities, office space, beds, and affiliations, does the Clinical Medicine Report assume an increase because of an increase in the number of undergraduates and graduate students? Or is such expansion necessary just to take care of graduate students and present inadequacies? It's all of these. It would be desirable if our facilities were together, not split up.

QUESTION: Must research laboratories, offices and teaching space be together, or could they be separate? They can exist apart, but ideally they should be together. But given less than ideal circumstances, which must be together and which can be apart? In my opinion, teaching and research should be together, offices can be removed. I don't know if my colleagues would agree with that.

COMMENT: The Clinic Directors have looked at designs with all three facilities in one building. Therefore, it is possible to have the desirable unity Dr. French de-

scribes. We must bear in mind that when we're talking about teaching, we're talking about beds and clinic facilities.

Dr. Learn: Then it seems impossible to have all three facilities contiguous.

Dr. Howard: In the 1950's, when Mayo opened, it was possible to have beds, labs and offices in close proximity. Now, with growth and specialized hospitals, and donors gifts for specific developments, we can't continue to keep our teaching, research and office facilities together. Departmental lines are crossed and new units form around a particular interest, such as Heart. This is a positive accomplishment, but formerly close contacts are removed as a result. Also, different areas of medicine grow at different rates, and this throws off the regulated coordination of the Medical Center's growth.

QUESTION: Isn't separation being perpetuated when a separate building for research is requested in the Clinical Medicine Report (cf. No. 2, page 5 of the Report)? Yes, but if the University had a long-range plan for development of the Health Sciences, donors could probably be persuaded to put their money into orderly expansion of the Medical Center.

The University of Minnesota's space at present is quite confined. Therefore, the question we must ask is, what facilities can safely be separated from the basic complex? We have considered leveling Powell Hall and constructing in its place a hospital with certain departments and offices, thereby freeing space in the present hospitals for development there. In the hospitals' opinion research laboratories are located outside of patient care facilities. This allows for orderly expansion of these separate functional units, and reduces safety and health hazards to the patient.

Mr. Stephan: That's true, so we are trying to have a research unit off by itself.

COMMENT: If we really pursued an active role in new methodologies of teaching, the picture of the Medical Center's physical needs might be significantly altered. For example, the bed needs cited on page 4 of the Report. Fewer beds might be needed for residents if ambulatory care patients take preeminence.

Dr. Learn: The Clinical Medicine Committee will have to make a judgment concerning its most urgent priorities, given the inevitable limitations that will be placed on your request by less than adequate resources.

Since a vast number of medical procedures are changing now, only by reworking the development plan as a group will the faculty form an idea of the future.

COMMENT: Right now curriculum changes are necessary, for example, a common teaching room for basic and clinical sciences.

COMMENT: No department chairman made a really strong plea for more beds. Therefore, must we look for different ways to use the beds we now have, especially in relation to disease categories such as Cancer, Heart, Stroke? In all probability there will be a lopsided arrangement in time and facilities in adjusting to these categories. The demands for service are still great. Service needs, however, often don't relate to teaching and research needs.

Mr. Stephan: We shape our buildings, and they shape us. If we don't achieve model coordination to medical practice, the practitioners themselves won't be able to envision this coordination. And this Medical Center must maintain a fluid condition to allow for growth.

Dr. Learn suggested that the Clinical Medicine and Hospital Task Force Reports be coordinated. Dr. Learn then turned the chair over to Mr. Stephan, who introduced members of his sub-committee. Mr. Stephan also made his presentation from a report prepared and approved by the Hospital Task Force for the members of the Committee for the Study of Physical Facilities for the Health Sciences. A copy of this report is also appended to these minutes.

Mr. Stephan emphasized the preliminary nature of his report and acknowledged the need to coordinate his report with that of the Clinical Medicine Task Force. He then reviewed the report for the Committee.

The Committee noted a striking likeness of conclusions between the Hospital and Clinical Medicine Reports.

Dr. French expressed the need for the Medical School to look into curriculum changes which may in turn change space requirements. Dr. Learn wondered from this remark if the sub-committee is reluctant to make long-range plans until the curriculum is changed. Dr. Gault, however, pointed out that the curriculum was likely to be in a state of perpetual change, so long-range plans would have to be made on the basis of the best possible information available at present.

The direction of change will be toward a team approach and integrated care, concentrating on out-patients in undergraduate training, with the graduate learning his specialty on in-patients. Nursing will concentrate on training the type of nurse needed for the future in relationship to the future physician. There is enough evidence at hand to indicate the need for more facilities and this should be examined by a team of expert planners.

Dr. Learn: If there is a more than 50% chance that the curriculum will change in X direction, with real implications for space needs, then all of the needs proposed by this committee can't be fulfilled immediately and the committee therefore will have to recommend its most urgent needs. Taking into account the best judgment today about the Health Sciences' needs in ten years, the committee must come forth with explicit recommendations.

COMMENT: While the sub-committee had not been explicit on all points, they had outlined certain needs:

1) The Medical Center has to provide a better framework for the demonstration and exemplification of teamwork in comprehensive patient care.

2) The undergraduate curriculum, contrasted with that of 15 years ago, does not produce a finished product. With increased specialization, the undergraduate is only on the first step in an 8 year course, and this phenomenon may lead to the development of more than one curriculum. Ambulatory patient care experiences, basic medical care of one patient, are part of the consequent

curriculum revisions. Further, Dr. French cited the changes in medicine he indicated in his letter to Mr. Westerman, and Dr. Learn agreed that the letter did make several strong points which could be a basis for planning future development.

The difficulty of putting parameters on the quantity and quality of the Medical Center's product was discussed. The undergraduate medical school accounts for approximately 1/4 of the Health Sciences' concerns, and nursing accounts for some of this. So far nursing has been able to accommodate all who are qualified. But other areas, such as graduate education and research, have not had limits on the number of positions, nor can they predict their future growth rate.

QUESTION: Why has the College of Medical Sciences elected to limit the number of undergraduates, but not the others? There are obvious reasons for this. The laboratories in the basic sciences are limited. The amount of clinical material in University Hospitals and affiliated hospitals is limited. Furthermore, the undergraduate program is under fairly centralized control, whereas decisions concerning graduates are decentralized because they are made by the various departments, and indeed even in sub-divisions of some departments. Somehow they are able to infiltrate graduates into space that doesn't even exist.

Another factor we'll have to take into account in making realistic plans for the future is the Health Professions Assistance Act, which will probably result in a 2 1/2 to 5% expansion in the number of dentistry and undergraduate students.

It was pointed out that up until now the emphasis has been on research training and facilities. Now in the Clinical Medicine field there is as much concern to train teachers as there is to train researchers. However, some pointed out that the emphasis has not really changed, since the man who does research is also the man who teaches.

Dr. Learn summed up by saying that, as this study of development of physical facilities for the health sciences enters the second phase, it will be imperative to specify needs such as the number of Ph. D.'s, curriculum requirements, the number of graduates, etc., in order to have Administration backing of the proposed program, before building plans are drawn up. The subcommittee agreed wholeheartedly, and Dr. Learn thanked the Clinical Medicine and Hospital Task Forces for their reports.

Respectfully submitted,

John H. Westerman
Executive Secretary

September 22, 1965

TO: Members of the Committee for the Study of Physical Facilities for the Health Sciences

Enclosed is a preliminary report of the Clinical Medicine Task Force, prepared in the format suggested in Dr. Learn's memorandum of June, 1965.

The Task Force is part of the Clinical Medicine and Hospital Sub-Committee, chaired by Dr. N. L. Gault, Jr. Members of the Clinical Medicine Task Force are:

Richard W. Anderson, Professor of Psychiatry

Nancy L. Cook, Assistant Professor of Nursing

Robert J. Gorlin, Professor of Dentistry

Richard C. Lillehei, Assistant Professor of Surgery

Richard M. Magraw, Professor, Department of Psychiatry & Medicine, Director, Comprehensive Clinic Program

Paul G. Quie, Assistant Professor of Pediatrics

Wesley W. Spink, Professor of Medicine

Dennis W. Watson, Professor of Microbiology

John H. Westerman, Executive Secretary, Committee for the Study of Physical Facilities for the Health Sciences

Lyle French, Chairman
Clinical Medicine Task Force

STATEMENT OF CLINICAL MEDICINE TASK FORCE FOR PRELIMINARY REPORT TO LEARN COMMITTEE

SEPTEMBER 22, 1965

INTRODUCTION

The committee was faced with a difficult assignment in planning the future growth and development of the clinical departments, and relating these developments to space needs. One of the difficulties was that there was no written plan to build on. The existing patterns and philosophy of the school had to a certain measure been built on the efforts, hopes and aspirations of strong individual faculty members. In other words, an unwritten legend. Some of these members have expired, moved on or are about to retire. Five chairmen will retire within three years.

The methodology used to develop this report was to call on the incumbent chairmen to appear before the committee and outline the past, present and future programs for their departments. The following individuals appeared before the committee:

Gerald T. Evans	Clinical Laboratories	May 24, 1965
Donald Hastings	Psychiatry	June 14, 1965
John A. Anderson	Pediatrics	July 9, 1965
Harold O. Peterson	Radiology	July 19, 1965
Robert Barr	Director, State Board of Health	Aug. 2, 1965
Cecil Watson	Medicine	Aug. 20, 1965
Owen H. Wangensteen	Surgery	Sept. 13, 1965
John McKelvey	Obstetrics	Sept. 14, 1965

The committee had ten meetings. A representative from most of the clinical departments was included on this committee. At the outset, this clinical representative was asked to work with his chairman, solicit the views of members of his department, and keep posted on the literature and developments relating to his specialty. Each committee member was asked to draft a program for his department, describing where the department is at present and where it would like to go in the future.

It is important to emphasize that the responsibility for this report rests soley with the committee. The report represents the best judgment of the committee about what the developments of the future should be, and are likely to be, taking into account the views of the department chairman, faculty members, evidence from the literature, developments in other medical centers, and outside pressures.

I. ROLES

A. The primary role of the clinical medicine departments is to EDUCATE MEDICAL STUDENTS AND GRADUATE STUDENTS in the theory and practice of clinical medicine. This role involves a recognition of the need to serve the people of the State through the preparation of physicians. Most of the medical students are from

and for the State, but the training and financing of graduate students may relate as much to the nation as to the State. Another obligation is to participate in the training of associated professional personnel.

B. Clinical departments also have the important role of carrying on RESEARCH PROGRAMS THAT WILL EXPAND THE HORIZONS OF KNOWLEDGE AND PROVIDE AN ENVIRONMENT IN WHICH MEDICAL STUDENTS AND GRADUATE STUDENTS WILL PARTICIPATE AND HAVE THE OPPORTUNITY TO PURSUE INDEPENDENT INVESTIGATION PROJECTS. This role includes degrees of participation, such as student exposure, part-time faculty projects, and full-time career investigators.

C. All medical care in the medical center is the responsibility of the clinical departments and such departments fill certain service obligations to the people of Minnesota. It is essential THAT THE DEPARTMENTS PROVIDE EXEMPLARY CARE TO THE PATIENTS in the medical center setting. Elements of this care are preventive medicine, diagnostic medicine, and therapeutic medicine. The provision of care relates closely to the teaching and research roles.

D. Members of the clinical departments provide a CONSULTATION SERVICE TO THE HEALTH PROFESSIONALS OF THE REGION AND INDEED TO WORLD HEALTH. Opportunities for POST GRADUATE MEDICAL EDUCATION are an important function.

E. A product of the above roles is the obligation to CREATE AN ATMOSPHERE IN THE STATE in which clinical medicine can be stimulated and developed. Part of this role comes from the fact that Minnesota is the only medical school in the State.

II. OBJECTIVES

A. Teaching

1. To DEVELOP A COMPREHENSIVE APPROACH to the individual patient, recognizing the potentialities of the HEALTH TEAM CONCEPT, and assist the student in acquiring the necessary skills, attitudes, and principles of knowledge to give the best possible care. This in no way compromises the importance of the individual physicians responsibility for the individual patient.

2. To INTEGRATE THE APPROACH TO TEACHING recognizing responsibilities to other associated health professionals and units of the University. An integrated approach would contain an awareness of the range of student preparation and is carried on in varied locations in the area.

3. To BE SENSITIVE TO THE METHODOLOGY OF TEACHING in order that the talents of the faculty be used to the maximum extent and the student be put in the best possible learning environment.

4. To TRAIN GENERAL PRACTITIONERS of medicine who will give continuing medical care to individuals within his sphere of influence, to create an atmosphere where students may pursue SPECIALTY TRAINING FOR clinical practice or pursue CLINICAL SCIENCE training for basic clinical research or a combination of the above to prepare for a CAREER IN ACADEMIC MEDICINE.

5. To offer and make available a program to assist the practicing physician improve and acquire requisite skills in his area through OPPORTUNITIES IN CONTINUING EDUCATION.

6. A summary objective would be to create in the student an ATTITUDE OF ETERNAL DISSATISFACTION with the state of today's knowledge and develop within the student the DESIRE FOR SELF-IMPROVEMENT and critical analysis.

B. Service

1. To PROVIDE AN EFFICIENT SERVICE, WITH COMPETITIVE SYSTEMS, AND EXEMPLARY PROFESSIONAL CARE in an environment conducive to excellent patient care and patient convenience. The service role cannot rest on exemplary care alone in the future.

2. To PROVIDE EXEMPLARY CONSULTATIVE SERVICE, and yet be sensitive to the demands of the patients which will effect our existing relationships.

3. To assist the medical profession of the State by SETTING HIGH STANDARDS OF PRACTICE through the service we provide.

4. To SHARE INFORMATION about patterns of care with appropriate medical agencies and individuals.

5. To offer the patient COMPREHENSIVE consultative services. These services include a well-developed ambulatory and in-patient program.

C. Research

1. To ADVANCE THE KNOWLEDGE of clinical medicine with a WELL-SUPPORTED basic and applied research programs.

2. To ATTRACT AND RETAIN outstanding investigators by PROVIDING AN ENVIRONMENT conducive to research.

3. To come to the assistance and aid of COMMUNITY HEALTH NEEDS through research programs.

4. To EXPERIMENT WITH PROFESSIONAL EDUCATION CURRICULA and methodology of learning to achieve educational goals. This objective also includes the consideration of facility use and design, and efficient utilization of the time of the faculty and the students.

5. To carry out basic and clinical research as it potentially relates to the IMPROVEMENT OF MEDICAL CARE.

INTRODUCTION TO PROGRAM REPORT

There are certain common threads running through all of the department reports. One could start off with the question, why teach clinical medicine? The purpose of

the clinical teachers is to take a large volume of knowledge from a number of different resources and then apply it to the individual patient. In teaching students this technique, the clinical educators really act as integrators or synthesizers and are teaching the students decision making. In this close personal interaction, the student is also forming an attitude about patient care and developing a concept of responsibility for another human being. These attitudes are largely influenced by the actions of the clinical teacher.

Along with these attitudes and decision making abilities, the students is taught skills - how to do something by practice. In planning space requirements, one of the considerations to keep in mind is, what does teaching the practice of medicine imply in terms of programs, equipment, staff and space?

There have been these trends in the reports of the department chairman.

1. The need to strengthen the affiliations with community hospitals. This strengthening is needed to provide sufficient clinical experiences in quantity as well as the scope of disease conditions. It would also have the effect of nurturing academicians and involve the clinical staff in a meaningful educational experience. This trend, according to most department chairmen, would meet the need for improved educational programs in the affiliated institutions. It would also lighten the excessive teaching load imposed on the University Hospitals faculty and patients. Some individuals believe that University Hospitals should not increase in size (or add very few beds at most) because there is some limit beyond which the teaching and service programs will suffer.

THE COMMITTEE WOULD AGREE WITH THE NEED TO STRENGTHEN AND EXPAND AFFILIATIONS provided these conditions are held to:

a) University control of all faculty appointments.

b) Adequate support by the affiliated institution for research space, equipment and personnel. WE CONCLUDE THAT FACULTY MEMBERS WILL NOT WANT TO WORK WITH AFFILIATED HOSPITALS UNLESS AMPLE RESEARCH OPPORTUNITIES ARE AVAILABLE. This conclusion does not preclude the individual faculty member who wants to devote full-time to teaching and service, but does point out the need for research opportunities to be available to all.

c) Adequate support by affiliated institutions for teaching staff.

d) Adequate arrangements so that the student will be allowed to have responsibility for the care of the patient. This means the medical staff of the affiliated institution must cooperate in making beds available and support the student in his prime responsibility role.

Although the committee agrees wholeheartedly with the suggestion that affiliated community hospital programs be strengthened and expanded, the COMMITTEE REJECTS THE NOTION THAT NO MORE BEDS ARE NEEDED AT UNIVERSITY HOSPITALS OR THAT WE HAVE REACHED AN ABSOLUTE CEILING ON SIZE. This medical center has long passed the point of being a small, informal, everybody knows everybody institution. To cry "hold, enough" is to ignore the pressures of today and tomorrow and may even be a romantic or inaccurate reflection of the past. We would

agree that it would be unwise to provide for all future clinical expansion at this institution. The point is that we are not talking about an increase to 2000 beds in the next 20 years, but should not be afraid of an orderly expansion of---say 200 beds. Educational needs for beds now exist in Eye, Surgery and Neuro Surgery. As larger staffs are added to the smaller specialties, one can predict even a greater pressure for beds.

If additional faculty are added across the board to accommodate 200 students per class, this could increase the pressure for beds. If existing beds are transferred from general use to categorical research programs, this would increase the pressure for beds. The concept of categorical research cannot and must not be ignored. If the population of this state increased to 5 million people in 1975, as has been projected, this will increase the pressure for beds. If this center intends to demonstrate to the students a true range of comprehensive care, one could envision the addition of nursing home and motel type beds. Medicare and DeBakey legislation could increase the pressure for beds. A new attractive out-patient facility, which we actively support, could attract more patients and this could increase the pressure for beds. If we are to approach the 10 beds per student, more beds will be needed. The existing beds were assigned before we went into the intensive phase of graduate training. These are just some of the reasons we reject the notion that no more beds at this institution will be needed.

2. Another theme is the prediction that research activities would continue to grow, but that the amount of growth would be unpredictable. WE ACCEPT THIS EVALUATION OF FUTURE RESEARCH PROGRAMS. However, we may be able to help the space planners by projecting our departmental needs on at least a 7 - 10 year basis. THE IMPORTANT CONSIDERATION IN RESEARCH SPACE IS THE QUESTION OF WHETHER IT IS TIME TO CONSIDER CONSOLIDATING RESEARCH ACTIVITIES IN A SEPARATE BUILDING.

We have taken the latter course already in the development of Diehl Hall space and surgical laboratories. Should all of the center research activities be pulled out (where possible) or just the animal quarters? We can't answer this question but can state that we have been able to operate with the separation we now have. However, this is not the most desired arrangement. An integrated office, research and clinical area, is the ideal arrangement even if separate areas are necessary. Therefore, we conclude separate research facilities should be considered by the planners.

3. A third idea has been that University support for departmental teaching, resident and clerical personnel has been inadequate in the past and must be improved in the future. Elements of the support that will be needed include more square footage for departmental activities (particularly office space), more budgetary support for personnel and supplies, and direct support of educational costs.

While we are in sympathy with this concern, it is only fair to note that this problem exists in every medical school complex. The fact is that society has yet to come to grips with the problem of realistically financing medical education.

The most realistic recommendation we can make at this time is that the INSTITUTION OFFICIALS THOROUGHLY VERSE THEMSELVES IN THE DIMENSION OF THIS

PROBLEM AND PRESENT AN EDUCATIONAL AND ACTION PROGRAM TO THE APPROPRIATE PEOPLE TO SOLVE THIS PROBLEM.

4. The fourth theme has been that the government inspired categorical approach to bed utilization will upset the existing concepts of bed assignment in this institution.

WE RELUCTANTLY CONCLUDE THAT THE INSTITUTION MUST WORK AROUND THE PROBLEMS RAISED BY THIS DEVELOPMENT, NEVER LOSING SIGHT OF THE BASIC OBJECTIVES OF THIS SCHOOL.

It should be pointed out we now have categorical programs in the transplant and cardiovascular fields. A logical extension of such programs may be stimulated by government and private grants. Therefore, we may well see a different pattern of organization developing within the medical school.

5. There has been a general concern about the lack of general or family practitioners. WE SHARE THIS CONCERN AND DESIRE FOR THIS SCHOOL TO WORK TOWARD THE DESIGN OF A PROGRAM TO MEET THIS NEED.

6. Another theme is that the trend toward specialization will not decrease but increase. This may lead to consideration of different categories of faculty as well as the development of two types of curriculum. WE URGE THIS DEVELOPMENT BE THOROUGHLY INVESTIGATED.

7. Themes developed or mentioned, but not discussed by our group, are the need for a more active emergency department in support of the educational program in surgery. With improvement of basic salaries for faculty and the value placed on research (with generous support by outside agencies), there has developed a trend for faculty members to be unwilling to take time to provide services to patients. This limits the ability to render comprehensive care and reduces the interdepartmental approach to patient care.

8. A trend with which we are in substantial agreement is the notion that MEDICAL PRACTICE OF THE FUTURE WILL RELY MORE AND MORE ON OTHER HEALTH PROFESSIONALS. This team approach has certain implications in terms of space and teaching facilities that will be required.

9. There has not been a thorough discussion of the relationship with the basic sciences programs, but there has been a general recognition of the need for good correlation between the clinical and pre-clinical curriculum. It is difficult to project the space implications of this.

Our committee notes the implications of the basic science report and urges the availability of graduate level training for those students who will be going into the highly specialized clinical areas.

10. Our committee has had reference to proposed program changes in dentistry. The explicitness of these changes has not developed to the extent we can project space implications. However, closer liaison with the clinical portion of the dental school seems likely. It is possible in the future development of health sciences that

one should take into consideration the advantages of more closely relating the training in dentistry and medicine, even to the extent of making dentistry a specialty of medicine.

11. A trend as strong as (1) the need to affiliate and (2) the unpredictable growth in graduate and research programs, has been the emphasis on ambulatory care programs. We recognize the importance of the clinic directors report and urge a rapid implementation of the findings of this report. The construction of a new out-patient facility is of the highest priority in the clinical and hospital area.

September 27, 1965

TO: MEMBERS OF THE COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES FOR THE HEALTH SCIENCES

Enclosed is a preliminary report of the Hospital Task Force, prepared in the format suggested in Dr. Learn's memorandum of June, 1965.

The task force is part of the Clinical Medicine and Hospital Sub-Committee chaired by Dr. N. L. Gault, Jr. Members of the Hospital Task Force are:

James B. Carey, Associate Professor of Medicine

Donald Cowan, Professor and Director, University Health Service

Gerard W. Frawley, Associate Director, University Hospitals

Gertrude M. Gilman, Director, University Hospitals

Norman O. Holte, Professor of Oral Surgery, School of Dentistry

Florence J. Julian, Director, Nursing Service, University Hospitals

Robert J. Laur, Instructor, Program in Hospital Administration

John H. Westerman, Executive Secretary, Committee for the Study of Physical Facilities for the Health Sciences

James W. Stephan
Chairman, Hospital Task Force

STATEMENT OF HOSPITAL TASK FORCE FOR PRELIMINARY REPORT
TO THE LEARN COMMITTEE

SEPTEMBER 27, 1965

A. INTRODUCTION TO THE REPORT

We would like to emphasize that a major conclusion to be drawn from this preliminary report is the fact that we are concerned with a large scale space expansion program that has significant implications in carrying out the changing role and objectives of the hospitals. This report, in combination with the clinical medicine and other sub-committee reports, clearly points out the need for an overall space study and the formulation of a long-range plan which is based on coordination among the respective units. It appears that the immediate requirements can be quickly and fairly adequately ascertained, but the long-range needs can only be an educated guess. This means that land on which to grow is one of the most important factors and could be of such overriding importance that conceivably an entirely new site could be required. The close relationship between hospital beds, ambulatory care facilities (outpatient and emergency department) and clinical office facilities and clinical research facilities could very well predicate an entirely new approach to the physical facilities required.

We should also like to point out the limitations of this report. Many parameters relating to the expansion needed are missing. While it can be concluded that this is a major expansion program, we don't know how many graduate students, pre- and post-doctoral, there will be in the next 10 - 20 years, how many undergraduate students there will be, how many continuing education courses will be offered for health science workers, how many faculty members, how many beds are needed, how much research space is needed, what the relationship between the clinics and dentistry will be, what the effect of health legislation will be, and in general, what demands the faculty and the community will place on the hospital. The Hospitals will have to be sensitive to the space implications as all the other units develop their programs and requirements. We do believe that this information which is now lacking can be made available in a relatively short period of time. Future efforts will be aimed at refining this document by filling in the gaps and by conducting a study of the existing facilities and an evaluation of future needs and uses for all existing buildings.

For the convenience of the reader, certain programs which affect a number of hospital departments have been summarized and listed under the headings of teaching.

B. ROLES OF UNIVERSITY HOSPITALS

1. The primary role of University Hospitals is to PROVIDE AN ENVIRONMENT IN MINNESOTA FOR CLINICAL EDUCATION IN THE HEALTH SCIENCES. This role includes the provision of staff and facilities, for students from Minnesota, and secondarily for students in the region and the country. In making Hospital resources available to students of health sciences, most departments assume a teaching role for full-time students, and also carry on in-service training programs for hospital personnel or for other persons coming to the Hospitals for continuing education.

2. The service role of University Hospitals is to PROVIDE HEALTH CARE FACILITIES, EQUIPMENT AND PERSONNEL TO ASSIST THE HEALTH SCIENCE PROFESSIONS in the patient care, education and research programs. Because of many highly qualified health science professionals in the College of Medical Sciences and the Dental School, the University has the unique capability of providing the most advanced health care services, especially advantageous for patients with complex health problems. The University Hospitals therefore have the role of providing those hospital services necessary for the most advanced preventive measures, diagnosis, treatment and rehabilitation of illness on both an in-patient and out-patient basis. This role is further influenced by the fact that University Hospitals are designed as the only Base Hospital in the "Minnesota State Plan for Hospitals, Public Centers and Related Medical Facilities" as developed by the Minnesota Department of Health.

Through State Legislation and University Administrative rulings, University Hospitals have a role of PROVIDING HOSPITAL CARE FOR SPECIFIED GROUPS. At present, these groups include:

a. Indigent patients residing in the State of Minnesota, whose care is authorized and supported by the counties and referred by a physician.

b. Patients who are referred by their attending physician to a faculty staff man or the Hospitals for diagnosis and care. These patients may be full pay or part pay.

c. Students enrolled in the University and members of the faculty and staff who are referred by the University Health Service Staff.

3. Besides the supportive service research role mentioned in B., University Hospitals may have a future role of INVESTIGATING THE ORGANIZATION AND DISTRIBUTION OF HEALTH CARE SERVICES and the CONDUCT OF RESEARCH RELATED TO HOSPITAL MANAGEMENT.

4. As a product or total of the above roles, the University Hospitals must have an awareness of the further role of SERVING AS AN INFLUENTIAL EXAMPLE AND SOURCE OF LEADERSHIP FOR THE ADVANCEMENT OF HOSPITAL CARE for citizens of Minnesota, the region, and the nation.

C. OBJECTIVES OF UNIVERSITY HOSPITALS

1. TEACHING OBJECTIVES

a. To PROVIDE EXEMPLARY FACILITIES AND SERVICES THAT MEET THE NEEDS OF THE EDUCATIONAL PROGRAMS of the College of Medical Sciences and the School of Dentistry, and administer these services in an effective manner.

b. To STRENGTHEN AND EXPAND IN-SERVICE TRAINING PROGRAMS for Hospital personnel and CONTINUATION EDUCATION PROGRAMS for appropriate health science personnel in the area. The Hospitals will develop and participate in these programs. It is intended that the Hospitals play an active role in the education of health science personnel by providing and developing competent personnel to assist in the teaching. In this capacity, the Hospitals may be identifying new areas for partic-

ipation and cooperation in educational programs.

c. To STIMULATE AND PARTICIPATE IN THE DEVELOPMENT OF A COORDINATED INTEGRATED PLANNING EFFORT among the health science educational programs at the University.

d. To IMPROVE AND DEVELOP COOPERATIVE PROGRAMS OF COMPREHENSIVE PATIENT CARE, which would include a health plan for the patient and reflect in hospital practice what has been taught in the educational programs where such an objective is consistent with the mission of the Hospitals.

2. SERVICE OBJECTIVES

a. To CREATE AN ENVIRONMENT WHICH WILL ENHANCE THE HEALTH CARE of the patient. This service will require a recognition of the dignity of the patient and call for personalized hospital care by a skilled staff.

b. To PROVIDE A HIGH QUALITY OF HOSPITAL CARE IN A DEMONSTRATIVELY EFFICIENT MANNER. This must be done in a way to meet the objectives of the health sciences educational programs and also be capable of serving as a model for service programs that could be adopted by other hospitals in the state.

c. To BETTER ORGANIZE AVAILABLE PATIENT DATA so that the data may be readily available to appropriate members of the health sciences profession.

d. To INTEGRATE UNIVERSITY HOSPITALS SERVICES WITH OTHER STATE HOSPITAL AND HEALTH RESOURCES to the end that the referral system and continuity of care objective are enhanced and the total health plan for the patient may be made operative.

e. To PROVIDE LEADERSHIP TO THE HOSPITAL FIELD in developing the full potential of hospital based services and integration of all other community services. It is hoped that this action would elevate standards of hospital services throughout the state.

f. To ATTRACT AND RECRUIT THE BEST QUALIFIED PERSONNEL to the staff of University Hospitals and thereby serve as a source for hospital leadership in the region.

3. RESEARCH OBJECTIVES

a. To CONTRIBUTE NEW KNOWLEDGE AND UNDERSTANDING ABOUT PATTERNS OF HOSPITAL CARE and the role to be played by University Hospitals in a rapidly changing environment.

b. To investigate the Hospital services that are provided to determine optimum ORGANIZATION OF HOSPITAL SERVICES AND TEST HYPOTHESES ABOUT THE ECONOMICS OF HOSPITAL SERVICES.

c. To DEFINE HOSPITAL SERVICE AND TO INVESTIGATE THE DETERMINANTS OF HIGH QUALITY HOSPITAL CARE.

d. To conduct research in coordination with members of the clinical staff in high quality patient care.

e. To conduct research in Hospital administrative services.

D. PROGRAMS OF UNIVERSITY HOSPITALS

1. Service

a. Determination of the need for expansion of hospital beds, services and supportive facilities, consistent with the needs of educational and research programs and consistent with the legal obligations to serve as a prime referral center. This includes giving recognition to such factors as the constantly changing educational and research needs, the demographic characteristics of the service area, the availability of alternative resources for medical and hospital care, and the constantly changing state of medical knowledge and techniques.

b. Definition of the optimum intrahospital distribution of beds, services, and supportive facilities to provide a spectrum of properly sized, supported and coordinated units ranging from intensive care through nursing home levels with extension on to ambulatory and home care services. A preliminary estimate of short term bed needs for the immediate future, based on the current need and demand for beds by clinical services, is approximately 200 in addition to those currently under construction in Masonic Memorial.

c. Recognition must be given to the necessity of reinforcing exemplary medical care with exemplary hospital care, recognizing the dignity of the individual and the social and economic needs of the patient.

d. Development of ambulatory care facilities and services in a comprehensive manner which will give proper consideration to the emerging medical, organizational, and educational environment. This development must also give recognition to the necessity of reinforcing good medical care with thoughtful attention to other patient needs and demands, such as:

1) Efficient appointment and scheduling systems
2) Provision of necessary care in the shortest possible time consistent with educational needs
3) Adequate parking, transportation and traffic patterns
4) Necessary housing and dining facilities

This concept will require a well organized, well staffed department, combining the resources of the entire medical school and hospitals. We are grateful for the excellent report by the Clinic Directors Committee and are wholeheartedly in favor of their conclusions and recommendations.

e. Maximization of individualized patient care, giving recognition to the increasing sophistication and articulation of service demands by the public, greater freedom of choice of vendor for medical care by a larger segment of the population, and the desire to offset any possible tendency toward the dehumanization of hospital service as the technology of patient care becomes increasingly "machine" oriented.

f. Identification of cost centers for hospital services including a delineation of costs for formal and informal educational efforts, acquisition of support and trans-

fer of costs to other appropriate sources.

g. Utilization of automatic data processing capabilities in comprehensive application to the Hospitals' operation.

h. Revision of accounting systems to provide improved efficiency in all phases of the fiscal operation of the Hospitals.

i. Development of equipment and supply distribution systems, methods and facilities to incorporate a more closely coordinated appraoch to purchasing, warehousing, inventory control distribution, efficiency and cost control.

j. Encouragement of cooperative associations with allied academic fields related to the operation of hospitals, e.g. Public Health, Dentistry, Social Work, Industrial Engineering, Sociology, and others.

k. To cooperate with the Dental School in improving the hospital dental services for outpatients and inpatients.

2. Teaching

a. Cooperation with the various units of the College of Medical Sciences and associated Hospital and Health Care Programs to strengthen the contribution of University Hospitals in the total educational endeavors of the University of Minnesota.

b. Expansion of the in-service training program on a Hospitals-wide basis to provide adequately trained personnel for non-professional hospital functions, including recognition of the possible support such efforts could lend to improving non-professional hospital skills on a statewide basis.

c. Interpretation of the Hospitals' multiple roles in teaching, research and service to interested individuals and organizations including medical staff and employees, citizens of the state of Minnesota, state and national legislative bodies, state and national administrative agencies, local, state and national hospital organizations and allied groups.

3. Research

a. Establishment of a formally organized, supported and coordinated effort to conduct research in hospital administrative services.

b. Assistance by every means possible to the members of the Clinical and Basic Science faculty in the conduct of their research.

c. Establishment of specific research into methods analysis (operations research).

Appendix

Reports from individual Hospital Departments

(This information will follow)

TO: Members of Committee for the Study of the Physical Facilities for the Health Sciences

FROM: Edna L. Fritz, Chairman, Nursing Subcommittee

DATE: October 6, 1965

SUBJECT: Preliminary Report of Nursing Subcommittee

The accompanying preliminary report of the Nursing Subcommittee will be presented to members of the over-all committee on Monday, October 11, 1965. You will note the attached addendum concerned with the public health nursing unit of the School of Public Health.

Will you be good enough to bring the reports to the meeting?

ELF:hks

October 11, 1965

TO: Members of the Committee for the Study of Physical Facilities for the Health Sciences

Enclosed is a preliminary report of the Nursing Subcommittee, prepared in the format suggested in Dr. Learn's memorandum for June, 1965, and including introductory material designed to provide a framework within which to assess the roles, objectives, and programs that are described.

Members of the Nursing Subcommittee are:

Edna L. Fritz, Professor and Director, School of Nursing

S. Gaylen Bradley, Professor of Microbiology

Edward C. Defoe, Jr., Assistant Professor of Pediatrics;
Director, Pediatrics Clinic;
Assistant Director, Comprehensive Care Clinic

Frances E. Dunning, Assistant Professor, School of Nursing

Frances D. Moncure, Assistant Professor, School of Nursing

Marion I. Murphy, Professor and Director, Public Health Nursing Department, School of Public Health

Betty M. Pederson, Associate Director, Nursing Services, University Hospitals

Hubert H. Serr, Professor of Dentistry

Dorothy E. Titt, Assistant Professor, School of Nursing

Edna L. Fritz

Chairman, Nursing Subcommittee

STATEMENT OF NURSING SUBCOMMITTEE FOR PRELIMINARY REPORT

TO THE LEARN COMMITTEE

October 11, 1965

I. Introduction

During any one span of time the educational and research contribution of the School of Nursing are influenced by over-all developments within the health field including those within the occupation of nursing. They take cognizance of national, regional, and state needs for nurses and of available resources within the University and elsewhere for meeting these needs.

Continuing expansion of health services and modifications in the patterns for rendering health care can be expected to accelerate in the years ahead. Quantitative and qualitative increases are going to be required of nursing and nursing education. Nursing, in concert with medicine, is going to have to decide whether assumption by nurses of the increasing technical components of medical care, which many members of the medical profession seemingly envision delegating to nursing in the future, will best serve the public, or whether a new worker will be needed to function as an assistant to physicians. If nursing is to absorb these tasks, then ways must be found to make it possible for nursing to develop its technology further at the same time that it retains and extends at some level of preparation and practice those supportive, instructional, and comforting services that people look to nurses to provide during their efforts to maintain or regain what is for them optimum health. The magnitude of such an undertaking suggests that nursing will increasingly have to differentiate the vocational, technical, and professional components within its service and prepare people differently for these levels of functioning.

In the face of rapid social change and unresolved issues before the health discipline the country over, it still remains for this School to chart its future course in nursing. Our teaching, research, and service activities should give promise of maximizing the School's contributions to attainment of over-all University goals and ultimately to the expansion and improvement of nursing care services for the public we serve.

In addition to the usual educational concerns, the following considerations have shaped the projections for the School of Nursing that are presented here.

1. <u>The responsibility of the health team to society</u>:

Adequate health care requires the interaction and cooperative efforts of many persons, a) the patient, b) his family and friends and the community as a whole, and, c) members of the health care group. The health care group has as its over-all goal a state of optimum health for every member of society. The achievement of this over-all goal is dependent upon the contributions of a variety of health professions, each of which has its unique goal. A well-defined goal makes it possible for a given profession to a) circumscribe its role, b) plan the educational preparation of its practitioners, c) develop a body of knowledge by means of clearly focused research, d) meet the changing needs of society from a frame of reference, e) understand the goals of other professions with which it works in efforts to achieve the larger goal, and f) assume legal responsibility for its own acts.

2. The place of nursing on the health team:

At present, nursing on the national scene is attempting to circumscribe its role around a unique goal. Society has for many years expressed the idea that illness itself and measures necessary for recovery from and prevention of illness add up to a variety of discomforts and inconveniences. There is evidence that unrelieved discomfort (stress) makes if difficult for people to take maximum advantage of available health services. Individuals differ from one another in the way in which circumstances associated with health care constitute discomfort for them. Because of this great individuality, it seems appropriate and necessary that a professional group assume major responsibility for the comfort of people receiving health care. Comfort has thus been identified as the goal of nursing, around which is circumscribed a primary role. The nurse assumes her primary role in a variety of settings, wherever there are people receiving health care.

The practice of nursing includes, besides this primary role, certain functions delegated by the medical profession. Nurses carry out measures which have been prescribed by the physician for the attainment of the goal of medicine. In order to assure maximum effectiveness of these medical means, the professional nurse administering them takes responsibility for creating ways to keep concomitant discomfort to a minimum.

3. The education of professional nurses:

The nursing roles described carry implications for the necessary educational preparation of those who fulfill them. To be able to provide comfort one must a) be able to assess the state of comfort of individuals, b) select principles, from the behavioral and natural sciences, related to the maintenance of comfort, c) identify nursing means based on the principles and apply them, and d) evaluate the outcomes of nursing means. To carry out delegated medical care safely and effectively one must be able to a)understand the purpose of the prescribing physician. b) understand the potential and actual responses of the body to the care, and c) apply scientific principles in the actual provision of the care.

The attainment of these abilities to an extent sufficient for initial professional practice of nursing requires that a student have baccalaureate education. To develop a body of principles in nursing one must be able to plan and carry out research related to the nursing goal. This ability is attained through graduate study at the master's and doctoral levels. These levels of preparation are also necessary to extend the understand and abilities of practitioners who wish to undertake specialized roles in the field.

4. The place of non-professional assistants in nursing and their preparation:

The professional nurse ideally provides complete nursing care, beginning with assessment and ending with evaluation, which would constitute a direct service to the patient. This is not always possible, since socio-economic factors limit the supply of professional practitioners. A nurse may have to delegate certain aspects of a patient's care to an assistant. The nurse's decision that a given patient is to receive that particular care, based on her own careful assessment, makes the giving of it her indirect service. The nurse decides who is best able to perform a particular aspect of care and then assumes responsibility for the outcomes. Thus, professional nursing practice encompasses both direct and indirect services to patients.

Since nursing is responsible for outcomes of the functions performed by assistants, it follows that the preparation of these people is determined by nursing. The ability to perform certain functions can be developed through on-the-job instruction.

The development of other abilities may require completion of organized vocational or technical programs conducted by vocational high schools or institutes, by hospitals, or by junior colleges.

5. Nursing needs and resources for meeting them in the nation, region, and state:

Current national projections about needed numbers of nurses, teachers and supervisors of nursing, etc., while very high are related only to predicted population increases. They do not allow for qualitative improvements either in the educational opportunities within nursing or in the services rendered by nurses, nor do they seem to take into account the likelihood of more diverse and demanding types of service in the future.

Admitting that the projected numbers were inadequate to meet the actual need, but assuming them to be the greatest that were attainable, the Surgeon General's Consultant Group on Nursing recommended in 1960 that by 1970 the numbers graduating from masters programs in nursing be tripled while those completing baccalaureate programs be doubled.

National figures and projections:

Type of Program	Numbers Graduated 1961	Goal for Number to be graduated in 1970	Projected Percentage Increase in Number of Graduates between 1961-1970	Projected number of Graduates needed in 1985 at same rate of increase.
Masters or higher degree	1,020	3,000	194	5,280
R.N.Bacc.	2,456	5,000	103	6,784
Basic Bacc.	4,039	8,000	101	10,563

Minnesota figures and projections:

	Number of Minnesota Graduates 1962-63	Percentage of Nat'l Total of Graduates Prepared in Minn. in 1962-63	Minn.Goal for 1970 Graduates /Surgeon General's recommendation	Percentage Increase in Minn. Graduates between 1962-63 and 1970	Projected Numbers of Minn. Graduates for 1985 at same rate of increase
Masters or higher degree*	51	5.0	153	200	293
R.N.Bacc.**	59(spec.)	2.4	118	100	170
Basic Bacc.	262	6.4	524	100	753

*Now prepared only at SofN and SofPH of University of Minnesota
**Now prepared only at SofN of University of Minnesota.

To yield 262 graduates in 1962-63 from Minnesota's basic nursing programs leading to a baccalaureate degree required enrollments of 865, hence if we wish 1572 graduates in 1985 enrollments in such programs in Minnesota must total 5188 students or approximately a 500% enrollment increase. Within baccalaureate programs an even higher percentage increase would be needed in the enrollment of students who had previously completed programs in nursing leading to either a diploma or an associate degree, since attrition of these students has been greater than that of basic students. Seven institutions in Minnesota, in addition to the University, now conduct baccalaureate nursing programs. Two of these are in state colleges at Mankato and Winona, but neither program is now professionally accredited. The liberal arts colleges that conduct baccalaureate nursing programs do not accept into them students who have had prior preparation for nursing because of the nature and location of their institutions. Further, it is not likely that they can appreciably expand their enrollments of basic nursing students without altering their institutional missions. This, coupled with the cost to institutions of providing baccalaureate nursing education, suggests that the principal burden for expanded enrollments in such programs will fall to public institutions.

Admission and graduation figures are more nearly synonymous in masters programs than at the baccalaureate level, since attrition is not great and, presently at least, federal traineeship support is available to most students for full-time study. Assuming the need to increase masters nursing program enrollments in Minnesota by 475% to 293 by 1985, it goes beyond the means and potential of the University's Schools of Nursing and Public Health to accomplish, but at present this institution is the only one offering programs in nursing at this level.

These facts suggest that if the University delineates its responsibility in nursing education in terms of the state's needs for nursing personnel only, the School can reasonably expect to contribute an appropriate share both quantitatively and qualitatively, given the necessary resources for program development and expansion. If, however, the University views its responsibilities as extending to the upper midwest, to the nation and to the international scene, any reasonable projections of nursing personnel needs go beyond this institution's capacity to fully provide now or in the foreseeable future.

Assuming acceptance of the broader of these two areas of concern, it is appropriate for the School of Nursing to contribute what it reasonably can to the quantitative need for nurses prepared in baccalaureate programs and to exemplify in its program the soundest preparation possible for the beginning practice of professional nursing. The University's greater contribution is to be realized through expansion of enrollments in graduate programs designed to prepare for increasingly expert nursing practice and/or for selected roles in nursing such as teacher, supervisor, administrator, or investigator. We need to provide leadership in the development and expansion of undergraduate programs in other educational institutions, especially in those state colleges that have access to suitable clinical resources. Assuming sound baccalaureate programs in several state colleges, masters programs are then to be encouraged in them as well.

II. Roles of the School of Nursing

Delineation of role emphasizes the faculty's concern for current and foreseeable needs. In addition, we must continuously explore new frontiers in nursing and health (with members in other disciplines.)

In keeping with the generally accepted purposes of universities and in common with most other educational units of this university, the School of Nursing's major roles are teaching, research, and service. Primacy among these roles will undoubtedly continue to be accorded to teaching although increased attention will be given to the research role in the years ahead.

A. Teaching Role

The teaching role is to

1. provide an exemplary undergraduate program which prepares for the initial practice of professional nursing.

2. conduct graduate nursing education except in public health.*

3. assist nurses who are studying in other educational units of the university as appropriate to their needs.

4. contribute instruction in nursing for students in other fields, such as hospital administration, when it is requested.

5. maintain excellence in the faculty.

6. share our experiences with faculty elsewhere in the University and in other nursing education programs.

B. Research Role

The School's research role is forwarding the development of theory and theoretical models that will contribute to the advancement of nursing practice.

C. Service Role

The provision of direct nursing care for patients is the responsibility, not of this School's faculty, but of the staffs of the hospitals and public health nursing or other agencies whose resources are utilized for laboratory practice in various of our educational programs. Service responsibility to patients is indirect in nature and implemented through guidance of students giving nursing care, consultation to individuals and agencies, as well as provision of continuing education experiences for nursing personnel in a variety of employment settings.

*See addendum to this report for a statement of the roles, objectives, and programs of the public health nursing unit in the School of Public Health.

III. Objectives of the School of Nursing

A. Teaching Objectives

1. Undergraduate Education

   a. To provide a baccalaureate program in nursing that exemplifies educational excellence and prepares students for the initial practice of nursing at a professional level.

   b. To test in this program the extent to which baccalaureate education in nursing, while realizing its principal purpose, can provide foundations for further study in nursing and/or in other subject fields.

2. Graduate Education

   a. To offer programs (other than in public health nursing) designed to prepare increasing numbers of individuals for the roles of expert practitioner, teacher, supervisor, administrator, or investigator in nursing.

   b. To assist nurses who are enrolled in graduate programs in units of this or other universities.

3. To participate upon request in the teaching efforts of other university departments, especially within the health disciplines.

4. To recruit, select, and develop a faculty which can effectively discharge the roles appropriate to faculty within a university.

5. To promote exchange of experiences relative to program development, implementation, and evaluation.

B. Research Objectives

1. To undertake research in nursing care, education, and service in areas other than public health.

2. To plan and participate in research efforts of an interdisciplinary nature with faculty in other divisions of the University as appropriate.

3. To provide opportunity for students to participate appropriately in ongoing research activities.

4. To participate selectively in the research efforts of others within nursing and allied disciplines.

C. Service Objectives

1. To provide opportunities for continuing education to a variety of

groups within the nursing profession.

2. To offer consultative services to individuals and agencies, both private and governmental, in nursing and allied fields.

3. To participate selectively in activities of organized nursing at local, state, national, and international levels.

4. To assist in referral and placement of graduates of the School's programs.

IV. Programs of the School of Nursing

On the assumption that the current pace of expansion in knowledge and health services will accelerate over the next quarter century, it is not unreasonable to suppose that by 1985 baccalaureate nursing programs may well be desirable as preparation for the technical practice of nursing. The professional practitioner of the future will need fully as much substantive knowledge of the physical and biological sciences as the nurse technician, considerably more knowledge in the social and behavioral sciences, and a considerable degree of expertness in carrying out all aspects of the nursing process in the care of patients. Such preparation may desirably require completion of a "generalized" baccalaureate program that provides the foundational work in the supportive sciences coupled with other liberalizing studies. This to be followed by preparation for nursing practice at the post-baccalaureate level in programs whose main focus would be on the nursing process with opportunity for requisite study of supportive sciences, including medical sciences, at the graduate level. Such an arrangement would permit greater interdisciplinary teaching of students in professional programs in various of the health fields. On this basis, preparation for the more expert practice of nursing and/or for other functional roles such as teacher, supervisor, investigator, etc., would take place at the post-masters level.

While this upgrading of educational preparation for nursing may well be important to insure nursing services of the quality desired under the circumstances of future practice that seem likely, it does not now seem an attainable goal. The current state of nursing and nursing education, the prevailing attitudes about higher education and the appropriateness of life-long career pursuits by women, and the rewards so far provided to women in the labor force of this country militate against this being practicable within a quarter of a century. However, speculation about such directions do have relevance for program considerations here.

A. Teaching Programs

It is recognized that the function of teaching is integral to the discharge of the faculty's responsibilities to interpret nursing and nursing education and to the conduct of the service role.

<u>Undergraduate Program</u>

1. The baccalaureate nursing program has recently been revised extensively. In preparing for initial practice it provides the fund-

amental aspects of a liberal undergraduate education and the prerequisites for graduate study in nursing.

It remains now to persist with evaluation of this curriculum, including the follow-up study of its graduates, to obtain evidence upon which to base future program changes. Particular attention must be given to a.) determining whether or not the purpose and objectives of the program are accomplishable by the majority of students within 13 quarters of study, b.) whether the laboratory time provided for the practice of nursing is sufficient to enable new graduates to perform nursing functions with reasonable effectiveness and security in beginning positions, and c.) whether the courses selected as prerequisite and contributory to the nursing courses are satisfactory both for the purposes of this program and as a foundation for graduate study in nursing.

On the first of the above points, it seems likely that as the expec expectations held for the nurse practitioner expand in the future initial preparation will have to be more extensive. Therefore the length of our baccalaureate program may increase, which would serve to increase enrollments within it.

On the last point there is particular need to investigate with other departments the provision of suitable courses in the physical and biological sciences for nursing students and other non-science majors.

2. The program is seen as serving as a model rather than as a major supply source of beginning professional practitioners. Therefore it is not anticipated that the numbers admitted to it will go much above the current goal of 130 students per year.

Nurses generally, school counselors, and the public are not yet fully aware of the differences in purpose and design among the several types of programs that prepare for nursing. The School's faculty recognizes their interpretive responsibilities in this regard and expects that within five years or so greater clarity about different levels of nursing education will be reflected in the recruitment and selection of students for all programs. As higher percentages of students with interest in and potential for the collegiate study of nursing go directly into baccalaureate programs, the need for us to admit any appreciable number of graduates from diploma or associate programs for baccalaureate study will lessen. Until such time as this is the case, however, we have a particular obligation to qualified applicants among this group, since ours is the only nursing program in Minnesota that serves them. Nurse faculty will be seeking the cooperation of others in the University in utilizing and/or developing procedures for determining the advanced standing that can be accorded to individuals in this group.

3. Public health nursing instruction within this program is now largely provided by nurse faculty in the School of Public Health. Since that School no longer engages in baccalaureate nursing education and the School of Nursing's undergraduate program has been extensively revised, the coordination that is necessary to integrate their contributions to

curriculum and instruction in the School of Nursing is time-consuming for all concerned. There is need in the 1967-69 biennium for additional budgeted positions in the School of Nursing to make possible assumption of responsibility for this aspect of undergraduate instruction both for students enrolled in the baccalaureate nursing program and for potential graduates who must remove a deficiency in this area of undergraduate nursing preparation.

Graduate Programs

1. Currently, programs in psychiatric and medical-surgical nursing, having as their purpose the preparation of expert practitioners, are offered through the Graduate School under Plan B. requirements for the degree of Master of Science.

   A teacher preparation program leading to the degree of Master of Education is offered through the College of Education with School of Nursing faculty responsible for student selection and advisement, and for planning and implementing those parts of the curriculum that constitute the major in nursing education.

2. Present masters programs serve thirty-five to forty students per year on the average. Students come from many states beyond this immediate region, especially since graduate study in nursing is financed for most by federal traineeships. Each year usually finds enrollees from a few foreign countries.

   As the only institution offering graduate nursing programs in the three states of Minnesota, North and South Dakota, and in view of the national needs for persons prepared through them for leadership positions in nursing, we expect to both extend graduate programs and to expand enrollments within them during the next twenty years. By 1970 it is reasonable to expect that we will have 60 to 75 students, while as many as 150 or more may be enrolled by 1985. Additional faculty will be needed to permit such growth.

3. Attention is being given to curriculum development in masters programs with a view to insuring that all serve to extend students' knowledge and ability in nursing per se, and that opportunities are available upon election to prepare for specialized roles within the field of nursing. Attaining these two purposes may necessitate extending the length of masters programs to two years.

   We would hope that all such programs might be made available through the Graduate School and that students might elect to meet either Plan A. or Plan B. requirements in them. Fulfillment of Plan A. requirements seems especially pertinent for students who wish to undertake post-masters study in disciplines other than nursing and/or to prepare for research participation.

4. Refinement and further development of content for inclusion in nursing education programs at the various levels will be dependent upon research by nurse faculty here and elsewhere. Such ongoing research is requisite in the learning environment of both undergraduate and graduate students and provides opportunities for students to participate as appropriate in research.

As nursing theory evolves further and is supported, we see its potential for inclusion in nursing programs at the post-masters and/or doctoral level. It is somewhat difficult to predict the pace at which this will occur. The research emphasis of nurse faculties in selected universities over the country has already led to the establishment of a few doctoral programs in nursing.

Increased numbers of nurses should be encouraged and can be expected to undertake doctoral study in other fields of the University. The School of Nursing faculty plans to maintain liaison with them and to make assistance available to them in their research investigations in nursing.

General considerations re the program of teaching

1. Attention needs to be given to the facilitation of interdepartmental faculty communication and cooperation in the interests of program development, implementation and evaluation.

2. The national shortage of qualified persons for university faculty positions in nursing requires aggressive recruitment efforts, and attention to all elements that bear on the retention of faculty. Efforts to provide developmental opportunities for faculty will need to be systematized and extended. The need for this and the time of faculty that it entails has to be recognized in according budgeted positions to the School.

3. Opportunities to practice nursing need to be regularly available to and utilized by faculty teaching nursing in order for them to maintain their expertise and to demonstrate the effectiveness of the nursing process they are teaching.

4. Attention must be given to maximally conserving the time of faculty for their central functions.

   Experimentation with methods and means of teaching that promise to conserve faculty time without compromising potential learning outcomes for students must be continued by faculty.

   Provision of additional clerical staff and of budget to employ teaching and/or research assistants is needed.

   To the extent possible, geographic proximity to the clinical or other laboratories that are utilized in the programs and to persons in other University units with whom we work closely should be maintained both to facilitate planning and conserve faculty travel time.

B. Research Program

1. It is imperative that an investigative research climate be fostered in order to develop knowledge that enriches all programs in the School as well as to demonstrate that the academic role involves research.

2. Because of the limited research preparation of most present and potential faculty at this point in time, we are presently working to further competencies through a developmental program supported by U.S.P.H.S. for a five-year period from 1963 through 1968. The

beginnings made during this interval will have to be continued by us beyond the end of the project. Seminars, consultation, opportunities for collaborative participation in the research of others, and opportunities for study are among the means being used to assist faculty.

3. Need is felt by the faculty for a clinical unit in which the exercise of certain controls by nursing would make it possible to carry out research in patient care. Such a unit in University Hospitals would serve the research interests of the Schools of Nursing and Public Health, and the Department of Nursing Services.

C. Service Program

Of many areas of service that the School's faculty are requested to provide, selectivity is needed in determining participation that is manageable in light of commitments to teaching and research and that have the greatest potential of contributing ultimately to improved nursing care.

1. In order to promote exemplary nursing care in agencies where students have learning experiences, faculty need to utilize informal opportunities to work collaboratively with nursing personnel in identifying and solving nursing problems. In addition, conferences, demonstrations, investigation and other means of participation in direct care of patients in agencies utilized for student laboratory experience serve to maintain effective relationships with nursing service personnel.

2. Consultation of a short-term nature is provided as appropriate in response to requests for assistance from individuals, schools, or agencies. Priority is given to local and state requests, but the region is also served.

Requests have increased markedly out of general interest in the conduct of the newly revised baccalaureate nursing program. Some of the needs expressed can be met by providing carefully planned observation visits with us for faculty in other schools, but the number we can serve in this way must be limited.

3. Ongoing consultation or program participation is provided selectively to governmental agencies, professional organizations, and foundations by individual faculty members.

4. Our conviction that learning experiences are enhanced by contact sufficient to provide reinforcement has led us to concentrate our efforts on providing sequentially planned opportunities for continuing education. In addition we have defined our audience as those nurses in a position to provide leadership to others in improving nursing practice or nursing education.

5. The dynamic nature of current nursing education coupled with the extreme need to prepare maximal numbers in the shortest time possible, makes it imperative that students at either the graduate or undergraduate level pursue preparation in regular full-time academic programs. This makes

inappropriate the provision of regular courses out of sequence in summer or in extension and has led to the development of non-credit offerings designed to assist employed nurses to increase nursing knowledge and skills.

File.

see MSD gA4r

TO: MEMBERS OF THE COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES FOR THE HEALTH SCIENCES

FROM: EDITING COMMITTEE
Robert Howard, Elmer Learn, Erwin Schaffer, William Shepherd, John Westerman

SUBJECT: DRAFT OF REPORT TO THE PRESIDENT AND BOARD OF REGENTS

At the request of Chairman Learn, the above members of the Health Sciences Committee met to consider the form and content of part 1 of our report. After carefully reviewing the sub-committee reports and consulting with our colleagues on the committee, we have drafted what we would consider to be a preliminary program report for the full committee.

This statement is submitted for your critical comment and, after appropriate revision, we hope your approval. Mr. Westerman will meet with you individually within the next ten days. We will incorporate as many of your suggestions as we can in a second draft which we would like to discuss at a meeting of the full committee on November 22, 1965 at 3:30 P.M. in 510 Diehl Hall.

D R A F T

COMMITTEE FOR THE STUDY OF THE PHYSICAL FACILITIES FOR THE HEALTH SCIENCES

REPORT TO THE PRESIDENT AND BOARD OF REGENTS ON THE RESULTS OF A STUDY ON THE ROLES, OBJECTIVES AND PROGRAMS OF THE HEALTH SCIENCES

PART I - PROGRAM STUDY

ELMER W. LEARN,
CHAIRMAN

GAYLORD W. ANDERSON
CYRUS P. BARNUM (DECEASED)
WINSTON A. CLOSE
LYLE A. FRENCH
EDNA FRITZ
STERLING B. GARRISON
N. L. GAULT, JR.
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IONE JACKSON
JAMES R. JENSEN
FREDERIC J. KOTTKE
RICHARD M. MAGRAW
ERWIN M. SCHAFFER
WILLIAM G. SHEPHERD
JOHN H. WESTERMAN, EXECUTIVE SECRETARY

O. Meredith Wilson
President
University of Minnesota

Dear Dr. Wilson:

On October 20, 1964 you appointed the Committee for the Study of Physical Facilities for the Health Sciences. After 14 meetings of this committee and over 50 meetings of the sub-committees we formed, we have come to certain conclusions about future programs in the health sciences. On behalf of the committee, I am forwarding a copy of our preliminary report for your review and comment.

It is our judgment that we must now begin to develop the implications of this report in terms of staff and physical resource needs. As you are aware, we have already begun a space study with the assistance of Hamilton Associates. As we proceed, we intend to revise and refine the program report.

Sincerely,

Elmer W. Learn
Assistant to the President

OUTLINE OF THE PROGRAM REPORT

Letter of transmittal by Dr. Learn . . . . . .

I. Introduction

II. Committee Organization

III. Conclusions

IV. Summary of Health Sciences

- A. Role
- B. Objective
- C. Program

V. Abstracts of Sub-Committee Reports

VI. Enclosures

- A. Sub-Committee Reports
  1. Ancillary
  2. Basic Sciences
  3. Clinical Medicine
  4. Dentistry
  5. Hospital
  6. Nursing
  7. Public Health
- B. Other

I. INTRODUCTION

On October 20, 1964 President O. Meredith Wilson appointed a Committee for the Study of Physical Facilities for the Health Sciences at the University of Minnesota. Included in the study were: the College of Medical Sciences (Medical School, Nursing, Hospital and Public Health) and the School of Dentistry. In his appointment letter, Dr. Wilson stated:

> The University of Minnesota has a major commitment to teaching and research in the health sciences. Over the years we have developed major physical facilities. Many of these were developed in an early day and are not well suited to modern circumstances. External factors have frequently influenced our decisions on the development of facilities with the result that our growth has not always been well coordinated into a master plan. Many of the facilities we do have are badly crowded, and it has become apparent that we need to develop additional facilities to serve a variety of needs.... It is important that we undertake an internal study of the needs of the health sciences in order that we may provide the most adequate longrange plan.

The first phase of the study was devoted to the development of a statement of programs envisioned in the health sciences in the years ahead. From this statement will logically follow an analysis of the type of space needs and of the relationships required among alternative kinds of space. Finally, when the foregoing is combined with estimates of numbers of students and faculty, a definitive plan describing quantitative and qualitative aspects of the development of physical facilities for the health sciences can be presented.

Resources are and will be limited. For this reason we shall attempt wherever feasible to express program, staff and space needs within a system of priorities. Furthermore, limitations at one stage may require review and perhaps modification of all that has gone before.

The committee is about to begin its study of the kinds of staff and space needs implied by the program reports elicited to date. It seemed wise, however,

that the program study be made available at this time to a broader audience, especially to central administration, for review and consideration.

Readers of this preliminary report should be aware of certain major limitations faced by the committee:

1. Perhaps the chief limitation was the fact that the findings of the Hill Commission Study on regional needs for physicians and dentists was not available at the time this report was written. While it is possible to point out certain general trends on a program basis, it is not possible to convert programs to space without a reasonably accurate estimate of the number of students we will have to accommodate.

2. Another limitation has been the difficulty in projecting the number of graduate students in the years ahead. While we are in sympathy with this difficulty, we are also concerned that the space implications of graduate training far exceed those of undergraduate training in many instances.

3. A third limitation has been that the committee had no previous plan upon which to build.

4. A fourth limitation has been our lack of experience in planning. This limitation, in combination with a self-imposed deadline for a preliminary report, has meant that many inexperienced people have had to cover a great range of material in a relatively short period of time.

From the outset we have stressed the fact that this report will be constantly reviewed and revised where appropriate. Our assumption has been that better program planning will come from the faculties' best judgment on what may be insufficient data than will come from lack of faculty participation and estimates on no data.

It will be noted that some of the subcommittee reports have striking similarities and may even appear repetitious at times. For the convenience of the reader we have attempted to summarize the subcommittee reports in two ways. First, we

have abstracted major conclusions from the reports. Except when identified as being that of a specific committee, it can be assumed that the major conclusion applies to all or almost all of the health science units. Secondly, we have made a summary statement of role, objective and program for all of the health sciences. However, for greater detail about an individual area, your attention is invited to the specific subcommittee report.

The appointment of 65 faculty members indicates the breadth of representation and consultation. In addition, every member involved in the study was charged with the responsibility of keeping his faculty colleagues informed about the project, and encouraged to solicit their views on particular aspects of the study. It would not have been possible to ask each faculty member to pour through the 8-plus inches of paper and attend all of the committee discussions that have been generated by the project.

In conclusion, the reasons for beginning this study still seem valid as we complete our preliminary program report. There is an internal need for this study; external pressures have made such a study a necessity; and finally, many circumstances in the history of the health science units indicate that we are about to embark on a new era. This does not mean that this report should be put in tablet form or shelved for the next twenty years, but there is a clear recognition that the health science units must respond to the internal and external pressures for change in a coordinated, integrated manner.

II. COMMITTEE ORGANIZATION

We have alluded to a full committee and six subcommittees in the introduction section. We should like to point out in a brief fashion how we organized, how we collected data and techniques we used in an attempt to critically evaluate the past and present, and make objective judgments about the future.

President Wilson appointed 20 people to the full committee chaired by Dr. Learn. The full committee met several times in January and February, 1965, to determine what to study in order to carry out President Wilson's charge and then how to study ~~to~~ the determined subject. It was decided that one could not consider space requirements for the future until something was known about the programs behind space requirements. Judgments about allotting more or less space could not be made on square footage and dollars alone, but must rest on the judgment of what programs deserved the highest priority. This meant we needed to know how the programs in the health sciences had come about, what the programs were at present and what the projections were about future programs and on what basis they could be made.

These kinds of questions, while obviously involving the faculty, could be answered by having an outside consultant gather the necessary data and opinions or could be developed by the faculty itself. After looking over the work of outside consultants at other health science centers, and in view of the past history of faculty participation in these matters at Minnesota, the full committee decided to carry out an internal study of the programs in the health sciences. This was not a bleak prospect as may first appear, because of the availability and helpfulness of numerous knowledgable individuals within the faculty at the University.

The full committee decided to organize for the internal study by forming the following committees with the chairmen taken from the membership of the parent committee:

Subcommittee	Chairman
Ancillary	Frederick Kottke
Basic Sciences	Eugene Grim
Clinical Medicine & Hospital	N.L. Gault, Jr.
Clinical Medicine Task Force	Lyle French
Hospital Task Force	James Stephan
Dentistry	Mellor Holland
Nursing	Edna Fritz
Public Health	Gaylord Anderson

When the appointments to the various subcommittees had been completed (there was not a single refusal among those asked to participate), and additional 46 faculty members were added to the 20 originally appointed. In addition to the requirement that the chairman of each subcommittee come from the full committee, the full committee also decided that there be full cross-representation on all subcommittees. That is, each subcommittee contained at least one person from every other subcommittee area. The subcommittees were informed of each other's progress by having all minutes circulated to each of the 66 participating study members.

The technique used in gathering information varied from group to group. In all cases it was the responsibility of the chairman and his committee members to get as much information as needed so they could write a program report about the present and future. Some committees sent out questionnaires, some called department chairmen to meet with them, some used the members from the area they were

studying who were on the committee to gather data and make recommendations. Some used a combination of methods.

What evidence is there that any critical evaluation went into the subcommittee reports? We can't guarantee that there was enough critical evaluation, but can cite some of the techniques used in an attempt to stimulate such a critical viewpoint. First of all, there was a clear recognition at the first meeting of the Learn Committee that there would be a great tendency for the units to do nothing more than ask for what they needed right now and project for future space requirements without consideration of programmatic changes of resource limitations faced by the University. Therefore, the full committee was sensitive to the limitations of their approach and aware of the potential shortcomings.

Probably the most important factor was the quality of the people asked to serve on the study. The 46 members who accepted subcommittee assignments were selected on the basis of their independent thinking, breadth of vision about all of the health sciences, ability to critically evaluate incomplete data or impressionistic evidence and finally to make the best possible judgments on the evidence at hand.

The aforementioned cross-representation was thought to be a way of introducing an element of fresh, if not knowledgable questions about what a particular unit was attempting to accomplish and of providing judgments at the subcommittee level by persons other than those directly associated with the area under study.

By circulating minutes to all members in the study, it was hoped that conflicts could be spotted and discussed. The executive secretary worked closely with the subcommittee chairmen in an attempt to focus on certain issues of concern to the parent committee.

Ultimately, the acceptance or rejection of the subcommittee reports rested with the full committee. By close examination of the written reports, and questioning of the subcommittee chairmen, it was hoped the full committee would make sure that important issues were being discussed and that the work of the subcommittees was being carried out in a coordinated framework.

We are not prepared to say how well these techniques succeeded. It does seem that the subcommittee reports are long on aspirations and needs and short on priorities, However, part of this is due to the limitations previously mentioned. Our best judgment is that it is better to come out with a preliminary report at this time and get on with the job of assigning space requirements to the programs rather than wait until all the variables have been sifted out. Conclusions about space are one way of assistance in making priority judgments about programs.

As the space figures become available, and when the Hill Commission Report is received, and when the faculty reaction to this report is apparent, then we will be in a better position to draft our final report on programs with the priorities for each area. We fully recognize that limited funds are one of the realities of University Health Science life and are prepared to make the necessary judgments about our future as more essential information becomes available.

III. CONCLUSIONS

These conclusions are based on the findings of the preliminary phase of the study. Many of these conclusions are repeated in the individual subcommittee reports. Most of the conclusions have space implications.

1. When the reports of the six subcommittees are evaluated, the collective programmatic summaries suggest major changes in future health science programs. Some of the important changes will revolve around these items:

a. The hospital and the medical school will place greater emphasis on outpatient teaching and service programs. The existing facilities are inadequate even for the present programs. Projections about future teaching programs rest on the assumption there will be less emphasis on the bed patient and greater attention to the ambulatory patient. Projections about future service obligations of the hospital are based on the assumption that there is increasing pressure to develop the ambulatory services into an efficient, comprehensive, competitive unit than there is to build up the already well-developed inpatient service. The service programs of the dental school are largely outpatient at present, and these programs will expand with closer integration with the medical center ambulatory program. In the longer range, the pressure for the public health field to become more clinically oriented will likely be reflected in the SPH educational programs.

b. Increased emphasis on an integrated team approach to health maintenance and care will be reflected in most of the programs, indicating a better utilization of highly skilled services and the increasing need for associated professional personnel. To accomplish the team approach objective, the health science teaching programs will be reviewed as a comprehensive unit, in order to determine at what level meaningful team educational experiences can be accomplished.

c. There will be a major program change in the School of Dentistry. The qualifications of the students and the quality of the training program will be up-

graded to meet the stiffening demands of the profession. More basic science courses will be given. The graduate and research programs will greatly expand, hence the number of full-time faculty will also increase. The curriculum will shift to a greater emphasis on preventive dentistry.

d. The graduate programs and research endeavors, which have contributed enormously to the growth of the health sciences since the end of World War II, will continue to expand. It must be stressed that the programs for new ambulatory, dental and nursing innovations will not come at the expense of the strong existing graduate and research programs. In further committee study it will be as important to attempt to define the scope and needs of graduate programs as carefully as we now specify the undergraduate enrollment figures.

2. Programs of the health science units will give greater emphasis to SERVICE AND EDUCATIONAL EFFORTS THAT EXTEND INTO AND INVOLVE THE COMMUNITY.

Surveys of health needs, legislative programs and community desires all point to a greater interchange with the community. This will help the health science units round out their educational programs and be of assistance to the community in a service role.

3. The health science units recognize AN OBLIGATION TO PROVIDE POST-GRADUATE EDUCATION that is just as important as the obligation for undergraduate and graduate programs.

Post-Graduate programs, while differing in emphasis, should not be distinguished on the basis of a lower priority. At present, the size and scope of post-graduate activities does not begin to compare with undergraduate and graduate programs. If this obligation is to be translated into a reality for health science professionals in the field, it will take major resources not now available.

4. INVESTIGATION INTO TEACHING TECHNIQUES AND THE METHODOLOGY OF LEARNING will become major programs of the various health science units.

5. The health science units, in serving the needs of the state, can best achieve their objectives BY CONTINUING THE EMPHASIS ON HIGH QUALITY PROGRAMS. Plans for future growth must include a delineation of what constitutes high quality and how high quality can be preserved when programs are expanded.

While this is a large University, its contribution in the health sciences cannot be measured on solely a quantitative basis. We are capable of and have been providing high quality educational programs. This is achieved through limited undergraduate enrollments and exemplary, model programs. Because certain programs are not available elsewhere in the community, there is often pressure on the health sciences to increase enrollments and become a major supplier in a particular field. While this has been done in some instances, limitations of space, staff, funds and lack of compatibility with existing primary programs prevent any widespread trend in this direction. The health sciences do recognize the important obligation to the state of turning out health professionals for employment in the state. In fact the faculties are prepared to undertake ADDITIONAL EDUCATIONAL OBLIGATIONS AND PROGRAMS provided they have the resources to carry out the charge and the increased obligation is of an orderly magnitude. Looking at it another way, the health science faculties do not believe that programs in research, education and service should have an absolute ceiling at this time.

However, the faculties are aware of the limitations in the role of being all things to all people or "providing something for everyone." Where the health sciences are uniquely qualified to offer programs (such as dentistry and medicine), expansion would seem to be in order. Where other resources in the state could offer programs (such as nursing and x-ray technicians), it would seem the appropriate role for the health sciences would be to offer programs geared to training teachers,

researchers, and leaders in the particular field.

6. There is a need for some FORM OF ORGANIZATION TO COORDINATE HEALTH SCIENCE PROGRAMS IN SERVICES, SPACE AND CURRICULUM.

This study has increased the awareness of the participants of the interdependence of the health sciences. Yet there is no clear mechanism to achieve a coordinated effort under the existing administrative arrangements.

There is inadequate space at present for the existing health science programs. Projected programs, in total, represent a dramatic shift from the existing pattern in the health sciences. This shift involves relationships among the health sciences and between the health sciences, the university and the community. Judgments about priorities must be tentative at this time without further data. When the data are available, conclusions can be made about the importance of teaching, service and research relationships among the health sciences. At this point, we can only point out general trends that will shape the future of the health sciences.

IV. SUMMARY STATEMENT OF ROLES, OBJECTIVES AND PROGRAMS FOR THE HEALTH SCIENCE

A. ROLES

TEACHING

1. The Health Sciences are primarily concerned with the education of undergraduate students from the state, graduate students from a national base and post-graduate professionals from the region. This role includes the preparation of practicing professionals, highly specialized individuals requiring advanced work, research investigators, technical scientists and academicians among others.

The health sciences recognize that there is an obligation to supply health science professionals for the state. At the same time there is an awareness of the important contributions that can and are made on a national and international basis.

RESEARCH

2. An integral part of the role of the Health Sciences is to investigate problems in the area, to extend the frontiers of knowledge through basic and applied research and to expose the students to the research process.

Some students will seize this opportunity and become full-time investigators. The range of research activities extends from the students' introductory exposure to the development of complex research institutes. This role has been responsible, in large measure, for the growth and development of the health sciences since the second world war.

SERVICE

3. The role of service, while complimentary to the teaching and research roles, may extend beyond the minimum needs for these purposes. The health sciences render service in the form of patient care, assistance to health professionals in the area, and cooperative programs with community agencies and other organizations.

OTHER

4. A combination of the above roles is the overall role of interacting with communities and organizations and influencing the attitudes and standards of student and practicing health science professionals.

B. OBJECTIVES

TEACHING

1. To develop in the students the necessary knowledge, skills and attitudes to carry out their professional function. This objective is best accomplished through an integrated team approach.

2. To instill in the students an eternal dissatisfaction with the existing state of knowledge and practice and develop an attitude conducive to the pursuit of a lifetime of learning.

3. To develop programs that recognize external needs and pressures and yet represent a logical extension of internal developments. Implicit in this objective is the need to experiment with the methodology of learning, the subject matter and the application of knowledge and skills.

4. To develop methods for measuring what and how we teach.

5. To recognize the interdependence of the health sciences and develop appropriate programs that will involve the students in meaningful cooperation and prepare the students for the needs and demands society will place upon him.

RESEARCH

1. To create an environment conducive to investigation and research activities.

2. To extend the frontiers of knowledge through basic and applied programs.

3. To maintain interdisciplinary relationships in research and between research and instruction.

SERVICE

1. To provide exemplary service to our defined population, consistent with the educational mission.

2. To provide exemplary consultative and other services to members of the health profession and appropriate organizations.

3. To devote our resources in a manner that exemplary services will help elevate standards in the region. This involves sharing information about our activities and an interaction with individuals and organizations.

4. To recognize and create an awareness among our colleagues about areas in which additional or new services may be needed and to act as a catalyst to develop appropriate service patterns.

C. PROGRAMS

1. ANCILLARY

This subcommittee reviewed 15 programs. About half of the programs were well established in the College of Medical Sciences and half were programs which should be established or enlarged. Typically, these programs have started as vocational training for a person who would assist the physician or dentist to carry out specific tasks. The programs have evolved into professions, capable of independent action (and indeed certain talents and skills which the physician or dentist doesn't possess) and of great importance in providing comprehensive health care. The University has often pioneered in the establishment of these programs and yet there is common and continual pressure within these programs, to achieve professional recognition.

Some of the reasons for this pressure are unrelated to their setting in the health sciences. It is a great advantage to be located within the University framework. However, there is a need for research in these areas and for a review of broad educational preparation. At present, all of the programs are under a

clinical department. This is as it should be for the clinical aspects of their preparation. However, it may be worthwile to explore an arrangement whereby the units could be administratively grouped together with the potential advantages of a broader approach to the health sciences, such as is practiced in the School of Public Health.

We agree with the basic principles developed by the subcommittee for evaluating the establishment and continuation of these programs. These principles are:

1. The College of Medical Sciences should be involved primarily in the establishment and teaching of courses leading to baccalaureate or graduate degrees. This would also apply to the School of Dentistry.

2. Technical training and subcollegiate courses, as a generality, should not be carried out by the University except when special facilities or personnel preclude such programs elsewhere.

3. The College of Medical Sciences (Dentistry) may initiate a subcollegiate course as a pilot program to develop the requirements for such a course.

4. Under certain circumstances it may be necessary for the College of Medical Sciences (Dental School) to establish certain subcollegiate courses in order to meet its own or community needs. Insofar as possible this should be avoided or constitute a temporary service.

The subcommittee set up criteria for deciding which programs to include in their study. Programs in Public Health, Nursing and Dentistry were excluded. The following established programs were considered:

1. Medical Technology
2. Occupational Therapy
3. Physical Therapy
4. Radiologic Technology
5. Vocational Rehabilitation Counseling
6. Speech Pathology & Audiology
7. Clinical Psychology

No radical changes are anticipated in the above group. Projected developments and existing limitations would indicate the most severe space problems are in Medical Technology, Radiologic Technology and Audiology & Speech Pathology. Alternative training programs are available and these programs do have limited enrollments, with an objective of quality education for leaders and teachers. Even so, the concept of retaining the students in the clinical or service area must come under scrutiny when one considers the prospect of 330 undergraduate and graduate Medical Technology students by 1985, for example. The health team approach will have an impact on the design of future facilities.

The concept that the physician is dependent on associated health professionals carries with it an obligation for the University to establish or enlarge programs in new areas. The subcommittee report suggests the following fields:

8. Bioengineering
9. Biomedical data processing and information retrieval
10. Electroencephalography technicians
11. Inhalation therapy
12. Medical Art
13. Medical Record Librarians
14. Medical Social Work

These programs have implications for many of the health science units and underscore the need for an integrated cooperative educational and service approach.

2. BASIC SCIENCES

This traditionally has been one of the strong units of the health sciences. The reputation of this center to a considerable extent has been based on the achievements of the basic sciences. These units have undergone a striking shift in emphasis over the past ten years. The faculty has become increasingly concerned with basic research and has moved a long way from the instruction of the basic sciences as applied to medical students and dental students. Today, medical students occupy less than 40% of the curriculum time, take few of the higher level courses, and participate in a limited manner in the research programs. Graduate students occupy more time, take more high level courses and participate in more research than the medical and dental students.

At present in most departments, the basic medical school course is also taken by graduate students. It seems likely that these two groups will be separated in the future with the medical course stressing general principles and clinical applicability and the graduate course concerning itself with the more detailed and complex mechanisms underlying the general principles, according to the subcommittee report.

The basic sciences are in accord with the objectives of the dental school to upgrade their course content and are prepared to undertake this project. The basic sciences are asked to develop special programs for a large number of groups. They do not have the resources to accommodate all of the special requests but are willing to review their programs with the objective of teaching fewer courses to more groups.

There is no radical programmatic change foreseen over the next 20 years. Continuation of existing research programs will undoubtedly increase pressure for staff and facilities. The faculty is not inclined to put a ceiling on the number

of graduate students. There is a program change, not radical in nature, that may have a major impact on the arrangement of facilities. When and if Dentistry and Nursing vacate the basic science complex, the subcommittee would like to have Micro-Biology rejoin them. Micro-Biology is now in the Mayo Tower. This availability of space and the arrival of Micro-Biology could occasion a pooling of student laboratories. That is, the students would be divided up into laboratory modules of say 4 to 12 students, and the basic science departments would come to the student. The departments would be teaching the same programs but in a vastly different physical arrangement. A curriculum review may also indicate the desirability of including the basic sciences at a later time in the curriculum of the student and call for integrated programs with clinincal medicine, clinical dentistry and clinical nursing, for example.

Changes in methodology might include adoption of programmed learning in some form, increased use of teaching aids (eg., films and video tape), greater reliance on laboratory demonstrations as opposed to student experiments, etc., according to the subcommittee report.

The relationship of the basic sciences to the new College of Biological Sciences must be worked out. At present, it would seem the College of Biological Sciences would undertake the small undergraduate load of the College of Medical Sciences Basic Science Departments. There is no way at this time to project the relationships with regard to the preparation of graduate students. This is another example of an area that needs to undergo constant review as the final program report and space report is developed.

3. CLINICAL MEDICINE AND HOSPITAL

CLINICAL MEDICINE

There will be many significant program changes in clinical medicine. A cursory examination of internal studies by other medical schools, legislation, public expectations, special study reports and publications suggests that medical education and patterns of health care are in a state of critical review and change. Denial of this situation does not alter its existence. Difficulty in predicting the form of the change does not alleviate the necessity for developing plans and programs that will serve the health sciences and the public in the future.

The clinical medicine group is aware of the Coggeshall Report (Planning For Medical Progress Through Education) and has come to many similar conclusions regarding programs at this center. Historically, the strong scientific orientation that has influenced the basic science departments has also shaped the clinical medicine departments. Minnesota graduates have earned the reputation of being well grounded scientific clinicians. Indeed, many of the clinical departments have strong basic research programs. The school is jealous of this accomplishment and will strive to maintain this essential orientation in future programs.

However, a new set of pressures are upon us and the clinical medicine departments need to examine and strengthen their programs in several areas. Some of the programs of the future will include:

1. Greater emphasis on ambulatory teaching and service programs.
2. Increased cooperation with the programs of the School of Dentistry.
3. Expansion of clinical research programs, particularly with reference to greater use of animals.
4. The strengthening and expansion of affiliations, ever mindful of the demonstrated elements essential to a high quality affiliation.

5. A meaningful emphasis on the team approach to comprehensive health care.

6. Greater reliance on the talents of associated health professionals is a major trend and must be dealt with in the educational framework.

It is recognized that these may sound like all-purpose statements applicable to any medical school. However, this does not lessen our need to be sensitive to the external pressures that are generated from a variety of sources with a genuine and legitimate concern about the future of clinical medicine. Unfortunately, this concern has yet to be channeled in a concerted effort to provide the resources necessary to carry out these trends and objectives. The clinical medicine departments cannot realistically accommodate these desirable changes without the means to do so. The departments will be limited in what programmatic changes they can implement until faculty and financial support for these programs is given a priority comparable to that which is given to research programs. The group realizes that many of these changes imply an important cooperative role with the hospital.

HOSPITAL

There will be many programmatic changes within the hospital. Some of these changes are related to the hospitals' service relationship with other health science units (particularly clinical medicine) but some of the changes reflect patterns of growth and improvement that would come about even if there were no medical school. No attempt will be made to distinguish the causative factors behind the changes.

A major conclusion, from even the preliminary report, is that the hospitals have projected a program that will call for space expansion on a large scale. The expansion will not necessarily be solely reflected in the more readily identifiable symbols of growth - beds, exam rooms, operating rooms, etc. - but will also give space for expanded programs in the hospital departments. High quality service is and will continue to be the main business of the hospital. Following are some programs and general trends of service that will guide the hospital in the years to come.

* Development of ambulatory care facilities and services in a comprehensive manner which will give porper consideration to the emerging medical, organizational, and educational environment. As part of the environment of ambulatory care, thoughtful attention will be given to such demands and needs of the patient as:

-efficient appointment and scheduling systems

-provision of care in the shortest possible time

-adequate parking, transportation and traffic patterns

-appropriate housing and dining facilities

* Development of a comprehensive range of exemplary services. This program will include the definition of the optimum intrahospital distribution of beds, services and supportive facilities to provide a spectrum of properly sized, supported

and coordinated units ranging from intensive care through nursing home levels with extension to ambulatory and home care services.

* Maximization of individualized patient care, giving recognition to the increasing sophistication and articulation of service demands by the public, greater freedom of choice of vendor for medical care by a larger segment of the population.

* Utilization of data processing procedures in a comprehensive application to the hospitals' operation. Also, a revision of accounting systems to provide improved efficiency in all phases of the fiscal operation, including the identification of cost centers for hospital services, educational programs, and research.

* The cooperation with the dental school in improving and expanding hospital dental services for all patients.

* The encouragement of cooperative associations with allied academic fields related to the operation of hospitals, eg., industrial engineering, sociology, social work, community medicine, dentistry, and public health.

The hospital will become involved in other teaching and research programs. Some of these are:

* Continued cooperation with the university and health science faculties to strengthen the contribution of the hospital to the total educational effort of the university.

* Expansion of the in-service training program on a hospital wide basis. Interpretation of the hospitals' multiple roles in teaching, research and service to interested individuals and organizations.

* The establishment of a formally organized, supported and coordinated effort

to conduct research in hospital administrative services and establishment of an operations research or methods analysis program.

Like other units of the health sciences, the hospital is about to embark on a new era. It has a well kept, excellent physical plant. The services are soundly financed. Expansion has been made possible through the generous assistance of individuals (Eustis, Todd, and Christian) and organizations (Variety Club, Masonic Order, VFW). This hospital has become a strong, vigorous, independent entity in much the same manner as such departments as surgery, medicine and physiology. Now a new set of challenges have appeared. Excellent services, sound financing and good plant will continue to be important. In addition, active participation in the provision of health services by a highly trained hospital staff will become of increasing importance. This in turn will call for a more active in-service training program for all employees. The hospital will also have to strengthen its external programs in order to integrate its services with other state hospital and health resources so that the referral system and continuity of care objectives are enhanced.

In summary, the hopsital cannot act in defiance of the laws of social gravity. Most of the other reports note that this is a period of change. Change in patterns of care, a critical look at what is being taught and how it is being taught, a change in the expectation of the public, a change in the traditional roles of the health sciences and a growing self-awareness that things are not like they used to be but not yet clear as to what they will be. Many of these changes are translated into action is a hopspital setting. The hospital looks upon this challenge as a wonderful opportunity to apply its imagination and skill. Then the words of objectives and programs will become acts of understanding and service to the people of this community.

4. DENTISTRY

The dental school is at a time of change. This unit has, perhaps, the most dramatic program changes. These changes include a major curriculum change, higher entrance qualifications for the students, the addition of full-time faculty members, and more emphasis on preventive dentistry and dental research. In the 1920's and 1930's the dental school had a worldwide reputation for its excellence in restorative dentistry. In the 1950's the school shifted its emphasis to research activities, graduate study, preventive dentistry and continuation education. All of this was done without impairing the outstanding restorative dentistry program. For a number of reasons, the fine starts made in the 1950's have not flourished as expected. After a full-scale curriculum review and a thorough program survey, the school is now ready to devote its resources to carrying out these desired programs. Highlights of these changes will be noted:

* The four year DDS program will recruit better qualified students by increasing the pre-dental liberal arts background, raising the minimum acceptable admission GPA, and pursuing a more active recruitment program. The curriculum will be improved by increasing the biologic orientation, greater utilization of the team approach, better preparation for the planning, direction and execution of oral health care, teaching students to work in the hospital setting, developing a major educational program in preventive dentistry, and providing free time and honors courses.

* Graduate students will increase in numbers as the investigative programs are expanded. A conscious effort will be made to develop dental educators as well as educating students for the dental specialties. The graduate student recruitment program will be expanded as will the intern-residency program. The key to additional graduate programs will be the addition of faculty who will have the time and resources to devote all of their effort to investigative programs and graduate education.

* Another major change will be emphasis on upgrading the skills and responsibilities of the associated dental professionals. The school must devote major attention to this area if the dental practice of tomorrow is to achieve its desirable changes.

* The school will pursue a more integrated teaching, research and service role with other health science units.

* With all of the changes in dental practice, the school finds it more urgent than ever to close the gap between the school and the practitioner via meaningful post-graduate programs.

* The school will develop a program to study the educational methods used within the school and make use of recent developments in teaching aids.

* A thread running through all of the programs will be the need for dental students to develop a feeling of social responsibility and sensitivity. This is the kind of program that cannot be described, measured, documented or readily made tangible. Faculty attitude, concern for the dignity and importance of the individual patient, responsiveness to requests from individual practitioners and community agencies are all a part of this very important program.

In summary, dentistry has not shared in the resources made available to the health science units over the past 15 years. Hence, the growth in dentistry has been more limited. A number of internal and external factors have prevented the school from realizing its full potential. Now, after several years of careful preparation, the school knows what it wants to achieve and how it can achieve its objectives. If adequate resources are made available, the school should develop some of the most exciting programs within the health sciences.

5. NURSING

The school of nursing has had a long and illustrious record in the field of nursing education. This school had one of the first graduate programs and has long been recognized as a school providing educators and leaders for the profession. Key positions in education, as directors of nursing service and as representatives in organizations are filled throughout the country by Minnesota graduates. The last major curriculum change of the school was in 1962-63. This change was based on the premise that nursing had more than an assisting technical role in the care of patients.

In making this program report, the committee noted that quantitative and qualitative increases are going to be required of nursing and nursing education. Nursing, in concert with medicine, is going to have to decide whether assumption by nurses of the increasing technical components of medical care will best serve the public or whether a new worker will be needed to function as an assistant to physicians. Nursing will have to differentiate the vocational, technical and professional components within its service and prepare their students accordingly.

The following considerations have influenced the program projections:

1. The responsibility of the health team to society.
2. The place of nursing on the health team.
3. The education of professional nurses.
4. The place of non-professional assistants in nursing and their preparation.
5. Nursing needs and resources for meeting them in the nation, region and state.

It is projected that by 1985 the baccalaureate nursing programs may be general in nature and serve as a preparatory course for additional work in the technical practice of nursing. For the present:

* It will be necessary to evaluate the recent curriculum changes to evaluate in particular, whether it is possible to accomplish the stated objectives in the time alloted. There is a possibility that the length of the basic program will have to increase. In any case, the program should serve as a model, not as a primary supplier of nurses for the state or region. A careful review should be made of the public health nursing program (which is under the School of Public Health) because of the time consuming efforts required to coordinate the program with the undergraduate public health program of the School of Nursing.

* The graduate program will need to expand to accommodate the demand in this area. This is the only institution offering graduate nursing programs in Minnesota, North Dakota and South Dakota. Therefore, it would seem the expansion of graduate nursing programs would better fit in the role of the school and have a higher priority than expansion of the undergraduate program.

* Research programs are virtually non-existent. However, major emphasis should be put on creating a climate where a vigorous program could be carried out. The school is a logical choice for this research role. This role could involve the hospital and the nursing service department.

* The service programs of the school are taken on only in conjunction with the teaching and research roles. The faculty has developed guidelines for these programs and is concerned about being selective in their commitments in order not to dilute their primary objectives.

* There are many potential programmatic changes involving the methodology of teaching. The faculty is ready to reconcile their objectives of doing enough practice to maintain their expertise and adventuring into new methods of teaching to provide the students with an exciting approach and conserve the time of the faculty.

The national shortage of nurses imposes many demands on the School of Nursing. This school has the potential resources, the willingness and the imagination to pioneer new approaches to an old problem. Experimental programs in patterns of nursing care have broad implications for all the health services. The school is concerned with the nurse's role in meeting the needs of the patient and functioning as a member of the health team. Many of these programs call for the active participation and support of the medical staff, hospital, and School of Public Health.

6. PUBLIC HEALTH

The School of Public Health is one of the 12 accredited institutions receiving federal support under the Hill-Rhodes act for public health training as well as special project training grants. Minnesota has the second largest enrollment among public health schools and yet only two small schools have less space than Minnesota. In fact the total amount of space in the school is less than one-half the national average for other schools of public health.

There has been a trend within the schools of public health whereby emphasis is placed on activities resembling a research institute approach and the overall task of offering an educational opportunity to public health practitioners is being left to a smaller number of schools. Minnesota, while carrying on an active research program, has rejected the more narrow institute approach and has accepted the broader role of filling positions that exist inprivate and public health agencies.

In addition to the research programs and professional training for those who are to be employed in public health programs, the school also offers instruction in preventive medicine and public health, cultural health courses, training in biostatistics and instruction in physiological hygiene. The staff of the school are also actively engaged in public service enterprises as members of committees or consultants to many local, state, national and international agencies.

The School has the following programs:

1. Professional training for public health work.

* Health officer training course for physicians and dentists, This program will increase slightly in length and approximately double the number of students in the years ahead.

There are three divisions of this course. Public Health Administration (which needs full time staff, particularly if instruction in community medicine is included as the program develops. Minnesota is the only school in the country without a fully staffed division of public health administration). Epidemiology needs to expand its graduate program and be prepared to accommodate graduate students from other areas who would like to spend some free time with this division. Maternal and child health is now in a position to expand its minimum program but is desperately cramped by lack of staff and space. Clinical programs can be carried on in conjunction with the University Clinics but research programs require space adjacent to the division.

* Public Health Nursing is a program under pressure to expand as society demands more service from the public health agencies.

* Environmental Health has an active program aimed at training professional personnel for public health careers and also carries on extensive research and doctoral level programs. Again society's concern with issues of environmental health will be reflected in the support given this program.

* Health Education, although not a large program, will approximately double in size and could conceivably increase beyond this figure if this division is called upon to upgrade the abysmal state of health education in most schools systems.

* Public Health Veterinarians are handled in conjunction with the School of Veterinary Medicine. It does not appear that this program will increase to any considerable extent.

* Biostatistics has been one of the fastest growing units within the school. The importance of this unit to the faculty and staff of the center cannot be overemphasized.

* Hopsital Administration may double the size of its program. Doctoral level candidates may increase and it is likely that the faculty will be engaged in more research projects. Many in the department are located outside of the assigned space. If the program keeps the students on campus for two years, there would have to be a major adjustment in space planning.

* Medical Economics and Community Health Care. This is a proposed program which would greatly strengthen the health sciences.

* Mental Health has been a neglected area within the school. This program should be expanded, but the directions and programs are not clear at this time.

* Laboratory of Physiological Hygiene is badly in need of space to accommodate existing programs and to allow essential expansion.

Of the above, the School would give priority to (1) staff and space for Biostatistics programs, (2) more staff for mental health programs, (3) consolidation of Public Health facilities and (4) more space for epidemiology programs.

This school has taken a broad approach to the problems confronting a school of public health. From the above programs, many inter-relationships with the health sciences may be noted. Biostatistics and the faculties of the health sciences; environmental health and the University Health Service; Public Health Nursing and the School of Nursing; Maternal and Child Health and the University Clinics; Hospital Administration and University Hospitals.

Recent and proposed legislation points toward a rising expectation that these relationships will continue and grow stronger. The pressure is very strong for people in public health to become more clinically oriented, either as vendors of service or in partnership with organizations that do render service. These programs will have to be worked out within the framework of desired consolidation of all public health units. It may be that the trend away from consolidation toward closer ties with clinically oriented units will be a stronger force than the desire to consolidate for administrative convenience.

(This report will be followed by appendices containing statistical data about the health sciences and an organization chart of the Learn Committee and subcommittees.)

UNIVERSITY OF MINNESOTA
College of Medical Sciences
(School of Public Health)

Addendum to the Preliminary Report of the Nursing Subcommittee to the Committee to Study Physical Facilities for the Health Sciences

The following material was prepared by Marion Murphy for study by subcommittee members according to the format suggested by Dr. Learn's letter of June 7, 1965:

I. Introductory: Public Health Nursing Programs in the School of Public Health

Present masters programs in public health nursing lead to either a Master of Public Health or Master of Science degree (Plan B), the latter administered by the Graduate School. As of the 1965-66 school year all programs are a minimum of 5 quarters in length; it is likely that faculty will take action to move to a 6 quarter (2 academic year) plan in another year. The major concentration in all programs is public health and public health nursing. The programs are termed "clinical" in that students work with patients in public health settings (and sometimes in hospitals) during a two or three quarter period. In addition, a student may broaden her program so as to include further emphasis in mental health, long-term patient care (rehabilitation) or school nursing. Selected students pursue functional preparation for supervision or for junior teaching positions in collegiate schools of nursing. The School of Public Health has a project grant from the Public Health Service which partially supports the latter program; support for mental health teaching comes from the National Institute of Mental Health.

Fifty-three public health nursing students are enrolled as of the fall of 1965; 37 of these are new while 16 are 5th quarter students from last year. Even reasonable enrollment projections indicate that by 1985 the School of Public Health will need to plan for an estimated 100 public health nursing students (50 new, 50 2nd year). (See projected figures for the School of Nursing and for other programs in the School of Public Health in relation to this).

II. Role of the Public Health Nursing Unit in the School of Public Health (tentatively 1975-80)

The following statements describe the central purpose (or mission) of this Unit.

1. To continue to provide opportunity for non-nursing students in the School of Public Health to become acquainted with the goals and functions of public health nursing. (This is in line with the School's policy of affording the members of the health team the opportunity to understand each other's role while in training).

2. To provide opportunity for selected professional nurses to prepare themselves at the masters level for a variety of leadership positions in public health nursing or, since terminology is changing, for nursing in community settings outside of hospitals. Such settings would include public health agencies, out-patient departments, other community clinics, schools, and occupational health facilities.

3. To further research in the area of community nursing; to continue with orientation to research at the masters level and to explore opportunities for post-masters and doctoral preparation.

4. To continue to render service in the area of nursing and public health nursing outside the University to the extent that it does not seriously interfere with teaching or research.

III. Goals or objectives - specific accomplishments required to fulfill the assigned role. The following goals are stated in terms of the expected outcomes for students.

Non-nursing students in the School of Public Health

1. All non-nursing students who complete masters or higher preparation with public health as a major should have understanding of the goals and functions of public health nursing (or nursing in the community outside hospitals).

Masters students in public health nursing.

1. The masters graduate in public health nursing should have: (a) clinical expertness, i.e., a level of nursing practice which equips her to make a high level contribution to the care of well and sick people in the community outside of hospitals. (b) ability to work collaboratively with nurses with masters preparation in other fields, giving and seeking nursing consultation. (c) ability to work collaboratively with a multidiscipline team (physician, social worker, other) giving and seeking consultation in behalf of her nursing service to well and sick people. (d) ability to participate in research activities; and (for some) interest in securing further preparation at the post-masters level.

2. The extent to which a masters program in nursing can also include functional preparation (how to supervise, how to teach) is undergoing scrutiny. Provision for some foundations in these areas, while admittedly of crucial importance at the present time, may be regarded as post-masters in coming years.

3. While masters preparation in public health nursing has been largely terminal in the sense of preparing nurses for leadership positions in this field of practice, it is anticipated that this emphasis will change in the future. Faculty are exploring the advantages of the Plan A program for public health nursing students who have aptitude and interest in post-masters study.

IV. Program - procedures used to meet the objectives which will fulfill the expected role.

Non-nursing students in the School of Public Health

1. All non-nursing students enrolled for a professional degree in public health should have the benefits of multidisciplinary study contact, which includes nurses, during their programs of study. This may be accomplished through formal and informal means throughout the curriculum.

2. The curriculum for all students enrolled for a professional degree in public health should include organized instruction concerned with the goals and functions of public health nursing. All public health nursing faculty are expected to participate in this phase of the instructional program in the School of Public Health.

Masters students in public health nursing

1. Preparation for leadership positions in public health nursing at the masters level should focus mainly on the achievement of further clinical nursing skill through utilization of opportunities for a variety of experiences with patients and families in community settings under faculty guidance. The objective of clinical expertness, i.e., the development of the clinical practitioner in public health nursing, can be achieved only through prolonged intensive carefully guided work with patients and families in the community milieu - a milieu which also is affected by (a) the presence or absence of other professional practitioners (b) the home and community environment.

2. Achievement of certain aspects of clinical depth for the masters students in public health nursing will necessitate close contact with School of Nursing faculty and students at certain points. The nurse in the community setting outside the hospital is confronted with many types of sick and well people and needs to draw upon the clinical expertness of other nurses in coping with certain problems.

3. Collaborative relationships should be developed with the School of Nursing whereby masters students there with primary interest in various clinical areas (medical-surgical, psychiatric) could share appropriate faculty and teaching resources in the School of Public Health. Similarly, students whose primary goal is the area of public health nursing (as illustrated above in #2) could share the resources of the School of Nursing.

4. Opportunities should be provided for selected students to secure functional preparation (for supervision, administration, teaching, consultation) in public health or community nursing either as the terminal phase of a two-year masters program or on a post-masters basis. Certain commonalities in such preparation should be offered jointly with the School of Nursing in order to avoid duplication of effort.

5. Opportunities should be provided for selected students in public health nursing to pursue post-masters preparation in research either through collaboration with research programs elsewhere in the University or within the School of Public Health.

6. Doctoral study for a selected group of public health nurses must be encouraged. Present channels for collaboration with other Departments of the University and other divisions of the School of Public Health toward this goal should be further clarified and appropriately publicized. Through such efforts, public health nurses who meet admission requirements for doctoral study in a given field could pursue a program leading to a Ph.D. degree in that field but retain an interest in and a tie with nursing while so doing. A possible alternative would be for the School of Public Health to develop a Ph.D. program in Public Health which could include concentration in one of several areas such as public health nursing.

The above alternatives are looked upon as a more desirable approach than effort to develop and defend a doctoral program in nursing, per se, at the present point in time.

Nov 8 -
Possible next meeting

Report of Task Force

on

School of Public Health

Gaylord W. Anderson, Chairman

Richard G. Bond

Allyn G. Bridge

Garland K. Lewis

Louis H. Muschel

Egar L. Makowski

Lee D. Stauffer

George M. Yamane

October 11, 1965

The School of Public Health is organized as one of the four major components of the College of Medical Sciences. Prior to the middle 30's Public Health was combined with other departments of the Medical School. About 1935 it became a separate department of Preventive Medicine and Public Health within the Medical School. In 1944, following a special grant from the Mayo Properties Associates, it was separated from the Medical School and made a separate school within the College of Medical Sciences, coordinate with the Medical School and School of Nursing and reporting to the President through the Dean of the College of Medical Sciences.

For its financial support the School depends heavily on outside money, chiefly federal through the Public Health Service. The Hill-Rhodes Act provides funds for operation and maintenance of schools of public health, such funds to be divided among all accredited U.S. schools on the basis of a formula giving major consideration to the number of students supported by the federal government. During the current session of Congress the ceiling for such appropriations has been raised from 2.5 million to 5.0 million. The Public Health Training Act, as well as general appropriations further provide funds for special training projects. In distribution of General Research Support funds the School is considered as a unit separate from the Medical School. The several Acts providing funds for construction of research and training facilities in the health sciences include a more generous matching formula for schools of public health than for medical schools. At the present time federal funds available for support and maintenance of the School's teaching program (exclusive of specific research projects and student stipends) exceed University support in a ratio of more than two to one.

I. Role of the School of Public Health

A. Intra-University

1. Instructional. The School of Public Health provides instruction of five types.

   a. Professional training for those who are to be employed in public health programs. In this regard it serves as one of the 12 accredited schools of public health receiving federal support under the Hill-Rhodes Act for public health training as well as special project training grants in the fields of accident prevention, air pollution, biostatistics, chronic diseases, epidemiology, hospital engineering, maternal and child health, mental health in public health nursing, preparation of teachers in public health nursing, public health biology, and radiological health. Special programs leading to the Master of Public Health degree are available for biologists, chemists, dentists, engineers, health educators, nutritionists, physicians, public health nurses, sanitarians, veterinarians and vital statisticians. A two-year program leads to the degree of Master of Hospital Administration. Ph.D. programs are available in the fields of biostatistics, environmental health, epidemiology, hospital administration and physiological hygiene.

b. Instruction in Preventive Medicine and Public Health required as part of the training for various professional groups throughout the University, notably students in medicine, nursing, dentistry, dental hygiene, pharmacy and the College of Education.

c. Cultural Health Courses. Instruction in personal and community health within the undergraduate colleges which require courses in personal health as a part of a liberal education. Such requirements exist in the Colleges of Liberal Arts, Education, and Pharmacy, the Institute of Agriculture, and some parts of the Institute of Technology.

d. Training in Biostatistics. Instruction is provided in basic biostatistics designed for graduate students learning the use of statistics in biological research. Instruction in biostatistics is also provided to the medical students and all students registered in the School of Public Health. In addition, the Division of Biostatistics, under a special training grant from the National Institutes of Health, prepares students for careers in biostatistics, both teaching and research.

e. Instruction in Physiological Hygiene, at the undergraduate level for Men's Physical Education, at the graduate level for graduate students, including physicians, dentists and nutritionists working for advanced degrees in the School of Public Health.

2. Research. Research programs with expenditures totaling $794,500 in 1964-65 are conducted in biostatistics, environmental health, epidemiology, hospital administration, physiological hygiene and public health nursing.

B. Extra-mural Services. Staff of the School are actively engaged in innumerable public service enterprises as members of committees or consultants to many local, state, national and international agencies. Service of this character ranges from single-day meetings to assignments extending over two or three months, the latter notably with the World Health Organization. During the present calendar year members of the staff of the School working under research grants or international consultantships have been in Brazil, Chile, Colombia, Costa Rica, Czechoslovakia, England, Finland, India, Iran, Italy, Lebanon, Nigeria, Norway, Pakistan, Peru, Philippines, Russia, Scotland, Sweden, Switzerland, Taiwan, Thailand, Turkey, United Arab Republics, West Germany, and Yugoslavia.

II. Goal or objectives.

A. Professional. The essential purpose of a school of public health, the reason for creation of such schools and for their public support, is the need for trained personnel to fill the many positions that exist in the public and private public health agencies. As time has passed, public health problems are demanding more highly trained personnel than in former days. For example, the day has long since passed when control of the environment could be limited to elimination of unsanitary conditions. Today's environmental hazards include problems of stream pollution with a kaleidoscopic array of chemical contaminants, air pollution, radiological hazards and innumerable accident hazards. All of these, as well as

many other types of public health problems, not only present highly complex and difficult technical problems but also demand well trained personnel for their solution. Schools of Public Health provide preparation of such personnel and contribute to the conduct of research as to methods for control of hazards. Similarly complex and difficult problems exist in all other aspects of public health, including the rendering of health services to the community.

B. Non-professional. The goal of the non-professional instruction in health is that of helping to develop an American public that is informed as to personal measures for health protection and possesses an understanding of the importance and value of community measures that require public support. Failure to appreciate the significance of community problems and the need for development and support of organized community programs results in the creation and persistence of problems that seriously jeopardize the health and secondarily the economic well-being of a community.

III. Existing Programs to carry out objectives.

A. Professional Training for Public Health Work. The School of Public Health at Minnesota is today the second largest school of public health in the country measured in terms of students registered for advanced degrees. Only the University of Michigan has a larger enrollment. It is the only school in the Upper Midwest. As shown in Table 1, the number of students in graduate programs has more than doubled during the past decade. Its students, including biologists, chemists, dentists, engineers, health educators, hospital administrators, nurses, nutritionists, physicians, statisticians and veterinarians, come from about 40 different states in the Union and normally from 15 to 25 foreign countries. The School thus has a higher proportion of non-residents (64% Fall Quarter 1964) than does any other portion of the University. This situation also explains why almost 90% of all money handled by the School comes from outside of Minnesota, chiefly in the form of grants from the federal government and various foundations. Most of the foreign students are supported by either the World Health Organization or the U.S. government through the A.I.D. program, though each year a number are supported by their own ministries of health. Students from the United States are supported partly by federal training grants of both a general and specific nature, by federal agencies by which the students are employed, by state and local governments, as well as by various voluntary agencies. Special federal legislation provides training grants for personnel to be employed in public health agencies, money to provide such stipends being awarded to the School of Public Health for allotment to qualified students. Of the 235 students registered for graduate programs during the regular academic year 1964-65, 83 were supported by the federal government under various training grants, 20 by international agencies and 11 by miscellaneous agencies. During the 1965 Summer Session 71 additional students from 22 countries were registered for special programs, 30 of whom were supported by international agencies, 39 by miscellaneous agencies.

1. Health Officer Training Course for Physicians (and Dentists). This is a program of 9 months duration but should be lengthened to 11 months. It leads to a Master of Public Health degree and is designed to train physicians (or dentists) for administrative positions in public health work. The special interests of these students vary somewhat, some being especially interested in electives in the field of maternal and child health, others in epidemiology, others in principles of administration, etc. In recent years there have been

about 10 to 15 such students each year. At the most we could probably look forward to not in excess of 25. Accommodations required are essentially those of classrooms, conference rooms and a library. At no time have these students had a place where they might sit down or even hang their coats and hats within the School of Public Health.

a. Public Health Administration. The instruction in public health administration has been carried for many years by the Director of the School, supplemented in certain years by a visiting lecturer for one academic quarter. Minnesota is the only School of Public Health that lacks a fully staffed division of Public Health Administration. All other schools have from two or more (6 or 7 in some schools) full-time persons in this division. At present the School has no space for such a unit but must look forward to creation of such a division, providing space for staff (at least two persons plus a secretary) and suitable ancillary rooms for housing of research projects. If instruction in community medical care is to be included in this Division substantially larger staff and space will be required.

b. Epidemiology. All candidates for a Master of Public Health degree are required to take at least one course in Epidemiology. Many take two or even three courses. The basic courses involve lectures and laboratory exercises of a statistical character. Student laboratories, preferably one large room, must be provided to house sections of 50 students each. Such a laboratory can, as at present, be shared with the Biostatistics Division though this produces serious scheduling problems. The Ph.D. program in epidemiology, supported under a special training grant from the Public Health Service, provides additional training for some 5 to 7 students who have already completed a Master of Public Health program. This division plays a major role in providing research experience to medical students during their free or elective quarter.

Facilities required for the division include staff offices, laboratories suitable for bacteriological, chemical or physiological research, desk space for students on Ph.D. programs and conference rooms. The academic staff, limited at present to only two persons, must be expanded to at least four. In planning facilities, there should be space for an additional four or five to provide for future needs. Laboratory space to house the various research projects of such a staff should be available to accommodate at least 30-35 technicians and assistants.

c. Maternal and Child Health. The maternal and child health unit, supported by a Children's Bureau grant, provides instruction for all students in the School as well as limited instruction outside of the School. Joint activities with the Department of Pediatrics, also under a special Children's Bureau grant, provide for special programs of study over a period of two or three years, combining clinical and experimental pediatrics with formal instruction in public health leading to a Master of Public Health degree. A similar program with the Department of Obstetrics is desirable. At present the MCH unit is operating with a minimal staff of four (one physician, one nurse, one nutritionist and a secretary) crowded into 3½ small rooms with a total area of 450 sq. ft. and

completely lacking facilities for development of any type of research project. Its ultimate development should envision space for academic and research staff of at least 10, accommodations for students, and laboratories suitable for chemical, biological and statistical research.

2. Public Health Nursing. For many years the School of Public Health maintained the country's largest program in public health nursing, receiving each year over 100 graduate nurses for whom additional instruction in public health nursing was provided to qualify them for first level positions. With the expansion of collegiate nursing programs, the number of nurses seeking such training because of lack of public health nursing experience in their basic courses, has so declined that what remains of this program is being transferred to the School of Nursing where it is combined with the basic program. This has left the Public Health Nursing Division free to concentrate on its rapidly growing Master's degree program which began at the end of World War II and has now grown to a point of admitting some 35 Master's degree students each year chosen from two to three times that number of qualified applicants. Ten yearsago it was the rare student whose studies extended more than the normal academic year of three quarters. Today all of the students, whether as candidates for an MPH degree in the School of Public Health or an M.S. degree in the Graduate School are on programs of at least five academic quarters and it can be anticipated that in the years ahead these will extend to six quarters in all but the exceptional case. The School has special PHS grants for nurses interested in mental health training and for those seeking careers in teaching. Special cooperative arrangements exist with the Department of Physical Medicine and Rehabilitation whereby the Master's degree students get special experience with respect to the problems of the home nursing care and supervision of patients who have persistent disabilities and especially those discharged from rehabilitation centers. To an increasing degree, public health nursing agencies are carrying heavy loads of nursing care for such patients. Until recent years little attention was given to the special training that public health nurses need for this work.

To provide field experience for the public health nurses the School maintains offices in the Rochester-Olmstead County Health Department, Suburban Public Health Nursing Service of Hennepin County, the Health Department of Minneapolis, and the St. Paul Family Nursing Service. Students are assigned to each of these agencies and a member of the School staff is desked on a part-time basis in the respective agency to serve as a field instructor.

In projecting staff and space needs for the coming decade it should be assumed that the School will admit annually at least 50 new students in public health nursing and that these will stay for two academic years. In addition to the field offices that the School must maintain in the collaborating public health agencies, the Public Health Nursing Division requires office facilities for staff and secretarial assistance, conference rooms to accommodate from 10 to 25 students at a time and suitable study facilities that these students can use as a "home" base. Like the health officers, they have at the present time no place where they can sit down or hang up their

hats and coats. Inasmuch as the public health nursing staff works closely with the staff of the School of Nursing and provides major assistance with the courses in Public Health Nursing required for all students within the School of Nursing its offices should be close to those of the School of Nursing. Separation by several blocks would be a severe handicap to effective coordination of the program.

3. Environmental Health. This program, in which about 50 students are enrolled each year in studies leading to a Master of Public Health, Master of Science or Ph.D. degree, is the outgrowth of the former program in Public Health Engineering or Sanitation. About half of the students are engineers; the other half present a diversity of backgrounds in physical and biological sciences. The Master's program varies in length from 11 months to 2 years. Within the Division there are special federal training grants in the fields of accident prevention, air pollution, hospital engineering, public health biology, and radiological health, in all of which programs there are students supported by federal training stipends. Training stipends from AEC and from NASA are also available and non-categorical stipends from the Public Health Service for students interested in somewhat broader and varied training in general aspects of environmental health.

Of special note is the Ground Water Course which has been operated each summer for the last six years under a grant (or contract) from the Agency for International Development. This is a course lasting 10 weeks (6 in classes on the Minneapolis Campus and 4 in field work at the U. of M. Forest Research Center in Cloquet) which has received and provided training for nearly 200 engineers from over 60 nations. These students are sent by their respective ministries of health under funds made available through A.I.D. or the World Health Organization. The School has a current contract with A.I.D. for continuation of this course and for development of comparable courses in other countries. Two such courses have already been conducted in Bogota in collaboration with the National University of Colombia, one is planned for the coming year in either Southeast Asia or the Philippines, and the contract calls for a similar course two years hence, probably somewhere in Africa.

To carry on its training and research activities in Environmental Health, the School maintains offices and laboratories covering about 2/3 of the 11th floor of the Mayo Building, one newly developed research laboratory area of 4,363 sq. ft. in the basement of the West Wing of the Health Service, and a Limnological Field Station in Duluth in collaboration with the Department of Biology of UMD. The Public Health Service Fresh Water Quality Research Laboratory being built in Duluth is located immediately adjoining this Limnological Laboratory and, with a proposed staff of almost 200 scientific personnel, will provide extra facilities for both teaching and research through collaborative arrangements with the School of Public Health and the Graduate School. A special grant from the Public Health Service has been received by the Graduate School for the development of an Environmental Health Research and Training Program, which, while under the Graduate School direction, will be assigned to the School of Public Health for immediate administration. The School is also involved with the University's developing Water Resources Research Center and Space Science Center, currently having research projects sponsored in both areas.

Students working in the field of Environmental Health not only take a broad program of public health subjects but, depending somewhat on special interests, take a large number of electives in various parts of the Institute of Technology, including chemical engineering, mechanical engineering, physics, and civil engineering. Conversely a number of the graduate students in civil, mechanical and chemical engineering avail themselves of courses in the School of Public Health. This exchange of students has been facilitated by the present proximity of the School to the Institute of Technology. A somewhat more limited exchange of students is maintained with the Institute of Agriculture. In the program in hospital engineering, close working relationships have been developed with various parts of the University Hospitals, relationships which are of mutual advantage to both.

Of the 12 Schools of Public Health in the United States, only six, including Minnesota, can be said to have faculty and research capability for present day professional education in environmental health. These other Schools of Public Health and the major engineering colleges offering training in environmental health, generally have as many, if not more, students enrolled in doctoral programs as in Master's programs. Although the Minnesota program has concentrated on training of professional personnel for public health careers (Master's programs) and will continue to give priority to such a mission, research needs in environmental health must be recognized if the graduate program is to flourish. To date, there has been neither adequate staff nor facilities to keep pace with the needs for doctoral training and research programs. Faculty are needed particularly at the Assistant Professor and Instructor level to "back stop" present senior staff and to help care for the inevitable increase in student load. The Division is currently responsible for 41 students at the Master's degree level and 14 working on doctoral programs. The former were selected from more than twice that number of applicants.

Assuming a growth in enrollment consistent with recent experience it seems reasonable to anticipate a minimum of 75 graduate students in environmental health, 50 of whom would be Master's candidates and 25 engaged in pre-doctoral studies and doctoral research. Total space to provide for such growth is estimated to be of the order of magnitude of 25,000 square feet of laboratories plus expanded "desking space" for faculty, teaching and research assistants, secretarial staff and pre-doctoral students, and the usual components of seminar and conference rooms, lockers, and storage for equipment and supplies.

4. Health Education. This is a program of some 10 to 15 graduate students being trained to serve in the health education programs of public and private health agencies. It is unlikely that this will grow to more than 25 or 30 students as a maximum, preferably around 20. Like the programs in environmental health, it requires at least 11 months, the summer after the formal classwork being given over to supervised field experience. This latter was formerly carried out through assignment to work with a health educator somewhere in the United States. During the past summer, the School has experimented successfully with more closely supervised experience in the Minneapolis Health Department for students from the United States and assignment of foreign students to work with a health educator in some other part of the world having a culture more nearly approximating that of the student in question.

The extremely poor quality of health instruction in the elementary and secondary schools bespeaks a need for preparation of school teachers with a satisfactory knowledge of the elements of personal and community health and trained in the teaching thereof, a knowledge rarely possessed by those entrusted with such instruction in the public schools. Facilities for the health education program involve offices, classrooms, work rooms and conference rooms.

5. Public Health Veterinarians. This program, leading to a Master of Public Health degree, is conducted in collaboration with the School of Veterinary Medicine. For several years the School has had from 5 to 6 graduate veterinarians working on such a program, partly in the School of Public Health and partly in the Veterinary School. It is doubtful if more than 15 students at any one time should be so accommodated. No special public health courses have been developed for these students for they take the general courses along with other students in the School. No special physical facilities are required other than the usual classrooms and conference rooms.

6. Biostatistics. This division serves five discrete functions.

   a. Basic instruction in biostatistics for all students in the School of Public Health. Every person is required to take at least one course and many take more than one. This means that instruction must currently be provided for some 150 new students each year, such instruction including laboratory work and necessitating laboratories accommodating at least 50 students, to make allowance for sections of this size.

   b. Instruction of medical students. The same laboratories can serve this group of 150 students each year. The School of Dentistry will probably request similar instruction for its students.

   c. Teaching of biostatistics as a research tool to students from all parts of the campus. This latter instruction bears no relationship to public health but rather the application of statistics to the study of biologic phenomena. Laboratories for this purpose, once located in Millard Hall, were later moved successively to the Chemistry Building, Mechanical Engineering, and Architecture and are currently located in Ford Hall Central location for these laboratories is essential since students come from all parts of the campus. Courses of this character are offered in each term of the regular year and in summer session.

   d. Graduate training of biostatisticians. Special grants from the National Institues of Health provide support for students and staff in this program. At present approximately 35 students are engaged in this, 10 of whom have completed their Master's degree and are working on their Doctoral degree.

   e. Assistance to all parts of the College of Medical Science in connection with the statistical aspect of research projects. This assistance involves not only advice as to design of experiments and analysis of resultant data but includes a great deal of actual calculation, for the latter of which a definite charge is made.

The foregoing activities require not only space for staff but should include space for at least the doctoral candidates. They also require laboratory space with various types of electronic or mechanical equipment. When the College of Medical Sciences has its own computer facilities, some of the equipment currently on the 12th floor of the Mayo can and should be moved in association with this Center. Other parts of the apparatus can be connected by cable and both this and the Medical Science Computer Center connected with the main computer center by cable. It is essential that the laboratories currently located in Ford Hall be maintained in a central location as student travel to and from a peripheral location would not be possible with the present time schedules. Similarly it is highly desirable that the Biostatistics Division be maintained in close physical approximation to the main components of the Medical School if the unit is to continue its function as a consultant to research projects throughout the College. The unit is currently badly cramped not only for office space to desk requisite staff and Ph.D. students but also in terms of the laboratory space requisite for the several large courses. Expansion of at least 25% is immediately necessary to serve the current operations and a minimum of 150% additional to prepare for the inevitable growth of the next decade. Lacking such expansion,there will be an inevitable curtailment of its teaching and service functions.

7. Hospital Administration. This is a two-year program leading to the degree of Master of Hospital Administration. About 30 to 35 students are selected each year from about 200 applicants from all parts of the United States and Canada as only 16 such programs exist in the two countries. The class usually includes one or two foreign students. After the usual 9-month academic year on campus, the students are assigned to a carefully selected hospital administrator serving as a clinical preceptor responsible for supervision of the student for a year of administrative residency. There is also a Ph.D. program accepting a maximum of three new students each year. Under a grant from the Hospital Research and Educational Trust of the American Hospital Association the Division is developing an Extension program for the upgrading of hospital personnel throughout the Upper Midwest.

Although the hospital administration students take many of the public health courses along with the other students in the School of Public Health,their special courses in hospital administration involve other parts of the University only slightly. In the development of the program there has been little utilization of the University Hospital, despite the fact that the course has been physically located in the medical center. It is hoped and highly desirable that closer working relationships can be developed in future years. If, however, there is any part of the School that must be separated from the rest and somewhat separated also from the Medical Center, it is this course in Hospital Administration. Such separation would be very unfortunate but less damaging than would separation of other parts of the School.

The Hospital Administration program currently occupies 1,567 sq. ft. on the 12th floor of the Mayo Memorial where, because of elevator problems, it has almost exclusive use of the class room seating 55 persons. One of the research programs occupies 681 sq. ft. of rental space at Oak Street. The students make extensive use of the Hamilton Library, heretofore located outside of the School but recently trans-

ferred to the University and set up in the Bio-Medical Library. In planning future facilities an absolute maximum of 75 new students per year should be considered. It should be recognized that in most other hospital administration programs the preceptorship year is being or has been replaced by a second year of formal class work on campus. If the Minnesota program should be similarly changed, the number of students (other than Ph.D. candidates) for whom physical accommodations and teaching staff would have to be provided would be doubled. In either case facilities should include one (or more) classrooms seating 100 students (to provide for outside students electing certain courses), a drafting room, work rooms, conference rooms and offices, including desk space for Ph.D. students.

8. Medical Economics and Community Health Care. The increasing degree to which hospitals, insurance plans and government have become involved in the provision of comprehensive health care, indicates an urgent need for more instruction on medical economics. Courses of this character should be available for all public health and medical students as well as for students majoring in social work, sociology, economics or political science. In other schools of public health extensive teaching and research units in medical care are being developed. Minnesota lags in this regard.

For several years a visiting lecturer in the spring quarter has provided two series of lectures, one for public health students and one for medical students. Last year the University accepted a memorial gift of $100,000 to help provide for instruction in health insurance, thus providing for a full quarter course. The Division of Hospital Administration has further provided similar courses for its Ph.D. students and through the Sociology Department, instruction in medical sociology.

If the School is to keep pace with current developments, it must materially enlarge its program in health care and medical economics. Full-time teaching staff with suitable research facilities will be required. Such a unit might be attached either to the Hospital Administration Division, to the new Division of Public Health Administration or made a separate division. Regardless of its exact placement, it should be developed as a component of the School of Public Health and provided with space suitable for major growth in the next two decades. In view of the importance of the subject on the national scene it is not unrealistic to envision a staff of 10-15 persons attached to such a unit.

9. Mental Health. In spite of the tremendous importance of mental health as a personal and community problem, very little attention has been directed to this area either in medical schools or schools of public health. At Minnesota, the School of Public Health has the half-time services of a psychiatrist and the full-time services of a public health nurse with special training in this field, both supported out of a special training grant from the National Institute for Mental Health. Instruction is provided for all students in the School except those in biostatistics and environmental health. The training grant provides stipends for 4-5 public health nurses on a 15-month program. The importance of mental health as one of the nation's major health problems indicates the need for expansion of this program if necessary funds and space can be made available.

10. Laboratory of Physiological Hygiene. This laboratory, originally developed in the Department of Physiology with collaboration of the Department of Physical Education and consequently located under the South side of the Stadium, was transferred to the School of Public Health in 1946. While carrying on a modest teaching program involving students in the School of Public Health and in Men's Physical Education, the laboratory is essentially a research institute. In this regard it has carried on distinguished research, not only within its own cramped laboratory facilities but also through its field studies in many parts of Europe, Asia and Africa, studies that have attracted world-wide attention.

Currently the Laboratory of Physiological Hygiene occupies 10,980 sq. ft. net space under the Stadium, rents 2,457 sq. ft. at Oak Street and maintains two railroad cars fully equipped for laboratory studies. Temporary laboratory facilities have been operated overseas as needed. For its teaching of students in Men's Physical Education it utilizes student laboratories of the Department of Physiology.

The facilities under the Stadium are grossly overcrowded and inadequate, enjoying no University maintenance other than water, heat and electric power, in spite of tremendous quantity of overhead money brought into the University by its many research grants. Because of its location and inadequate ventilation, work in the Laboratory has frequently had to be called to a halt owing to the hazards entailed. Expansion in its present location is physically impossible in spite of increasing grants and there is no possibility for the important animal experiments that should be conducted. In spite of these difficulties, the Laboratory has carried on research projects, the annual overhead of which far exceeds the University investment in salaries and supplies (in 1964-65 overhead of $101,053 as contrasted with $67,520 support funds) and which has brought world-wide recognition to the University matched by few other parts of the institution.

If the Laboratory is to continue to grow, as is essential to any healthy operation, it must find not only more suitable quarters but quarters that permit expansion of at least 100% in floor space. The full potential teaching and research value of this Laboratory can be achieved only through closer physical association with other parts of the College of Medical Sciences, an association that has not been possible so long as it was physically so removed and isolated.

B. Non-Professional Courses. Personal and Community Health. These courses, under the direction of Dr. Stewart C. Thomson, account for the largest actual class enrollment of any part of the School, providing instruction to 5,279 students during the past fiscal year as contrasted with 2,593 in the same courses in fiscal year 1954-55. These courses cover the material that might reasonably be expected of an educated man but are not designed to provide material that the student will use incidental to his earning of a living. They need little more than office space within the School but do require large classrooms to accommodate the enrollment. Each quarter for several years, the number of students seeking enrollment in these courses has far exceeded the capacity of the rooms to which the course has been assigned. Since the breaking up of Burton Auditorium, which accommodated over 700 students, the University has failed to provide equivalent lecture hall facilities, with resultant closing of these courses long before the opening of a new academic quarter.

Lecture hall space for these classes is best provided in as central a part of the campus as possible as it is far easier to send the instructor to a central location than to move several hundred students to a peripheral site. The School does, however, require space for additional staff as Dr. Thomson is currently heavily overburdened and this burden will increase as University enrollment climbs. Offices for two more professional staff and a suitable workroom to provide space for the mere mechanical operations of these classes are urgently needed. Even if, at some future date, some of these courses were to be offered on the basis of closed circuit television, the need for added staff would remain.

IV. General Considerations. As indicated from the foregoing, the School of Public Health, while operating separate degree programs leading to the degrees of Master of Public Health and Master of Hospital Administration, is nonetheless an integral part of the College of Medical Sciences and the entire University. Few parts of the University have contact with more students in the course of a year than does the School of Public Health.

While peripheral location of the School (as for example near the prospective new State Health Department Building on Delaware Street between Walnut and Oak) would provide for closer association with the Health Department, this isolation would work to the detriment of those programs in the School serving other parts of the College of Medical Science as well as other colleges of the University. Almost without exception, students within the School take courses outside the College of Medical Science, some of these being located on the West Bank, others on the St. Paul Campus and still others within the main portion of the Minneapolis Campus. Isolation in the Oak Street area would produce difficulties to these students and at the same time would produces difficulties for students in other colleges utilizing courses within the School of Public Health. Such isolation would also necessitate a large investment in classroom facilities for, at any given class hour, the School is operating from three to five courses ranging from 50 to 150 students. In its present location the School can take advantage of general purpose classrooms, notably those in the Medical Center, Botany and Zoology buildings, Ford Hall and the engineering complex. The farther the School is located from the medical complex the more will be the need for multiple classrooms to carry on its normal functions. Such separation would also seriously impair the value of the Biostatistical Division as a service to other parts of the College in their respective research projects, would increase the difficulty of coordination with the School of Nursing, would separate the new environmental health research laboratory in the Health Service from other parts of the Division of Environmental Health and would very generally remove the School from its present situation as an essential component of the College of Medical Sciences. In any planning for the future it is highly important, both from the standpoint of the School itself and of other parts of the University with which it is working, that any new facilities be established in as close physical association with the Medical Center as is possible.

Currently the School, although burdened with the second largest enrollment of any school of public health in the United States, has one of the smallest physical facilities, less than half of the national average, (Table 2). Only two schools, both with very small enrollment, have less space. One can estimate a need for expansion of at least 100% (exclusive of classrooms) which should be thought of as a bare minimum for the next 20 years.

Even with this expansion, the School would have one of the smallest physical facilities, far less than half of the national average. One of the outstanding characteristics of the School and one which has been commented on so favorably by all who have visited it has been its role as an integral part of the whole University rather than as an isolated unit apart from other parts of the University such as is the case in several of the other Schools. In any long range plans for future expansion, special attention should be given to so locate the facilities that they continue to be an integral part of the University and avoid the isolation that unfortunately, characterizes some of the Schools in other Universities.

Exact location and type of construction will of course depend on decisions as to location of other parts of the Health Science complex. There would be many advantages to the take over, renovation and expansion of the present Botany and Zoology buildings if these units were to be moved to the St. Paul Campus as part of the new College of Biological Sciences, yet the Task Force recognizes that other parts of the University may well present stronger claims for this area. A new building within the quarry area behind the Health Service and now occupied by the Botany greenhouses would provide proximity to the environmental health laboratory now in the Health Service building and to the Rehabilitation Center with which the Public Health Nursing Division will have increasingly close relations, and would be reasonably central for Biostatistics. Alternatively incorporation into or immediately proximal to a large medical-dental out-patient complex, would provide for closer coordination with the community clinical services, a direction in which public health is inevitably moving throughout the country as government continues to play an increasing role in the total problem of medical care for the public.

Table 1

School of Public Health
Fall Quarter Enrollment in Graduate Programs

	1955	1965
Biostatistics	6	35
Environmental Health	11	55
Epidemiology	--	5
Health Administration	9	15
Health Education	6	12
Hospital Administration	48	74
Public Health Nursing	20	53
Veterinary Public Health	8	7
Miscellaneous	2	6
	110	262

Table 2

Space and Federally Supported Student Census Estimates

of Schools of Public Health

School	Existing Space in sq. ft.	Construction in sq. ft. Under Development	Average Number of Federally Supported Students Last Three Years*	
Harvard	182,750		81.99	(6.54%)
Johns Hopkins	177,000	90,000	111.33	(8.89%)
Pittsburgh	168,000		78.33	(6.25%)
Michigan	134,000	Planning new addition	211.67	(16.90%)
North Carolina	115,750		169.00	(13.49%)
Yale	98,869		41.58	(3.32%)
Puerto Rico	58,000		60.50	(4.83%)
California	46,142		153.61	(12.26%)
U.C.L.A.	40,000	31,000	71.50	(5.71%)
Minnesota	38,003		161.05	(12.86%)
Columbia	34,035		55.00	(4.39%)
Tulane	25,000		57.08	(4.56%)
AVERAGE	93,129			

*In the absence of comparable figures as to student enrollment, this figure of federally supported students, which is used by the Public Health Service as its basis for distribution of Hill-Rhodes funds, is used in this table as a rough index of relative size of Schools. It ignores the differences as to extent to which schools provide instruction to students enrolled in other parts of the University.

Nov 8th

File

COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES FOR THE HEALTH SCIENCES

SUGGESTED AGENDA - OCTOBER 11, 1965 (#13)

1. Welcome guests

2. Announce sub-committee presentations:

   a. Public Health Sub-Committee, Dr. Gaylord Anderson, Chairman, 3:00 - 3:40 50

   b. Nursing Sub-Committee, Edna L. Fritz, Chairman 3:45 - 4:20

   c. Ancillary Sub-Committee, Dr. Frederick Kottke, Chairman 4:30 - 5:00

3. Review of Sub-Committee Reports Standing:

   a. The Outpatient Department Report was given July 8, and accepted.
   b. The Dentistry Report was given August 9, and accepted with the qualifications raised in the minutes of that meeting concerning ambiguity, and with answers to the questions raised by Vice President Shepherd, which will be amended in the minutes and included in the final report.
   c. Basic Sciences Report was given September 13, and will be accepted when the relationship of Basic Sciences with the College of Biological Sciences is fully delineated. This report will be amended or rewritten at the Basic Sciences Sub-Committee Meeting October 20.
   d. The Clinical Medicine and Hospital Task Force Reports were given September 27, and were accepted with the reservation that the two reports be consolidated in the final report.

4. Sent Out Since Last Meeting

a.	Hospital Task Force	September 20	(#8)
b.	Learn Committee	September 27	(#12)
c.	Public Health	September 29	(#9)
d.	Basic Sciences	September 30	(#5)
e.	Ancillary	September 30	(#5)

Meetings Held But Reports Not Available

a.	Clinical Medicine	September 13	(#8)
b.	Dentistry	September 21	(#7)
	[illegible]	[illegible]	[illegible]
c.	Nursing	October 1	(#7)
d.	Dentistry	October 5	(#8)
e.	Ancillary	October 7	(#6)

COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES FOR THE HEALTH SCIENCES

Minutes of Meeting October 11, 1965 (#13)

Present: Elmer Learn, Chairman; Gaylord Anderson, Lyle French, Edna Fritz, Sterling Garrison, Gertrude Gilman, Eugene Grim, Mellor Holland, Robert Howard, Robert Isaacson, James Jensen, Frederick Kottke, Richard Magraw, Erwin Schaffer, Robert Laur for James Stephan, Kathryn Ritzen, John Westerman.

Absent: Winston Close, N. L. Gault, Jr., Ione Jackson, William Shepherd

Guests: Louis Muschel, Richard Bond, Allyn Bridge, Marion Murphy, Lee Stauffer, George Yamane

NEXT MEETING MONDAY, NOVEMBER 22,1965, 3:30 P.M., 510 DIEHL

Sent Out Since Last Meeting

a. Hospital Task Force	September 20	(#8)
b. Learn Committee	September 27	(#12)
c. Public Health	September 29	(#9)
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Meetings Held But Reports Not Available

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e. Ancillary	October 7	(#6)

Dr. Learn welcomed the committee members and their guests. Due to the delayed start of the meeting, Dr. Learn asked each Subcommittee to limit its preliminary report and questions about it to 35 minutes. The Subcommittee reports are appended to the minutes.

A draft of the overall committee report will be made available at least one week prior to the November 22nd meeting. Dr. Learn then turned over the meeting to Dr. Anderson.

Public Health Subcommittee Report

Dr. Anderson introduced Mr. Bond, Dr. Bridge, Dr. Muschel, Mr. Stauffer, and Dr. Yamane from the Public Health Subcommittee. Dr. Anderson then summarized the Preliminary Report of the Public Health Subcommittee.

QUESTION: What is the relationship between University Hospitals and the Hospital Administration program? In the past there has been little relationship between the two, but the School of Public Health could be strengthened by a closer relationship to the Hospitals. The need for this strengthened relationship in the future should be made more explicit in the Public Health Subcommittee report. On the other hand, Dr. Anderson felt that if any section of the College of Medical Sciences had to be separated from the center complex Public Health is the logical choice, since it has been far less dependent on the Hospitals than any other program.

QUESTION: How do you view the interaction between the School of Public Health Nursing program and the School of Nursing? It's important to keep the two in as close a working relationship as possible, since each is dealing with comparable problems. Public Health utilizes the School of Nursing facilities, and the School of Nursing facilities, and the School of Nursing depends on Public Health for help with nursing instruction.

Dean Howard congratulated Dr. Anderson and his colleagues on the Public Health Report. He felt, however, that the report's estimates of growth were very conservative, especially looking at the federal scene today and the widespread concern for public health on a community basis. It would seem that, under these circumstances, astronomical growth in the field of public health can well be anticipated, and this certainly has implications for the Minnesota School of Public Health.

The specifics must be scrutinized more carefully, in Dean Howard's opinion. That the Minnesota School of Public Health has done well up to now is largely a tribute to Dr. Anderson who has had to work under tremendous space limitations. However, Dr. Anderson's retirement faces us in the near future, with the concomitant problem of finding a replacement for him. This will be a difficult problem, indeed, with Minnesota's presently limited facilities.

QUESTION: What implications do you see for the School of Public Health as a result of the continuing attention given to the Outpatient Clinic and the team approach to patient care? In the next decade, the federal government will be playing an even greater role in medical care and medical education. Public Health agencies are becoming more concerned with medical care. Therefore, it is desirable to tie the School of Public Health closely to the physical facilities for Outpatient work.

QUESTION: What about the importance of programmatic relations? For instance, will more of Dr. Magraw's students be taking more Public Health? Dr. Magraw foresees a closer relationship between the outpatient clinic and Public Health in community medicine.

QUESTION: This raises the question of federal appropriations for Public Health and Public Health administration. Don't you think there's going to be a tremendous need for the development of preventive and rehabilitation public health administration? Yes, the line between preventive and curative medicine is less sharp now. We haven't trained administrators in the past with clinical skills.

Chairman Learn pointed out that the interrelationships between the various programs in the Health Sciences ought to be clearly highlighted in the subcommittee re-

ports, in order to justify spending money to develop expensive land to foster those interrelationships. This should be clear to the administration, the Board of Regents and the legislators.

Nursing Subcommittee Report

Next, Dr. Learn introduced Miss Fritz, who highlighted the Nursing Subcommittee Report.

QUESTION: In regard to the School of Nursing Graduate programs, Miss Fritz indicated that the School of Nursing desires to have all of these programs made available through the Graduate School. Has this proposal been discussed with Vice President Shepherd? No. It would be a useful result of this committee's work if such a proposal could be explored.

COMMENT: The Nursing Subcommittee Report should be tied in with the Hospital Report in regard to research needs in the hospital context.

QUESTION: What about the relationship of Nursing in the changing concept of the Outpatient Clinic? Nursing seems to be ahead of medicine in this respect. The emphasis in nursing has always been to nurse patients in whatever environment they are in. But nursing depends on medicine to move in the same direction. As it is, Baccalaureate graduates have been supplying the Public Health agencies.

QUESTION: Do you envision Public Health nurses as the ones who staff the Outpatient Clinics? No, I have in mind the institutional nurse, but like the Public Health nurse, she's prepared to recognize Public Health agencies, the environmental factors involved etc.

Possibly the medical group will need an assistant to help technologically,different from the nurse of the past. They would be used, for example, in intensive coronary units.

QUESTION: I would be interested in your comments on this "new worker". Who will decide what she is to do? If you delegate nursing to a higher level position, doesn't that leave a space between what you're now doing and what you intend to do? I don't know who will make a decision about this "new worker". Nursing will not make a unilateral decision; it must be done by many units within the Health Sciences. Nursing could develop a technician to assist the physician in his role, but at the same time Nursing could still leave the patient with unmet needs. We do need nurses with greater scientific background, so one suggestion is that nursing will prepare a person to take over the current technical role and also prepare for the future by training nurses in the more demanding role of meeting the patient's non-technical needs. A variety of educational patterns could be devised to meet this challenge. We must understand the pattern of quiet delegation by the medical profession and unilateral preparation by the nursing profession.

QUESTION: What about getting more men into nursing? There are enormous problems facing that alternative. Tradition would have to be fought and remuneration would have to be sufficient for a breadwinner, which it is not at present. I think figures show that about 1.3% of practicing nurses today are men.

QUESTION: Medicare will provide payment for 100 home visits, a provision put in at the request of the A.H.A., and this is mostly directed at nursing care in the home. This is a most generous provision; however, will it have the effect of moving nurses out of the hospitals? If there are too few suitably trained personnel, the best will be attracted to positions that require a minimum of supervision, i.e., out of hospital nursing, and the converse will also be true.

COMMENT: Some findings indicate that good people don't necessarily migrate to the places where they're needed, but to places where there are other good people. The problem in nursing is to get good nurses out of the institution, and this has happened in Public Health nursing to some extent.

QUESTION: Concerning the research unit mentioned in the Nursing Report and also in the Hospital Report, do you see a need to have a research unit in the Outpatient Clinic? Or to include the Outpatient Clinic in such a research unit? Yes, we do, and even more, we see the need to have the Public Health agency in the community as part of such a research unit. It would be well, then, to amend the School of Nursing Report to include the Outpatient Clinic and a community agency in plans for the proposed research unit.

QUESTION: Returning to the discussion of a new group of technical assistants, would they come under nursing or constitute an entirely new group? It would seem most advantageous to create an entirely new group responsible for technical assistance, since new sources of personnel, such as men, could more easily be attracted to this new career category. Dean Howard wondered just when the University of Minnesota is going to start such a program. Dr. Learn suggested that, if the Committee feels it's useful, then the establishment of a new technical assistant program should be clearly recommended in the final report. If Minnesota doesn't take the lead in establishing such a program, who will do it?

QUESTION: Won't Public Health nurses need special training, especially relative to the chronically ill, to carry out the work they'll be doing under Medicare's provision of 100 home nursing visits? This and all of the changes in nursing we've discussed have implications for medical licensure and corresponding state laws.

Dr. Learn stated that if the Committee desires to discuss the implications of a possible new type of worker in nursing, a meeting will be scheduled exclusively for this, including assigned presentations. It's certainly well worth discussing, particularly since various foreign countries, such as the Soviet Union and Eastern Europe, have had sub-doctor assistants for some time.

Ancillary Subcommittee Report

Dr. Learn then turned the meeting over to Dr. Kottke, who gave the Ancillary Subcommittee report. Dr. Kottke began by pointing out that the committee reported on 13 out of 15 possible groups which are included in ancillary services and that total space needs have yet to be defined from the gross figures returned by each service area. Professional judgment would be required to correlate curricula with gross space needs to arrive at needed space which is used year-around.

QUESTION: Is OT/PT a degree program? Yes. In PT we offer a B.S. degree, but there is no Master's program. Radiologic Technology is a 15 month program, 3 of which are spent in the classroom, and a year is spent in practice. This leads

to a certificate

QUESTION: How does the Social Work Department relate to Medical Social Work? The only role played in the Hospital is that of practical experience. All Social Workers graduate as Social Workers, not as Medical Social Workers.

QUESTION: As a general rule, do you think workers in these ancillary professions are better trained in rump arrangements with a variety of departments, or should they have a more generic relationship with the College of Medical Sciences? In other words, should their place in administration relate to their college or departmental position? I would say that some programs do much better having a single department as a home base in Medicine who are concerned with their education. On the other hand, the traditional view of the medical technician is one who is working with delegated responsibility. Today, this is not really true; the work medical technicians do is their own responsibility, it's not delegated. Relative to licensure or certification, their position now is in limbo in relationship to doctors.

This is similar to nursing today. When a situation occurs where the doctors are uninterested in the role and work of the technician, the health team splits up and each member goes its own way. Therefore, it's important to be related to the doctor to emphasize ultimate medical responsibility for the work of the nurse or technician. This is particularly important because technicians today are not trained at the top level of performance, but instead they are trained to work under responsible supervision.

QUESTION: In creating technicians trained at less than capacity to fill the many gaps existing, shouldn't we recognize these technicians as mere gap-fillers?

QUESTION: Shouldn't Dietetic Interns and Pharmacy Interns have been included in the Ancillary Report? No, we conferred with Miss Gilman and left it out because no space is needed.

QUESTION: Then there is no graduate program in this? No, this is a post-degree program.

QUESTION: Wouldn't it be better to train teachers of radiologic technology or others, rather than more practitioners? It's more effective to bring all these trainees together in one quarter, and prepare them to go out to the hospitals.

COMMENT: Page 2 of the Report states a set of principles proposed by the Ancillary Subcommittee to the parent committee, with certain loopholes. The committee should look at these proposals carefully to see if we have a consensus in supporting them.

Respectfully submitted,

John H. Westerman
Executive Secretary

Report of Task Force

on

School of Public Health

Gaylord W. Anderson, Chairman
Richard G. Bond
Allyn G. Bridge
Garland K. Lewis
Louis H. Muschel
Egar L. Makowski
Lee D. Stauffer
George M. Yamane

October 11, 1965

The School of Public Health is organized as one of the four major components of the College of Medical Sciences. Prior to the middle 30's Public Health was combines with other departments of the Medical School. About 1935 it became a separate department of Preventive Medicine and Public Health within the Medical School. In 1944, following a special grant from the Mayo Properties Associates, it was separated from the Medical School and made a separate school within the College of Medical Sciences, coordinate with the Medical School and School of Nursing and reporting to the President through the Dean of the College of Medical Sciences.

For its financial support the School depends heavily on outside money, chiefly federal through the Public Health Service. The Hill-Rhodes Act provides funds for operation and maintenance of schools of public health, such funds to be divided among all accredited U.S. schools on the basis of a formula giving major consideration to the number of students supported by the federal government. During the current session of Congress the ceiling for such appropriations has been raised from 2.5 million to 5.0 million. The Public Health Training Act, as well as general appropriations further provide funds for special training projects. In distribution of General Research Support funds the School is considered as a unit separate from the Medical School. The several Acts providing funds for construction of research and training facilities in the health sciences include a more generous matching formula for schools of public health than for medical schools. At the present time federal funds available for support and maintenance of the School's teaching program (exclusive of specific research projects and student stipends) exceed University support in a ratio of more than two to one.

I. Role of the School of Public Health

A. Intra-University

1. Instructional. The School of Public Health provides instruction of five types.

a. Professional training for those who are to be employed in public health programs. In this regard it serves as one of the 12 accredited schools of public health receiving federal support under the Hill-Rhodes Act for public health training as well as special project training grants in the fields of accident prevention, air pollution, biostatistics, chronic diseases, epidemiology, hospital engineering, maternal and child health, mental health in public health nursing, preparation of teachers in public health nursing, public health biology, and radiological health. Special programs leading to the Master of Public Health degree are available for biologists, chemists, dentists, engineers, health educators, nutritionists, physicians, public health nurses, sanitarians, veterinarians and vital statisticians. A two-year program leads to the degree of Master of Hospital Administration. Ph.D. programs are available in the fields of biostatistics, environmental health, epidemiology, hospital administration and physiological hygiene.

b. Instruction in Preventive Medicine and Public Health required as part of the training for various professional groups throughout the University, notably students in medicine, nursing, dentistry, dental hygiene, pharmacy and the College of Education.

c. Cultural Health Courses. Instruction in personal and community health within the undergraduate colleges which require courses in personal health as a part of a liberal education. Such requirements exist in the Colleges of Liberal Arts, Education, and Pharmacy, the Institute of Agriculture, and some parts of the Institute of Technology.

d. Training in Biostatistics. Instruction is provided in basic biostatistics designed for graduate students learning the use of statistics in biological research. Instruction in biostatistics is also provided to the medical students and all students registered in the School of Public Health. In addition, the Division of Biostatistics, under a special training grant from the National Institutes of Health, prepares students for careers in biostatistics, both teaching and research.

e. Instruction in Physiological Hygiene, at the undergraduate level for Men's Physical Education, at the graduate level for graduate students, including physicians, dentists and nutritionists working for advanced degrees in the School of Public Health.

2. Research. Research programs with expenditures totaling $794, 500 in 1964-65 are conducted in biostatistics, environmental health, epidemiology, hospital administration, physiological hygiene and public health nursing.

B. Extra-mural Services. Staff of the School are actively engaged in innumerable public service enterprises as members of committees or consultants to many local, state, national and international agencies. Service of this character ranges from single-day meetings to assignments extending over two or three months, the latter notably with the World Health Organization. During the present calendar year members of the staff of the School working under research grants or international consultantships have been in Brazil, Chile, Colombia, Costa Rica, Czechoslovakia, England, Finland, India, Iran, Italy, Lebanon, Nigeria, Norway, Pakistan, Peru, Phillippines, Russia, Scotland, Sweden, Switzerland, Taiwan, Thailand, Turkey, United Arab Republics, West Germany, and Yugoslavia.

II. Goal or Objectives.

A. Professional. The essential purpose of a school of public health, the reason for creation of such schools and for their public support, is the need for trained personnel to fill the many positions that exist in the public and private public health agencies. As time has passed, public health

problems are demanding more highly trained personnel than in former days. For example, the day has long since passed when control of the environment could be limited to elimination of unsanitary conditions. Today's environmental hazards include problems of stream pollution with a kaleidoscopic array of chemical contaminants, air pollution, radiological hazards and innumerable accident hazards. All of these, as well as many other types of public health problems, not only present highly complex and difficult technical problems but also demand well trained personnel for their solution. Schools of Public Health provide preparation of such personnel and contribute to the conduct of research as to methods for control of hazards. Similarly complex and difficult problems exist in all other aspects of public health, including the rendering of health services to the community.

B. Non-professional. The goal of the non-professional instruction in health is that of helping to develop an American public that is informed as to personal measures for health protection and possesses an understanding of the importance and value of community measures that require public support. Failure to appreciate the significance of community problems and the need for development and support of organized community programs results in the creation and persistence of problems that seriously jeopardize the health and secondarily the economic well-being of a community.

III. Existing Programs to carry out objectives.

A. Professional Training for Public Health Work. The School of Public Health at Minnesota is today the second largest school of public health in the country measured in terms of students registered for advanced degrees. Only the University of Michigan has a larger enrollment. It is the only school in the Upper Midwest. As shown in Table 1, the number of students in graduate programs has more than doubled during the past decade. Its students, including biologists, chemists, dentists, engineers, health educators, hospital administrators, nurses, nutritionists, physicians, statisticians and veterinarians, come from about 40 different states in the Union and normally from 15 to 25 foreign countries. The School thus has a higher proportion of non-residents (64% Fall Quarter, 1964) than does any other portion of the University. This situation also explains why almost 90% of all money handled by the School comes from outside of Minnesota, chiefly in the form of grants from the federal government and various foundations. Most of the foreign students are supported by either the World Health Organization or the U.S. government through the A.I.D. program, though each year a number are supported by their own ministries of health. Students from the United States are supported partly by federal training grants of both a general and specific nature, by federal agencies by which the students are employed, by state and local governments, as well as by various voluntary agencies. Special federal legislation provides training grants for personnel to be employed in public health agencies, money to provide such stipends being awarded to the School of Public Health for allotment to qualified students. Of the 235 students registered for graduate programs during the regular academic year 1964-65, 83 were supported by the federal government under various training grants, 20 by international agencies and 11 by miscellaneous agencies. During the 1965 Summer Session 71 additional students from 22 countries were registered for special programs, 30 of whom were supported by inter-

national agencies, 39 by miscellaneous agencies.

1. Health Officer Training Course for Physicians (and Dentists). This is a program of 9 months duration but should be lengthened to 11 months. It leads to a Master of Public Health degree and is designed to train physicians (or dentists) for administrative positions in public health work. The special interests of these students vary somewhat, some being especially interested in electives in the field of maternal and child health, others in epidemiology, others in principles of administration, etc. In recent years there have been about 10 to 15 such students each year. At the most we could probably look forward to not in excess of 25. Accommodations required are essentially those of classrooms, conference rooms and a library. At no time have these students had a place where they might sit down or even hang their coats and hats within the School of Public Health.

   a. Public Health Administration. The instruction in public health administration has been carried for many years by the Director of the School, supplemented in certain years by a visiting lecturer for one academic quarter. Minnesota is the only School of Public Health that lacks a fully staffed division of Public Health Administrations. All other schools have from two or more (6 or 7 in some schools) full-time persons in this division. At present the School has no space for such a unit but must look forward to creation of such a division, providing space for staff (at least two persons plus a secretary) and suitable ancillary rooms for housing of research projects. If instruction in community medical care is to be included in this Division substantially larger staff and space will be required.

   b. Epidemiology. All candidates for a Master of Public Health degree are required to take at least one course in Epidemiology. Many take two or even three courses. The basic courses involve lectures and laboratory exercises of a statistical character. Student laboratories, preferably one large room, must be provided to house sections of 50 students each. Such a laboratory can, as at present, be shared with the Biostatistics Division though this produces serious scheduling proglems. The Ph. D. program in epidemiology, supported under a special training grant from the Public Health Service, provides additional training for some 5 to 7 students who have already completed a Master of Public Health program. This division plays a major role in providing research experience to medical students during their free or elective quarter.

   Facilities required for the division include staff offices, laboratories suitable for bacteriological, chemical or physiological research, desk space for students on Ph. D. programs and conference rooms. The academic staff, limited at present to only two persons, must be expanded to at least four. In planning facilities, there should be space for an additional four or five to provide for future

needs. Laboratory space to house the various research projects of such a staff should be available to accommodate at least 30-35 technicians and assistants.

c. Maternal and Child Health. The maternal and child health unit, supported by a Children's Bureau grant, provides instruction for all students in the School as well as limited instruction outside of the School. Joint activities with the Department of Pediatrics, also under a special Children's Bureau grant, provide for special programs of study over a period of two or three years, combining clinical and experimental pediatrics with formal instruction in public health leading to a Master of Public Health degree. A similar program with the Department of Obstetrics is desirable. At present the MCH unit is operating with a minimal staff of four (one physician, one nurse, one nutritionist and a secretary) crowded into 3 1/2 small rooms with a total area of 450 sq. ft. and completely lacking facilities for development of any type of research project. Its ultimate development should envision space for academic and research staff of at least 10, accommodations for students, and laboratories suitable for chemical, biological and statistical research.

2. Public Health Nursing. For many years the School of Public Health maintained the country's largest program in public health nursing, receiving each year over 100 graduate nurses for whom additional instruction in public health nursing was provided to qualify them for first level positions. With the expansion of collegiate nursing programs, the number of nurses seeking such training because of lack of public health nursing experience in their basic courses, has so declined that what remains of this program is being transferred to the School of Nursing where it is combined with the basic program. This has left the Public Health Nursing Division free to concentrate on its rapidly growing Master's degree program which began at the end of World War II and has now grown to a point of admitting some 35 Master's degree students each year chosen from two to three times that number of qualified applicants. Ten years ago it was the rare student whose studies extended more than the normal academic year of three quarters. Today all of the students, whether as candidates for an MPH degree in the School of Public Health or an M S. degree in the Graduate School are on programs of at least five academic quarters and it can be anticipated that in the years ahead these will extend to six quarters in all but the exceptional case. The School has special PHS grants for nurses interested in mental health training and for those seeking careers in teaching. Special cooperative arrangements exist with the Department of Physical Medicine and Rehabilitation whereby the Master's degree students get special experience with respect to the problems of the home nursing care and supervision of patients who have persistent disabilities and especially those discharged from rehabilitation centers. To an increasing degree, public health nursing agencies are carrying heavy loads of nursing care for such patients. Until recent years little attention was given to the special training that

public health nurses need for this work.

To provide field experience for the public health nurses the School maintains offices in the Rochester-Olmstead County Health Department, Suburban Public Health Nursing Service of Hennepin County, the Health Department of Minneapolis, and the St. Paul Family Nursing Service. Students are assigned to each of these agencies and a member of the School staff is desked on a part-time basis in the respective agency to serve as a field instructor.

In projecting staff and space needs for the coming decade it should be assumed that the School will admit annually at least 50 new students in public health nursing and that these will stay for two academic years. In addition to the field offices that the School must maintain in the collaborating public health agencies, the Public Health Nursing Division requires office facilities for staff and secretarial assistance, conference rooms to accommodate from 10 to 25 students at a time and suitable study facilities that these students can use as a "home" base. Like the health officers, they have at the present time no place where they can sit down or hang up their hats and coats. Inasmuch as the public health nursing staff works closely with the staff of the School of Nursing and provides major assistance with the courses in Public Health Nursing required for all students within the School of Nursing its offices should be close to those of the School of Nursing. Separation by several blocks would be a severe handicap to effective coordination of the program.

3. Environmental Health. This program, in which about 50 students are enrolled each year in studies leading to a Master of Public Health, Master of Science of Ph. D. degree, is the outgrowth of the former program in Public Health Engineering or Sanitation. About half of the students are engineers; the other half present a diversity of backgrounds in physical and biological sciences. The Master's program varies in length from 11 months to 2 years. Within the Division there are special federal training grants in the fields of accident prevention, air pollution, hospital engineering, public health biology, and radiological health, in all of which programs there are students supported by federal training stipends. Training stipends from AEC and from NASA are also available and non-categorical stipends from the Public Health Service for students interested in somewhat broader and varied training in general aspects of environmental health.

Of special note is the Ground Water Course which has been operated each summer for the last six years under a grant (or contract) from the Agency for International Development. This is a course lasting 10 weeks (6 in classes on the Minneapolis Campus and 4 in field work at the University of Minnesota Forest Research Center in Cloquet) which has received and provided training for nearly 200 engineers from over 60 nations. These students are sent by their respective ministries of health under funds made available through A. I. D. or the World Health Organization. The School has a current contract with A. I. D.

for continuation of this course and for development of comparable courses in other countries. Two such courses have already been conducted in Bogota in collaboration with the National University of Colombia, one is planned for the coming year in either Southeast Asia or the Philippines, and the contract calls for a similar course two years hence, probably somewhere in Africa.

To carry on its training and research activities in Environmental Health, the School maintains offices and laboratories covering about 2/3 of the 11th floor of the Mayo Building, one newly developed research laboratory area of 4,363 sq. ft. in the basement of the West Wing of the Health Service, and a Limnological Field Station in Duluth in collaboration with the Department of Biology of UMD. The Public Health Service Fresh Water Quality Research Laboratory being built in Duluth is located immediately adjoining this Limnological Laboratory and, with a proposed staff of almost 200 scientific personnel, will provide extra facilities for both teaching and research through collaborative arrangements with the School of Public Health and the Graduate School. A special grant from the Public Health Service has been received by the Graduate School for the development of an Environmental Health Research and Training Program, which, while under the Graduate School direction, will be assigned to the School of Public Health for immediate administration. The School is also involved with the University's developing Water Resources Research Center and Space Science Center, currently having research projects sponsored in both areas.

Students working in the field of Environmental Health not only take a broad program of public health subjects but, depending somewhat on special interests, take a large number of electives in various parts of the Institute of Technology, including chemical engineering, mechanical engineering, physics, and civil engineering. Conversely a number of the graduate students in civil, mechanical and chemical engineering avail themselves of courses in the School of Public Health. This exchange of students has been facilitated by the present proximity of the School to the Institute of Technology. A somewhat more limited exchange of students is maintained with the Institute of Agriculture. In the program in hospital engineering, close working relationships have been developed with various parts of the University Hospitals, relationships which are of mutual advantage to both.

Of the 12 Schools of Public Health in the United States, only six, including Minnesota, can be said to have faculty and research capability for present day professional education in environmental health. These other Schools of Public Health and the major engineering colleges offering training in environmental health, generally have as many, if not more, students enrolled in doctoral programs as in Master's programs. Although the Minnesota program has concentrated on training of professional personnel for public health careers (Master's programs) and will continue to give priority to such a mission, research needs in environmental health must be recognized if the graduate program is to

flourish. To date, there has been neither adequate staff nor facilities to keep pace with the needs for doctoral training and research programs. Faculty are needed particularly at the Assistant Professor and Instructor level to "back stop" present senior staff and to help care for the inevitable increase in student load. The Division is currently responsible for 41 students at the Master's degree level and 14 working on doctoral programs. The former were selected from more than twice that number of applicants.

Assuming a growth in enrollment consistent with recent experience it seems reasonable to anticipate a minimum of 75 graduate students in environmental health, 50 of whom would be Master's candidates and 25 engaged in pre-doctoral studies and doctoral research. Total space to provide for such growth is estimated to be of the order of magnitude of 25,000 square feet of laboratories plus expanded "desking space" for faculty, teaching and research assistants, secretarial staff and pre-doctoral students, and the usual components of seminar and conference rooms, lockers, and storage for equipment and supplies.

4. Health Education. This is a program of some 10 to 15 graduate students being trained to serve in the health education programs of public and private health agencies. It is unlikely that this will grow to more than 25 or 30 students as a maximum, preferably around 20. Like the programs in environmental health, it requires at least 11 months, the summer after the formal classwork being given over to supervised field experience. This latter was formerly carried out through assignment to work with a health educator somewhere in the United States. During the past summer, the School has experimented successfully with more closely supervised experience in the Minneapolis Health Department for students from the United States and assignment of foreign students to work with a health educator in some other part of the world having a culture more nearly approximating that of the student in question. The extremely poor quality of health instruction in the elementary and secondary schools bespeaks a need for preparation of school teachers with a satisfactory knowledge of the elements of personal and community health and trained in the teaching thereof, a knowledge rarely possessed by those entrusted with such instruction in the public schools. Facilities for the health education program involve offices, classrooms, work rooms and conference rooms.

5. Public Health Veterinarians. This program, leading to a Master of Public Health degree, is conducted in collaboration with the School of Veterinary Medicine. For several years the School has had from 5 to 6 graduate veterinarians working on such a program, partly in the School of Public Health and partly in the Veterinary School. It is doubtful if more than 15 students at any one time should be so accommodated. No special public health courses have been developed for these students for they take the general courses along with other students in the school. No special physical facilities are required other than the usual classrooms and conference rooms.

6. Biostatistics. This division serves five discrete functions.

a. Basic instruction in biostatistics for all students in the School of Public Health. Every person is required to take at least one course and many take more than one. This means that instruction must currently be provided for some 150 new students each year, such instruction including laboratory work and necessitating laboratories accommodating at least 50 students, to make allowance for sections of this size.

b. Instruction of medical students. The same laboratories can serve this group of 150 students each year. The School of Dentistry will probably request similar instruction for its students.

c. Teaching of biostatistics as a research tool to students from all parts of the campus. This latter instruction bears no relationship to public health but rather the application of statistics to the study of biologic phenomena. Laboratories for this purpose, once located in Millard Hall, were later moved successively to the Chemistry Building, Mechanical Engineering, and Architecture and are currently located in Ford Hall Central location for these laboratories is essential since students come from all parts of the campus. Courses of this character are offered in each term of the regular year and in summer session.

d. Graduate training of biostatisticians. Special grants from the National Institues of Health provide support for students and staff in this program. At present approximately 35 students are engaged in this, 10 of whom have completed their Master's degree and are working on their Doctoral degree.

e. Assistance to all parts of the College of Medical Science in connection with the statistical aspect of research projects. This assistance involves not only advice as to design of experiments and analysis of resultant data but includes a great deal of actual calculation, for the latter of which a definite charge is made.

The foregoing activities require not only space for staff but should include space for at least the doctoral candidates. They also require laboratory space with various types of electronic or mechanical equipment. When the College of Medical Sciences has its own computer facilities, some of the equipment currently on the 12th floor of the Mayo can and should be moved in association with this Center. Other parts of the apparatus can be connected by cable and both this and the Medical Science Computer Center connected with the main computer center by cable. It is essential that the laboratories currently located in Ford Hall be maintained in a central location as student travel to and from a peripheral location would not be possible with the present time schedules. Similarly it is highly desirable that the Biostatistics Division be maintained in close physical approximation to the main components of the Medical School if the unit is to continue its function as a consultant

to research projects throughout the College. The unit is currently badly cramped not only for office space to desk requisite staff and Ph. D. students but also in terms of the laboratory space requisite for the several large courses. Expansion of at least 25% is immediately necessary to serve the current operations and a minimum of 150% additional to prepare for the inevitable growth of the next decade. Lacking such expansion, there will be an inevitable curtailment of its teaching and service functions.

7. Hospital Administration. This is a two-year program leading to the degree of Master of Hospital Administration. About 30 to 35 students are selected each year from about 200 applicants from all parts of the United States and Canada as only 16 such programs exist in the two countries. The class usually includes one or two foreign students. After the usual 9-month academic year on campus, the students are assigned to a carefully selected hospital administrator serving as a clinical preceptor responsible for supervision of the student for a year of administrative residency. There is also a Ph. D. program accepting a maximum of three new students each year. Under a grant from the Hospital Research and Educational Trust of the American Hospital Association the Division is developing an Extension program for the upgrading of hospital personnel throughout the Upper Midwest.

Although the hospital administration students take many of the public health courses along with the other students in the School of Public Health, their special courses in hospital administration involve other parts of the University only slightly. In the development of the program there has been little utilization of the University Hospital, despite the fact that the course has been physically located in the medical center. It is hoped and highly desirable that closer working relationships can be developed in future years. If, however, there is any part of the School that must be separated from the rest and somewhat separated also from the Medical Center, it is this course in Hospital Administration. Such separation would be very unfortunate but less damaging than would separation of other parts of the School.

The Hospital Administration program currently occupies 1,567 sq. ft. on the 12th floor of the Mayo Memorial where, because of elevator problems, it has almost exclusive use of the class room seating 55 persons. One of the research programs occupies 681 sq. ft. of rental space at Oak Street. The students make extensive use of the Hamilton Library, heretofore located outside of the School but recently transferred to the University and set up in the Bio-Medical Library. In planning future facilities an absolute maximum of 75 new students per year should be considered. It should be recognized that in most other hospital administration programs the preceptorship year is being or has been replaced by a second year of formal class work on campus. If the Minnesota program should be similarly changed, the number of students (other than Ph. D. candidates) for whom physical accommodations and teaching staff would have to be provided would be doubled. In either case facilities should include one (or more) classrooms seating 100 students (to pro-

vide for outside students electing certain courses), a drafting room, work rooms, conference rooms and offices, including desk space for Ph. D. students.

8. Medical Economics and Community Health Care. The increasing degree to which hospitals, insurance plans and government have become involved in the provision of comprehensive health care, indicates an urgent need for more instruction on medical economics. Courses of this character should be available for all public health and medical students as well as for students majoring in social work, sociology, economics or political science. In other schools of public health extensive teaching and research units in medical care are being developed. Minnesota lags in this regard.

   For several years a visiting lecturer in the spring quarter has provided two series of lectures, one for public health students and one for medical students. Last year the University accepted a memorial gift of $100,000 to help provide for instruction in health insurance, thus providing for a full quarter course. The Division of Hospital Administration has further provided similar courses for its Ph. D. students and through the Sociology Department, instruction in medical sociology.

   If the School is to keep pace with current developments, it must materially enlarge its program in health care and medical economics. Full-time teaching staff with suitable research facilities will be required. Such a unit might be attached either to the Hospital Administration Division, to the new Division of Public Health Administration or made a separate division. Regardless of its exact placement, it should be developed as a component of the School of Public Health and provided with space suitable for major growth in the next two decades. In view of the importance of the subject on the national scene it is not unrealistic to envision a staff of 10-15 persons attached to such a unit.

9. Mental Health. In spite of the tremendous importance of mental health as a personal and community problem, very little attention has been directed to this area either in medical schools or schools of public health. At Minnesota, the School of Public Health has the half-time services of a psychiatrist and the full-time services of a public health nurse with special training in this field, both supported out of a special training grant from the National Institute for Mental Health. Instruction is provided for all students in the School except those in biostatistics and environmental health. The training grant provides stipends for 4-5 public health nurses on a 15-month program. The importance of mental health as one of the nation's major health problems indicates the need for expansion of this program if necessary funds and space can be made available.

10. Laboratory of Physiological Hygiene. This laboratory, originally developed in the Department of Physiology with collaboration of the Department of Physical Education and consequently located under the South side of the Stadium, was transferred to the School of Public Health in 1946. While carrying on a modest teaching program involving students in the School of Public Health and in Men's Physical Education, the laboratory

is essentially a research institute. In this regard it has carried on distinguished research, not only within its own cramped laboratory facilities but also through its field studies in many parts of Europe, Asia and Africa, studies that have attracted world-wide attention.

Currently the Laboratory of Physiological Hygiene occupies 10,980 sq. ft. net space under the Stadium, rents 2,457 sq. ft. at Oak Street and maintains two railroad cars fully equipped for laboratory studies. Temporary laboratory facilities have been operated overseas as needed. For its teaching of students in Men's Physical Education it utilizes student laboratories of the Department of Physiology.

The facilities under the Stadium are grossly overcrowded and inadequate, enjoying no University maintenance other than water, heat and electric power, in spite of tremendous quantity of overhead money brought into the University by its many research grants. Because of its location and inadequate ventilation, work in the Laboratory has frequently had to be called to a halt owing to the hazards entailed. Expansion in its present location is physically impossible in spite of increasing grants and there is no possibility for the important animal experiments that should be conducted. In spite of these difficulties, the Laboratory has carried on research projects, the annual overhead of which far exceeds the University investment in salaries and supplies (in 1964-65 overhead of $101,053 as contrasted with $67,520 support funds) and which has brought world-wide recognition to the University matched by few other parts of the institution.

If the Laboratory is to continue to grow, as is essential to any healthy operation, it must find not only more suitable quarters but quarters that permit expansion of at least 100% in floor space. The full potential teaching and research value of this Laboratory can be achieved only through closer physical association with other parts of the College of Medical Sciences, an association that has not been possible so long as it was physically so removed and isolated.

B. Non-Professional Courses. Personal and Community Health. These courses, under the direction of Dr. Stewart C. Thomson, account for the largest actual class enrollment of any part of the School, providing instruction to 5,279 students during the past fiscal year as contrasted with 2,593 in the same courses in fiscal year 1954-55. These courses cover the material that might reasonably be expected of an educated man but are not designed to provide material that the student will use incidental to his earning of a living. They need little more than office space within the School but do require large classrooms to accommodate the enrollment. Each quarter for several years, the number of students seeking enrollment in these courses has far exceeded the capacity of the rooms to which the course has been assigned. Since the breaking up of Burton Auditorium, which accommodated over 700 students, the University has failed to provide equivalent lecture hall facilities, with resultant closing of these courses long before the opening of a new academic quarter.

Lecture hall space for these classes is best provided in as central a part of the campus as possible as it is far easier to send the instructor to a central

location than to move several hundred students to a peripheral site. The School does, however, require space for additional staff as Dr. Thomson is currently heavily overburdened and this burden will increase as University enrollment climbs. Offices for two more professional staff and a suitable workroom to provide space for the mere mechanical operations of these classes are urgently needed. Even if, at some future date, some of these courses were to be offered on the basis of closed circuit television, the need for added staff would remain.

IV. General Considerations. As indicated from the foregoing, the School of Public Health, while operating separate degree programs leading to the degrees of Master of Public Health and Master of Hospital Administration, is nonetheless an integral part of the College of Medical Sciences and the entire University. Few parts of the University have contact with more students in the course of a year than does the School of Public Health.

While peripheral location of the School (as for example near the prospective new State Health Department Building on Delaware Street between Walnut and Oak) would provide for closer association with the Health Department, this isolation would work to the detriment of those programs in the School serving other parts of the College of Medical Science as well as other colleges of the University. Almost without exception, students within the School take courses outside the College of Medical Science, some of these being located on the West Bank, others on the St. Paul Campus and still others within the main portion of the Minneapolis Campus. Isolation in the Oak Street area would produce difficulties to these students and at the same time would produce difficulties for students in other colleges utilizing courses within the School of Public Health. Such isolation would also necessitate a large investment in classroom facilities for, at any given class hour, the School is operating from three to five courses ranging from 50 to 150 students. In its present location the School can take advantage of general purpose classrooms, notably those in the Medical Center, Botany and Zoology buildings, Ford Hall and the engineering complex. The farther the School is located from the medical complex the more will be the need for multiple classrooms to carry on its normal functions. Such separation would also seriously impair the value of the Biostatistical Division as a service to other parts of the College in their respective research projects, would increase the difficulty of coordination with the School of Nursing, would separate the new environmental health research laboratory in the Health Service from other parts of the Division of Environmental Health and would very generally remove the School from its present situation as an essential component of the College of Medical Sciences. In any planning for the future it is highly important, both from the standpoint of the School itself and of other parts of the University with which it is working, that any new facilities be established in as close physical association with the Medical Center as is possible.

Currently the School, although burdened with the second largest enrollment of any school of public health in the United States, has one of the smallest physical facilities, less than half of the national average, (Table 2). Only two schools, both with very small enrollment, have less space. One can estimate a need for expansion of at least 100% (exclusive of classrooms) which should be thought of as a bare minimum for the next 20 years.

Even with this expansion, the School would have one of the smallest physical facilities, far less than half of the national average. One of the outstanding characteristics of the School and one which has been commented on so favorably by all who have visited it has been its role as an integral part of the whole University rather than as an isolated unit apart from other parts of the University such as is the case in several of the other Schools. In any long range plans for future expansion, special attention should be given to so locate the facilities that they continue to be an integral part of the University and avoid the isolation that unfortunately, characterizes some of the Schools in other Universities.

Exact location and type of construction will of course depend on decisions as to location of other parts of the Health Science complex. There would be many advantages to the take over, renovation and expansion of the present Botany and Zoology buildings if these units were to be moved to the St. Paul Campus as part of the new College of Biological Sciences, yet the Task Force recognizes that other parts of the University may well present stronger claims for this area. A new building within the quarry area behind the Health Service and now occupied by the Botany greenhouses would provide proximity to the environmental health laboratory now in the Health Service building and to the Rehabilitation Center with which the Public Health Nursing Division will have increasingly close relations, and would be reasonably central for Biostatistics. Alternatively incorporation into or immediately proximal to a large medical-dental out-patient complex, would provide for closer coordination with the community clinical services, a direction in which public health is inevitably moving throughout the country as government continues to play an increasing role in the total problem of medical care for the public.

Table 1

School of Public Health
Fall Quarter Enrollment in Graduate Programs

	1955	1965
Biostatistics	6	35
Environmental Health	11	55
Epidemiology	--	5
Health Administration	9	15
Health Education	6	12
Hospital Administration	48	74
Public Health Nursing	20	53
Veterinary Public Health	8	7
Miscellaneous	2	6
	110	262

Table 2

Space and Federally Supported Student Census Estimates of Schools of Public Health

School	Existing Space in sq. ft.	Construction in sq. ft. Under Development	Average Number of Federally Supported Students Last Three Years*	
Harvard	182, 750		81.99	(6.54%)
Johns Hopkins	177, 000	90, 000	111.33	(8.89%)
Pittsburgh	168, 000		78.33	(6.25%)
Michigan	134, 000	Planning new addition	211.67	(16.90%)
North Carolina	115, 750		169.00	(13.49%)
Yale	98, 869		41.58	(3.32%)
Puerto Rico	58, 000		60.50	(4.83%)
California	46, 142		153.61	(12.26%)
U. C. L. A.	40, 000	31, 000	71.50	(5.71%)
Minnesota	38, 003		161.05	(12.86%)
Columbia	34, 035		55.00	(4.39%)
Tulane	25, 000		57.08	(4.56%)
AVERAGE	93, 129			

* In the absence of comparable figures as to student enrollment, this figure of federally supported students, which is used by the Public Health Service as its basis for distribution of Hill-Rhodes funds, is used in this table as a rough index of relative size of Schools. It ignores the differences as to extent to which schools provide instruction to students enrolled in other parts of the University.

October 11, 1965

To: Members of the Committee for the Study of Physical Facilities for the Health Sciences

Enclosed is a preliminary report of the Nursing Subcommittee, prepared in the format suggested in Dr. Learn's memorandum for June, 1965, and including introductory material designed to provide a framework within which to assess the roles, objectives, and programs that are described.

Members of the Nursing Subcommittee are:

Edna L. Fritz, Professor and Director, School of Nursing

S. Gaylen Bradley, Professor of Microbiology

Edward C. Defoe, Jr., Assistant Professor of Pediatrics;
Director, Pediatrics Clinic;
Assistant Director, Comprehensive Care Clinic

Frances E. Dunning, Assistant Professor, School of Nursing

Frances D. Moncure, Assistant Professor, School of Nursing

Marion I. Murphy, Professor and Director, Public Health Nursing Department, School of Public Health

Betty M. Pederson, Associate Director, Nursing Services, University Hospitals

Hubert H. Serr, Professor of Dentistry

Dorothy E. Titt, Assistant Professor, School of Nursing

Edna L. Fritz

Chairman, Nursing Subcommittee

STATEMENT OF NURSING SUBCOMMITTEE FOR PRELIMINARY REPORT

TO THE LEARN COMMITTEE

October 11, 1965

I. Introduction

During any one span of time the educational and research contribution of the School of Nursing are influenced by over-all developments within the health field including those within the occupation of nursing. They take cognizance of national, regional, and state needs for nurses and of available resources within the University and elsewhere for meeting these needs.

Continuing expansion of health services and modifications in the patterns for rendering health care can be expected to accelerate in the years ahead. Quantitative and qualitative increases are going to be required of nursing and nursing education. Nursing, in concert with medicine, is going to have to decide whether assumption by nurses of the increasing technical components of medical care, which many members of the medical profession seemingly envision delegating to nursing in the future, will best serve the public, or whether a new worker will be needed to function as an assistant to physicians. If nursing is to absorb these tasks, then ways must be found to make it possible for nursing to develop its technology further at the same time that it retains and extends at some level of preparation and practice those supportive, instructional, and comforting services that people look to nurses to provide during their efforts to maintain or regain what is for them optimum health. The magnitude of such an undertaking suggests that nursing will increasingly have to differentiate the vocational, technical, and professional components within its service and prepare people differently for these levels of functioning.

In the face of rapid social change and unresolved issues before the health discipline the country over, it still remains for this School to chart its future course in nursing. Our teaching, research, and service activities should give promise of maximizing the School's contributions to attainment of over-all University goals and ultimately to the expansion and improvement of nursing care services for the public we serve.

In addition to the usual educational concerns, the following considerations have shaped the projections for the School of Nursing that are presented here.

1. The responsibility of the health team to society:

Adequate health care requires the interaction and cooperative efforts of many persons, a) the patient, b) his family and friends and the community as a whole, and, c) members of the health care group. The health care group has as its over-all goal a state of optimum health for every member of society. The achievement of this over-all goal is dependent upon the contributions of a variety of health professions, each of which has its unique goal. A well-defined goal makes it possible for a given profession to a) circumscribe its role, b) plan the educational preparation of its practitioners, c) develop a body of knowledge by means of clearly focused research, d) meet the changing needs of society from a frame of reference, e) un-

derstand the goals of other professions with which it works in efforts to achieve the larger goal, and f) assume legal responsibility for its own acts.

2. The place of nursing on the health team:

At present, nursing on the national scene is attempting to circumscribe its role around a unique goal. Society has for many years expressed the idea that illness itself and measures necessary for recovery from and prevention of illness add up to a variety of discomforts and inconveniences. There is evidence that unrelieved discomfort (stress) makes it difficult for people to take maximum advantage of available health services. Individuals differ from one another in the way in which circumstances associated with health care constitute discomfort for them. Because of this great individuality, it seems appropriate and necessary that a professional group assume major responsibility for the comfort of people receiving health care. Comfort has thus been identified as the goal of nursing, around which is circumscribed a primary role. The nurse assumes her primary role in a variety of settings, wherever there are people receiving health care.

The practice of nursing includes, besides this primary role, certain functions delegated by the medical profession. Nurses carry out measures which have been prescribed by the physician for the attainment of the goal of medicine. In order to assure maximum effectiveness of these medical means, the professional nurse administering them takes responsibility for creating ways to keep concomitant discomfort to a minimum.

3. The education of professional nurses:

The nursing roles described carry implications for the necessary educational preparation of those who fulfill them. To be able to provide comfort one must a) be able to assess the state of comfort of individuals, b) select principles, from the behavioral and natural sciences, related to the maintenance of comfort, c) identify nursing means based on the principles and apply them, and d) evaluate the outcomes of nursing means. To carry out delegated medical care safely and effectively one must be able to a) understand the purpose of the prescribing physician, b) understand the potential and actual responses of the body to the care, and c) apply scientific principles in the actual provision of the care.

The attainment of these abilities to an extent sufficient for initial professional practice of nursing requires that a student have baccalaureate education. To develop a body of principles in nursing one must be able to plan and carry out research related to the nursing goal. This ability is attained through graduate study at the master's and doctoral levels. These levels of preparation are also necessary to extend the understanding and abilities of practitioners who wish to undertake specialized roles in the field.

4. The place of non-professional assistants in nursing and their preparation:

The professional nurse ideally provides complete nursing care, beginning with assessment and ending with evaluation, which would constitute a direct service to the patient. This is not always possible, since socio-economic factors limit the supply of professional practitioners. A nurse may have to delegate certain aspects of a patient's care to an assistant. The nurse's decision that a given patient is to

receive that particular care, based on her own careful assessment, makes the giving of it her indirect service. The nurse decides who is best able to perform a particular aspect of care and then assumes responsibility for the outcomes. Thus, professional nursing practice encompasses both direct and indirect services to patients.

Since nursing is responsible for outcomes of the functions performed by assistants, it follows that the preparation of these people is determined by nursing. The ability to perform certain functions can be developed through on-the-job instruction. The development of other abilities may require completion of organized vocational or technical programs conducted by vocational high schools or institutes, by hospitals, or by junior colleges.

5. Nursing needs and resources for meeting them in the nation, region, and state:

Current national projections about needed numbers of nurses, teachers and supervisors of nursing, etc., while very high are related only to predicted population increases. They do not allow for qualitative improvements either in the educational opportunities within nursing or in the services rendered by nurses, nor do they seem to take into account the likelihood of more diverse and demanding types of service in the future.

Admitting that the projected numbers were inadequate to meet the actual need, but assuming them to be the greatest that were attainable, the Surgeon General's Consultant Group on Nursing recommended in 1960 that by 1970 the numbers graduating from masters programs in nursing be tripled while those completing baccalaureate programs be doubled.

National figures and projections:

Type of Program	Numbers Graduated 1961	Goal for Number to be graduated in 1970	Projected Percentage Increase in Number of Graduates between 1961-1970	Projected number of Graduates needed in 1985 at same rate of increase.
Masters or higher degree	1,020	3,000	194	5,280
R.N. Bacc.	2,456	5,000	103	6,784
Basic Bacc.	4,039	8,000	101	10,563

Minnesota figures and projections:

	Number of Minnesota Graduates 1962-63	Percentage of Nat'l Total of Graduates Prepared in Minn. in 1962-63	Minn. Goal for 1970 Graduates /Surgeon General's recommendation	Percentage Increase in Minn. Graduates between 1962-63 and 1970	Projected Numbers of Minn. Graduates for 1985 at same rate of increase
Masters of higher degree*	51	5.0	153	200	293

Minnesota figures and projections (Continued)

R.N. Bacc**	59 (spec.)	2.4	118	100	170
Basic Bacc.	262	6.4	524	100	753

* Now prepared only at SofN and SofPH of University of Minnesota
** Now prepared only at SofN of University of Minnesota

To yield 262 graduates in 1962-63 from Minnesota's basic nursing programs leading to a baccalaureate degree required enrollments of 865, hence if we wish 1572 graduates in 1985 enrollments in such programs in Minnesota must total 5188 students or approximately a 500% enrollment increase. Within baccalaureate programs an even higher percentage increase would be needed in the enrollment of students who had previously completed programs in nursing leading to either a diploma or an associate degree, since attrition of these students has been greater than that of basic students. Seven institutions in Minnesota, in addition to the University, now conduct baccalaureate nursing programs. Two of these are in state colleges at Mankato and Winona, but neither program is now professionally accredited. The liberal arts colleges that conduct baccalaureate nursing programs do not accept into them students who have had prior preparation for nursing because of the nature and location of their institutions. Further, it is not likely that they can appreciably expand their enrollments of basic nursing students without altering their institutional missions. This, coupled with the cost to institutions of providing baccalaureate nursing education, suggests that the principal burden for expanded enrollments in such programs will fall to public institutions.

Admission and graduation figures are more nearly synonymous in masters programs than at the baccalaureate level, since attrition is not great and, presently at least, federal traineeship support is available to most students for full-time study. Assuming the need to increase masters nursing program enrollments in Minnesota by 475% to 293 by 1985, it goes beyond the means and potential of the University's Schools of Nursing and Public Health to accomplish, but at present this institution is the only one offering programs in nursing at this level.

These facts suggest that if the University delineates its responsibility in nursing education in terms of the state's needs for nursing personnel only, the School can reasonably expect to contribute an appropriate share both quantitatively and qualitatively, given the necessary resources for program development and expansion. If, however, the University views its responsibilities as extending to the upper midwest, to the nation and to the international scene, any reasonable projections of nursing personnel needs go beyond this institution's capacity to fully provide now or in the foreseeable future.

Assuming acceptance of the broader of these two areas of concern, it is appropriate for the School of Nursing to contribute what it reasonably can to the quantitative need for nurses prepared in baccalaureate programs and to exemplify in its program the soundest preparation possible for the beginning practice of professional nursing. The University's greater contribution is to be realized through expansion of enrollments in graduate programs designed to prepare for increasingly expert nursing practice and/or for selected roles in nursing such as teacher, supervisor, administrator, or investigator. We need to provide leadership in the development and expansion of un-

dergraduate programs in other educational institutions, especially in those state colleges that have access to suitable clinical resources. Assuming sound baccalaureate programs in several state colleges, masters programs are then to be encouraged in them as well.

II. Roles of the School of Nursing

Delineation of role emphasizes the faculty's concern for current and foreseeable needs. In addition, we must continuously explore new frontiers in nursing and health with members in other disciplines.

In keeping with the generally accepted purposes of universities and in common with most other educational units of this university, the School of Nursing's major roles are teaching, research, and service. Primacy among these roles will undoubtedly continue to be accorded to teaching although increased attention will be given to the research role in the years ahead.

A. Teaching Role

The teaching role is to

1. provide an exemplary undergraduate program which prepares for the initial practice of professional nursing.
2. conduct graduate nursing education except in public health. *
3. assist nurses who are studying in other educational units of the university as appropriate to their needs.
4. contribute instruction in nursing for students in other fields, such as hospital administration, when it is requested.
5. maintain excellence in the faculty.
6. share our experiences with faculty elsewhere in the University and in other nursing education programs.

B. Research Role

The School's research role is forwarding the development of theory and theoretical models that will contribute to the advancement of nursing practice.

C. Service Role

The provision of direct nursing care for patients is the responsibility, not of this School's faculty, but of the staffs of the hospitals and public health nursing or other agencies whose resources are utilized for laboratory practice in various of our educational programs. Service responsibility to patients is indirect in nature and implemented through guidance of students giving nursing care, consultation to individuals and agencies, as well as provision of continuing education experiences for nursing personnel in a variety of employment settings.

* See addendum to this report for a statement of the roles, objectives, and programs of the public health nursing unit in the School of Public Health.

III. Objectives of the School of Nursing

A. Teaching Objectives

1. Undergraduate Education

   a. To provide a baccalaureate program in nursing that exemplifies educational excellence and prepares students for the initial practice of nursing at a professional level.

   b. To test in this program the extent to which baccalaureate education in nursing, while realizing its principal purpose, can provide foundations for further study in nursing and/or in other subject fields.

2. Graduate Education

   a. To offer programs (other than in public health nursing) designed to prepare increasing numbers of individuals for the roles of expert practitioner, teacher, supervisor, administrator, or investigator in nursing.

   b. To assist nurses who are enrolled in graduate programs in units of this or other universities.

3. To participate upon request in the teaching efforts of other university departments, especially within the health disciplines.

4. To recruit, select, and develop a faculty which can effectively discharge the roles appropriate to faculty within a university.

5. To promote exchange of experiences relative to program development, implementation, and evaluation.

B. Research Objectives

1. To undertake research in nursing care, education, and service in areas other than public health.

2. To plan and participate in research efforts of an interdisciplinary nature with faculty in other divisions of the University as appropriate.

3. To provide opportunity for students to participate appropriately in ongoing research activities.

4. To participate selectively in the research efforts of others within nursing and allied disciplines.

C. Service Objectives

1. To provide opportunities for continuing education to a variety of groups within the nursing profession.

2. To offer consultative services to individuals and agencies, both private and governmental, in nursing and allied fields.

3. To participate selectively in activities of organized nursing at local, state, national, and international levels.

4. To assist in referral and placement of graduates of the School's programs.

IV. Programs of the School of Nursing

On the assumption that the current pace of expansion in knowledge and health services will accelerate over the next quarter century, it is not unreasonable to suppose that by 1985 baccalaureate nursing programs may well be desirable as preparation for the technical practice of nursing. The professional practitioner of the future will need fully as much substantive knowledge of the physical and biological sciences as the nurse technician, considerably more knowledge in the social and behavioral sciences, and a considerable degree of expertness in carrying out all aspects of the nursing process in the care of patients. Such preparation may desirably require completion of a "generalized" baccalaureate program that provides the foundational work in the supportive sciences coupled with other liberalizing studies. This to be followed by preparation for nursing practice at the post-baccalaureate level in programs whose main focus would be on the nursing process with opportunity for requisite study of supportive sciences, including medical sciences, at the graduate level. Such an arrangement would permit greater interdisciplinary teaching of students in professional programs in various of the health fields. On this basis, preparation for the more expert practice of nursing and/or for other functional roles such as teacher, supervisor, investigator, etc., would take place at the post-masters level.

While this upgrading of educational preparation for nursing may well be important to insure nursing services of the quality desired under the circumstances of future practice that seem likely, it does not now seem an attainable goal. The current state of nursing and nursing education, the prevailing attitudes about higher education and the appropriateness of lif e-long career pursuits by women, and the rewards so far provided to women in the labor force of this country militate against this being practicable within a quarter of a century. However, speculation about such directions do have relevance for program considerations here.

A. Teaching Programs

It is recognized that the function of teaching is integral to the discharge of the faculty's responsibilities to interpret nursing and nursing education and to the conduct of the service role.

Undergraduate Program

1. The baccalaureate nursing program has recently been revised extensively. In preparing for initial practice it provides the fundamental aspects of a liberal undergraduate education and the prerequisites for graduate study in nursing.

   It remains now to persist with evaluation of this curriculum, including the follow-up study of its graduates, to obtain evidence upon which to base future program changes. Particular attention must be given to a) determining whether or not the purpose and objectives of the program

are accomplishable by the majority of students within 13 quarters of study, b.) whether the laboratory time provided for the practice of nursing is sufficient to enable new graduates to perform nursing functions with reasonable effectiveness and security in beginning positions, and c.) whether the courses selected as prerequisite and contributory to the nursing courses are satisfactory both for the purposes of this program and as a foundation for graduate study in nursing.

On the first of the above points, it seems likely that as the expectations held for the nurse practitioner expand in the future initial preparation will have to be more extensive. Therefore the length of our baccalaureate program may increase, which would serve to increase enrollments within it.

On the last point there is particular need to investigate with other departments the provision of suitable courses in the physical and biological sciences for nursing students and other non-science majors.

2. The program is seen as serving as a model rather than as a major supply source of beginning professional practitioners. Therefore it is not anticipated that the numbers admitted to it will go much above the current goal of 130 students per year.

   Nurses generally, school counselors, and the public are not yet fully aware of the differences in purpose and design among the several types of programs that prepare for nursing. The School's faculty recognizes their interpretive responsibilities in this regard and expects that within five years or so greater clarity about different levels of nursing education will be reflected in the recruitment and selection of students for all programs. As higher percentages of students with interest in and potential for the collegiate study of nursing go directly into baccalaureate programs, the need for us to admit any appreciable number of graduates from diploma or associate programs for baccalaureate study will lessen. Until such time as this is the case, however, we have a particular obligation to qualified applicants among this group, since ours is the only nursing program in Minnesota that serves them. Nurse faculty will be seeking the cooperation of others in the University in utilizing and/or developing procedures for determining the advanced standing that can be accorded to individuals in this group.

3. Public health nursing instruction within this program is now largely provided by nurse faculty in the School of Public Health. Since that School no longer engages in baccalaureate nursing education and the School of Nursing's undergraduate program has been extensively revised, the coordination that is necessary to integrate their contributions to curriculum and instruction in the School of Nursing is time-consuming for all concerned. There is need in the 1967-69 biennium for additional budgeted positions in the School of Nursing to make possible assumption of responsibility for this aspect of undergraduate instruction both for students enrolled in the baccalaureate nursing program and for potential graduate students who must remove a deficiency in this area of undergraduate nursing preparation.

Graduate Programs

1. Currently, programs in psychiatric and medical-surgical nursing, having as their purpose the preparation of expert practitioners, are offered through the Graduate School under Plan B. requirements for the degree of Master of Science.

   A teacher preparation program leading to the degree of Master of Education is offered through the College of Education with School of Nursing faculty responsible for student selection and advisement, and for planning and implementing those parts of the curriculum that constitute the major in nursing education.

2. Present masters programs serve thirty-five to forty students per year on the average. Students come from many states beyond this immediate region, especially since graduate study in nursing is financed for most by federal traineeships. Each year usually finds enrollees from a few foreign countries.

   As the only institution offering graduate nursing programs in the three states of Minnesota, North and South Dakota, and in view of the national needs for persons prepared through them for leadership positions in nursing, we expect to both extend graduate programs and to expand enrollments within them during the next twenty years. By 1970 it is reasonable to expect that we will have 60 to 75 students, while as many as 150 or more may be enrolled by 1985. Additional faculty will be needed to permit such growth.

3. Attention is being given to curriculum development in masters programs with a view to insuring that all serve to extend students' knowledge and ability in nursing per se, and that opportunities are available upon election to prepare for specialized roles within the field of nursing. Attaining these two purposes may necessitate extending the length of masters programs to two years.

   We would hope that all such programs might be made available through the Graduate School and that students might elect to meet either Plan A. or Plan B. requirements in them. Fulfillment of Plan A. requirements seems especially pertinent for students who wish to undertake postmasters study in disciplines other than nursing and/or to prepare for research participation.

4. Refinement and further development of content for inclusion in nursing education programs at the various levels will be dependent upon research by nurse faculty here and elsewhere. Such ongoing research is requisite in the learning environment of both undergraduate and graduate students and provides opportunities for students to participate as appropriate in research.

   As nursing theory evolves further and is supported, we see its potential for inclusion in nursing programs at the post-masters and/or doctoral level. It is somewhat difficult to predict the pace at which this will occur. The research emphasis of nurse faculties in selected universities over the country has already led to the establishment of a few doctoral programs in nursing.

Increased numbers of nurses should be encouraged and can be expected to undertake doctoral study in other fields of the University. The School of Nursing faculty plans to maintain liaison with them and to make assistance available to them in their research investigations in nursing.

General considerations re the program of teaching

1. Attention needs to be given to the facilitation of interdepartmental faculty communication and cooperation in the interests of program development, implementation and evaluation.

2. The national shortage of qualified persons for university faculty positions in nursing requires aggressive recruitment efforts, and attention to all elements that bear on the retention of faculty. Efforts to provide developmental opportunities for faculty will need to be systematized and extended. The need for this and the time of faculty that it entails has to be recognized in according budgeted positions to the School.

3. Opportunities to practice nursing need to be regularly available to and utilized by faculty teaching nursing in order for them to maintain their expertise and to demonstrate the effectiveness of the nursing process they are teaching.

4. Attention must be given to maximally conserving the time of faculty for their central functions.

   Experimentation with methods and means of teaching that promise to conserve faculty time without compromising potential learning outcomes for students must be continued by faculty.

   Provision of additional clerical staff and of budget to employ teaching and/or research assistants is needed.

   To the extent possible, geographic proximity to the clinical or other laboratories that are utilized in the programs and to persons in other University units with whom we work closely should be maintained both to facilitate planning and conserve faculty travel time.

B. Research Program

1. It is imperative that an investigative research climate be fostered in order to develop knowledge that enriches all programs in the School as well as to demonstrate that the academic role involves research.

2. Because of the limited research preparation of most present and potential faculty at this point in time, we are presently working to further competencies through a developmental program supported by U.S.P.H.S. for a five-year period from 1963 through 1968. The beginnings made during this interval will have to be continued by us beyond the end of the project. Seminars, consultation, opportunities for collaborative participation in the research of others, and opportunities for study are among the means being used to assist faculty.

3. Need is felt by the faculty for a clinical unit in which the exercise of certain controls by nursing would make it possible to carry out research in patient care. Such a unit in University Hospitals would serve the research interests of the Schools of Nursing and Public Health, and the Department of Nursing Services.

C. Service Program

Of many areas of service that the School's faculty are requested to provide, selectivity is needed in determining participation that is manageable in light of commitments to teaching and research and that have the greatest potential of contributing ultimately to improved nursing care.

1. In order to promote exemplary nursing care in agencies where students have learning experiences, faculty need to utilize informal opportunities to work collaboratively with nursing personnel in identifying and solving nursing problems. In addition, conferences, demonstrations, investigation and other means of participation in direct care of patients in agencies utilized for student laboratory experience serve to maintain effective relationships with nursing service personnel.

2. Consultation of a short-term nature is provided as appropriate in response to requests for assistance from individuals, schools, or agencies. Priority is given to local and state requests, but the region is also served.

   Requests have increased markedly out of general interest in the conduct of the newly revised baccalaureate nursing program. Some of the needs expressed can be met by providing carefully planned observation visits with us for faculty in other schools, but the number we can serve in this way must be limited.

3. Ongoing consultation or program participation is provided selectively to governmental agencies, professional organizations, and foundations by individual faculty members.

4. Our conviction that learning experiences are enhanced by contact sufficient to provide reinforcement has led us to concentrate our efforts on providing sequentially planned opportunities for continuing education. In addition we have defined our audience as those nurses in a position to provide leadership to others in improving nursing practice or nursing education.

5. The dynamic nature of current nursing education coupled with the extreme need to prepare maximal numbers in the shortest time possible, makes it imperative that students at either the graduate or undergraduate level pursue preparation in regular full-time academic programs. This makes inappropriate the provision of regular courses out of sequence in summer or in extension and has led to the development of non-credit offerings designed to assist employed nurses to increase nursing knowledge and skills.

UNIVERSITY OF MINNESOTA
College of Medical Sciences
(School of Public Health)

Addendum to the Preliminary Report of the Nursing Subcommittee to the Committee to Study Physical Facilities for the Health Sciences

The following material was prepared by Marion Murphy for study by subcommittee members according to the format suggested by Dr. Learn's letter of June 7, 1965:

I. Introductory: Public Health Nursing Programs in the School of Public Health

Present masters programs in public health nursing lead to either a Master of Public Health or Master of Science degree (Plan B), the latter administered by the Graduate School. As of the 1965-66 school year all programs are a minimum of 5 quarters in length; it is likely that faculty will take action to move to a 6 quarter (2 academic year) plan in another year. The major concentration in all programs is public health and public health nursing. The programs are termed "clinical" in that students work with patients in public health settings (and sometimes in hospitals) during a two or three quarter period. In addition, a student may broaden her program so as to include further emphasis in mental health, long-term patient care (rehabilitation) or school nursing. Selected students pursue functional preparation for supervision or for junior teaching positions in collegiate schools of nursing. The School of Public Health has a project grant from the Public Health Service which partially supports the latter program; support for mental health teaching comes from the National Institute of Mental Health.

Fifty-three public health nursing students are enrolled as of the fall of 1965; 37 of these are new while 16 are 5th quarter students from last year. Even reasonable enrollment projections indicate that by 1985 the School of Public Health will need to plan for an estimated 100 public health nursing students (50 new, 50 2nd year). (See projected figures for the School of Nursing and for other programs in the School of Public Health in relation to this).

II. Role of the Public Health Nursing Unit in the School of Public Health (tentatively 1975-80)

The following statements describe the central purpose (or mission) of this Unit.

1. To continue to provide opportunity for non-nursing students in the School of Public Health to become acquainted with the goals and functions of public health nursing. (This is in line with the School's policy of affording the members of the health team the opportunity to understand each other's role while in training).

2. To provide opportunity for selected professional nurses to prepare themselves at the masters level for a variety of leadership positions in public health nursing or, since terminology is changing, for nursing in community settings outside of hospitals. Such settings would include public health agencies, outpatient departments, other community clinics, schools, and occupational health facilities.

3. To further research in the area of community nursing; to continue with orientation to research at the masters level and to explore opportunities for post-masters and doctoral preparation.

4. To continue to render service in the area of nursing and public health nursing outside the University to the extent that it does not seriously interfere with teaching or research.

III. Goals or objectives - specific accomplishments required to fulfill the assigned role. The following goals are stated in terms of the expected outcomes for students.

Non-nursing students in the School of Public Health.

1. All non-nursing students who complete masters or higher preparation with public health as a major should have understanding of the goals and functions of public health nursing (or nursing in the community outside hospitals).

Masters students in public health nursing.

1. The masters graduate in public health nursing should have: (a) clinical expertness, i.e., a level of nursing practice which equips her to make a high level contribution to the care of well and sick people in the community outside of hospitals. (b) ability to work collaboratively with nurses with masters preparation in other fields, giving and seeking nursing consultation. (c) ability to work collaboratively with a multidiscipline team (physician, social worker, other) giving and seeking consultation in behalf of her nursing service to well and sick people. (d) ability to participate in research activities; and (for some) interest in securing further preparation at the post-masters level.

2. The extent to which a masters program in nursing can also include functional preparation (how to supervise, how to teach) is undergoing scrutiny. Provision for some foundations in these areas, while admittedly of crucial importance at the present time, may be regarded as post-masters in coming years.

3. While masters preparation in public health nursing has been largely terminal in the sense of preparing nurses for leadership positions in this field of practice, it is anticipated that this emphasis will change in the future. Faculty are exploring the advantages of the Plan A program for public health nursing students who have aptitude and interest in post-masters study.

IV. Program - procedures used to meet the objectives which will fulfill the expected role.

Non-nursing students in the School of Public Health.

1. All non-nursing students enrolled for a professional degree in public health should have the benefits of multidisciplinary study contact, which includes nurses, during their programs of study. This may be accomplished through formal and informal means throughout the curriculum.

2. The curriculum for all students enrolled for a professional degree in public health should include organized instruction concerned with the goals and functions of public health nursing. All public health nursing faculty are expected to participate in this phase of the instructional program in the School of Public Health.

Masters students in public health nursing

1. Preparation for leadership positions in public health nursing at the masters level should focus mainly on the achievement of further clinical nursing skill through utilization of opportunities for a variety of experiences with patients and families in community settings under faculty guidance. The objective of clinical expertness, i.e., the development of the clinical practitioner in public health nursing, can be achieved only through prolonged intensive carefully guided work with patients and families in the community milieu - a milieu which also is affected by (a) the presence or absence of other professional practitioners (b) the home and community environment.

2. Achievement of certain aspects of clinical depth for the masters students in public health nursing will necessitate close contact with School of Nursing faculty and students at certain points. The nurse in the community setting outside the hospital is confronted with many types of sick and well people and needs to draw upon the clinical expertness of other nurses in coping with certain problems.

3. Collaborative relationships should be developed with the School of Nursing whereby masters students there with primary interest in various clinical areas (medical-surgical, psychiatric) could share appropriate faculty and teaching resources in the School of Public Health. Similarly, students whose primary goal is the area of public health nursing (as illustrated above in #2) could share the resources of the School of Nursing.

4. Opportunities should be provided for selected students to secure functional preparation (for supervision, administration, teaching, consultation) in public health or community nursing either as the terminal phase of a two-year masters program or on a post-masters basis. Certain commonalities in such preparation should be offered jointly with the School of Nursing in order to avoid duplication of effort.

5. Opportunities should be provided for selected students in public health nursing to pursue post-masters preparation in research either through collaboration with research programs elsewhere in the University or within the School of Public Health.

6. Doctoral study for a selected group of public health nurses must be encouraged. Present channels for collaboration with other Departments of the University and other divisions of the School of Public Health toward this goal should be further clarified and appropriately publicized. Through such efforts, public health nurses who meet admission requirements for doctoral study in a given field could pursue a program leading to a Ph. D. degree in that field but retain an interest in and a tie with nursing while so doing. A possible alternative would be for the School of Public Health to develop a Ph. D. program in Public Health which could include

concentration in one of several areas such as public health nursing.

The above alternatives are looked upon as a more desirable approach than effort to develop and defend a doctoral program in nursing, per se, at the present point in time.

COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES FOR THE HEALTH SCIENCES

Preliminary Report of the Ancillary Professions Subcommittee

Subcommittee members: Frederic J. Kottke, Chairman; Eleanor M. Anderson, Anna Hampel, Ruth Hovde, John A. Johnson, William G. Kubicek, Arnold Lazarow, Elizabeth A. Whitney.

The charge to the Ancillary Professions Subcommittee at the time that it was established left undefined the extent of its responsibilities in studying the need for physical facilities for the health sciences. "Programs for which this subcommittee is to be responsible include but are not restricted to: occupational therapy, physical therapy, medical technology, and x-ray technician."

"We are interested, initially, in how you envision the future activities in the ancillary professions area and what you think the optimal program ought to be. Once this information is in hand, we would expect to receive recommendations regarding space needs, location, student numbers, etc."

This subcommittee first considered the variety of possible ancillary health programs which might fall within the scope of its consideration based on activities within the Medical School, suggestions from a number of people to members of the committee, and review of the allied health professions and services listed by the American Medical Association. The advice of Dean Howard also was sought regarding the training programs for ancillary personnel which should be included in the report of this subcommittee. The following factors were considered in the selection of any discipline for inclusion in the study of this subcommittee:

1. Professions and services needing University training,
2. Services needed by the Medical School in order to function most efficiently.
3. National need for more personnel in that health profession or service.
4. Need for space for the teaching program by that ancillary discipline.
5. Need for obligation of faculty time to teach that discipline.

A questionnaire was prepared regarding the current and projected needs of each teaching program over the next twenty years for space, faculty, non-academic personnel and students. Each program was requested to relate these needs to its major or primary teaching curriculum, any service courses taught to other units or for continuation education and research. Each program was also requested to estimate future growth and needs relating to anticipated new activities. Description of the interrelationship with other departments, and the desired location of the space was also requested.

After a preliminary review of the questionnaires which were returned, the following basic principles were proposed by the subcommittee to be recommended to the committee:

The College of Medical Sciences should be involved in the establishment and teaching of courses leading to baccalaureate or graduate degrees.

Technical training and sub-collegiate courses, as a generality, should not be carried out by the University except when special facilities or personnel preclude such programs elsewhere.

The College of Medical Sciences may initiate a sub-collegiate course as a pilot or research program to develop the requirements for such a course.

Under certain circumstances it may be necessary for the College of Medical Sciences to establish certain sub-collegiate courses in order to meet its own or community needs. Insofar as possible this should be avoided or constitute only a temporary service.

The subcommittee has divided the ancillary disciplines into three categories:

A. Established teaching programs in which the College of Medical Sciences now participates.

1. Medical technology
2. Occupational therapy
3. Physical therapy
4. Radiologic technology
5. Vocational rehabilitation counseling
6. Speech pathology and audiology
7. Clinical psychology

B. Teaching programs which should be established, or in which the College of Medical Sciences should play a larger role.

8. Bioengineering
9. Biomedical data processing and information retrieval
10. Electroencephalography technicians
11. Inhalation therapy
12. Medical art
13. Medical record librarians
14. Medical social work

C. Teaching programs which the College of Medical Sciences may be requested to accept.

15. Mortuary Sciences

The subcommittee has attempted to survey these programs. The information which has been received regarding some is still incomplete. Several of these programs have reported to other subcommittees. It may be that certain disciplines or services which fulfill the criteria listed above have not come to the attention of the subcommittee.

Table 1 summarizes the data received to date regarding size and requirements for space for each of the programs surveyed by this subcommittee. In the following section is a brief summary of the needs, estimated growth and estimates of priority of need for each of the programs. The appendix to this report contains the reports which have been received regarding these programs.

Summary and Evaluation of the Teaching Programs Studied by the Ancillary Professions Subcommittee.

A. Established teaching programs in which the College of Medical Sciences now participates.

1. Medical Technology

Of the established programs, Medical Technology has the most urgent need for increased space. Baccalaureate, graduate, and sub-collegiate technical programs are taught. The demands for all types of personnel far exceed the supply. Medical technologists and medical laboratory assistants are employed by almost all of the departments in the clinical and basic sciences. The present space of 1600 square feet needs to be more than doubled immediately and by 1985 should be 12,000 square feet. Over the next 20 years it is estimated that the number of students will be tripled.

There are a number of specialty areas of technology which in the years to come will require the establishment of formal training programs. The necessity for such programs will become apparent as the years progress and more and greater needs for the required skills emerge. One of these fields is the technology of electron microscopy. Another is cytogenetics and still another is radioisotope technology. The skills and knowledge required in all three areas are such as to require advanced training. It would not be worthwhile to establish a training program at an undergraduate level. A variety of skills and knowledge are required including chemistry, histology and physics. It would, therefore, seem to be wise to plan to establish a training program at a post-baccalaureate level. It appears that a one-year training program would be required which would include a certain amount of formal training both by lecture and laboratory means. Individuals with a Bachelor's degree, preferably a Bachelor of Science in Medical Technology, might be admitted to the training program. Since the program in this area will have many aspects of "on-the-job" training and is at the post-baccalaureate stage of education. This advanced training may need to be supported by stipends though this may be a difficult thing to accomplish.

2. Occupational Therapy

Occupational therapy is fortunate to have newly constructed teaching space designed for a maximal class size of 24 students. If the class size exceeds 30 students, split classes will be necessary with a corresponding increase in faculty. At the present time the number of qualified pre-occupational therapy students does not exceed this class size. However, the demand for occupational therapists throughout the country far exceeds the supply.

3. Physical Therapy

The space available for the physical therapy curriculum is newly constructed to provide for a maximal class size of 24 students. If the class size exceeds 30 students, split classes will be necessary with a corresponding increase in faculty. There is a tremendous unmet demand for physical therapists in hospitals throughout the United States. There is urgent need to increase the number of students accepted into this course as rapidly as qualified candidates are available.

The graduate program in physical therapy should also be expanded to provide more physical therapists qualified for academic careers.

These plans appear feasible without a greatly increased need for space.

4. Radiologic Technology

This program does not have specific teaching space assigned to it at the present time. Lectures to classes of 100 students are presented in various large classrooms throughout the Medical School. As the class size is increased to 300-400 students, a lecture hall of adequate size will become a greater problem. There is also need for a classroom large enough for 40-50 students in the department. The technical aspects of training and practice are carried out using the facilities of the Department of Radiology.

5. Vocation Rehabilitation Counseling

Graduate students in Vocational Rehabilitation Counseling of the Department of Psychology, CLA, receive the core of the program in clinical practice and counseling psychology in the Rehabilitation Center. No space was planned for this teaching when the Rehabilitation Center was built in 1954 and the lack of space handicaps the program. Rooms for psychological testing and interviewing of patients are urgently needed. At the present this must be done in any room or office temporarily vacant. Specially constructed student interview rooms which allow observation and recording would increase the efficacy of the teaching. Adequate space for teaching conferences and facilities for closed circuit television are also needed. The additional space which is needed is not large but it should be in, or immediately adjacent to, the Rehabilitation Center.

6. Speech Pathology and Audiology

A questionnaire was sent to Dr. Frank Lassman requesting information on the current use of space and future needs for the graduate programs in speech pathology and audiology. He requested a delay in his reply until August 15 but no report has been received. It is understood that Dr. Lassman has presented his needs to the Subcommittee on Clinical Medicine.

7. Clinical Psychology

A questionnaire was sent to Dr. Starke Hathaway requesting information on space utilization and needs of clinical psychology. He replied that he was already working with the Subcommittee on Clinical Medicine.

B. Teaching programs which should be established, or in which the College of Medical Sciences should play a larger role.

8. Bioengineering

To date, it has not been possible to obtain the desired data regarding current or future needs for teaching or research space in bioengineering. Although there has been much interest in such a program for a number of years, and several years ago a cooperative plan was developed between the College of Medical Sciences and the Institute of Technology to build a facility for teaching and research in bioengineering, that plan was shelved and the committee dissolved. At the present there seems to be no unified activity nor planning.

An attempt will be made, however, to obtain more specific information and estimates.

9. Biomedical Data Processing and information retrieval.

This program is just in its developing stages. However, computer technology has developed to the point that it appears that data processing and retrieval will rapidly become an essential part of all activities in the medical school. Therefore space for this activity and for training personnel associated with this activity rate top priority.

The current estimated need for space in 1966 of 14,200 square feet will probably need to be doubled by 1970.

10. Electroencephalography Technicians

Information was recently requested from Dr. A. B. Baker by the subcommittee regarding the need for training electroencephalography technicians and has not yet been received. At the present these technicians are trained on an apprenticeship basis at the rate of approximately one per year. Since all neurologists today utilize electroencephalography technicians, it is the estimate of Dr. Baker that at least as many electroencephalography technicians as neurologists should be trained each year.

More information regarding specific needs will be submitted shortly.

11. Inhalation Therapy

Inhalation therapists are needed to aid anesthesiologists, surgeons and others. The Department of Anesthesiology would like to develop a teaching program in inhalation therapy. The estimated needs for space are modest.

12. Medical Art and Photography

At the present time the Department of Medical Art is a service department. The demands on the department exceed its capacities for service. Mr. John Parker, Director, stated that he would be very interested in developing a graduate program as soon as possible. He has anticipated the development of such a program within the next two years. He states that he has not discussed this with anyone except Miss Gilman. He anticipates that the curriculum would be planned for only three students in the beginning and that it would be a two-year program. Therefore, eventually six students at a time would be receiving a graduate program in the Department of Medical Arts. This program would include preliminary courses in Anatomy, Histology, Neuroanatomy and Pathology.

This program would need an additional classroom and additional space and equipment for students', drafting desks, photography rooms, publications department, etc. Research would be indicated for the students and therefore additional space is necessary in this future planning.

This program, at the moment, is service only. He does anticipate the need for more space especially in the photo studio which provides space for three different service areas. This means considerable manipulation of equipment and space to take care of the immediate requests in the department

Specific estimates of need are in appendix.

13. Medical Social Work

The Social Service Department operates primarily as a service department to the hospital and the clinical services. In its work it also participates in teaching medical, nursing, hospital administration and other students. The major need for increasing space is anticipated to relate to the increases in the medical curriculum. There will also be increased training of graduate students in medical social work.

It is estimated that these staff will double in size over next 20 years and the need for space will quadruple.

C. Teaching programs which the College of Medical Sciences may be requested to accept.

1. Mortuary Sciences

At the present time the course in Mortuary Sciences is a non-degree program taught under the Extension Division. There has been pressure to make this a four-year course offering a degree. A University committee has been appointed to consider the problem and also the college under which the program should be administered. If the course in Mortuary Sciences should become a part of the College of Medical Sciences, it would have a need for a total space of 1500 square feet with an anticipated increase to 4600 square feet by 1985.

TOPIC_____

TABULATION SHEET

TABLE I

COURSE	TOTAL SPACE					LABORATORY- T and R					CLASSROOM					
	1965	1970	1975	1980	1985	1965	1970	1975	1980	1985	1965	1970	1975	1980	1985	1965
1 Medical Technology	1590	4000	8100	10000	12000	800	2400	5600	6000	7000	400	800	1200	2400	2500	390
2 Students																
3 A- 1st and 2nd Year																
4 B-3rd, 4th, 5th Year																
5 C-Graduate																
6 Occupational Therapy	5386	5386	5386	5386	5386	2764	2764	2764	2764	2764	1053	SHARED	WITH	P.T.	1053	1570
7	2243	Shared with P.T.														1190
8 Physical Therapy	4689	4689	4689	4689	4689	1890	1890	1890	1890	1890	1053	SHARED	WITH	O.T.	1053	1746
9	2243	Shared with O.T.														1190
10 Radiologic Technicians											1150	1350	1360	3000	3560	60+
11 Rehabilitation Counsellors	551	1131	1200	1265	1265	238	518	518	518	518	-	300	300	300	300	313
12 Biomedical Data Processing & Information																
13 Retrieval																
14 Inhalation Therapy	--	1800	1800				1000	1000				400	400			
15 Medical Art and Photography	3000	5000	5000	5000		--	1600	1600	1600		-	400	400	4000		3000
16 Medical Librarian																
17 Social Service	1781	2881	3641	3761	6445						—	600	660	900	900	
18 Mortuary Science	1600	2894	3400	3800	3800	600	1325	1500	1700	2300	300	600	830	1030	1200	600

TO: MEMBERS OF THE COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES FOR THE HEALTH SCIENCES

FROM: EDITING COMMITTEE
Robert Howard, Elmer Learn, Erwin Schaffer, William Shepherd, John Westerman

SUBJECT: DRAFT OF REPORT TO THE PRESIDENT

At the request of Chairman Learn, the above members of the Health Sciences Committee met to consider the form and content of part 1 of our report. After carefully reviewing the sub-committee reports and consulting with our colleagues on the committee, we have drafted what we would consider to be a preliminary program report for the full committee.

This statement is submitted for your critical comment and, after appropriate revision, we hope your approval. Mr. Westerman will meet with you individually within the next ten days. We will incorporate as many of your suggestions as we can in a second draft. We would like to discuss this report with you at a meeting of the full committee on November 22, 1965 at 3:30 P.M. in 510 Diehl Hall.

D R A F T

COMMITTEE FOR THE STUDY OF THE PHYSICAL FACILITIES FOR THE HEALTH SCIENCES

REPORT TO THE PRESIDENT ON THE RESULTS OF A STUDY ON THE ROLES, OBJECTIVES AND PROGRAMS OF THE HEALTH SCIENCES

PART 1 - PROGRAM STUDY

ELMER W. LEARN,
CHAIRMAN

GAYLORD W. ANDERSON

CYRUS P. BARNUM (DECEASED)

WINSTON A. CLOSE

LYLE A. FRENCH

EDNA L. FRITZ

STERLING B. GARRISON

N. L. GAULT, JR.

GERTRUDE M. GILMAN

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JAMES W. STEPHAN

MELLOR R. HOLLAND

ROBERT B. HOWARD

ROBERT J. ISAACSON

IONE M. JACKSON

JAMES R. JENSEN

FREDERIC J. KOTTKE

RICHARD M. MAGRAW

ERWIN M. SCHAFFER

WILLIAM G. SHEPHERD

JOHN H. WESTERMAN,
EXECUTIVE SECRETARY

OUTLINE OF THE PROGRAM REPORT

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November 22, 1965

O. Meredith Wilson
President
University of Minnesota

Dear Dr. Wilson:

On October 20, 1964 you appointed the Committee for the Study of Physical Facilities for the Health Sciences. After 14 meetings of this committee and over 50 meetings of the sub-committees we formed, we have come to certain conclusions about future programs in the health sciences. On behalf of the committee, I am forwarding a copy of our preliminary report for your review and comment.

It is our judgment that we must now begin to develop the implications of this report in terms of staff and physical resource needs. As you are aware, we have already begun a space study with the assistance of Hamilton Associates. As we proceed, we intend to revise and refine the program report.

Sincerely,

Elmer W. Learn
Assistant to the President

I. INTRODUCTION

On October 20, 1964 President O. Meredith Wilson appointed a Committee for the Study of Physical Facilities for the Health Sciences at the University of Minnesota. Included in the study were: the College of Medical Sciences (Medical School, Nursing, Hospital and Public Health) and the School of Dentistry. In his appointment letter, Dr. Wilson stated:

> The University of Minnesota has a major commitment to teaching and research in the health sciences. Over the years we have developed major physical facilities. Many of these were developed in an early day and are not well suited to modern circumstances. External factors have frequently influenced our decisions on the development of facilities with the result that our growth has not always been well coordinated into a master plan. Many of the facilities we do have are badly crowded, and it has become apparent that we need to develop additional facilities to serve a variety of needs..... It is important that we undertake an internal study of the needs of the health sciences in order that we may provide the most adequate longrange plan.

The first phase of the study was devoted to the development of a statement of programs envisioned in the health sciences in the years ahead. From this statement will logically follow an analysis of the type of space needs and of the relationships required among alternative kinds of space. Finally, when the foregoing is combined with estimates of numbers of students and faculty, a definitive plan describing quantitative and qualitative aspects of the development of physical facilities for the health sciences can be presented.

Resources are and will be limited. For this reason we shall attempt wherever feasible to express program, staff and space needs within a system of priorities. Furthermore, limitations at one stage may require review and perhaps modification of all that has gone before.

The committee is about to begin its study of the kinds of staff and space needs implied by the program reports elicited to date. It seemed wise, however, that the program study be made available at this time to a broader audience, especially to central administration, for review and consideration.

Readers of this preliminary report should be aware of certain limitations faced by the committee:

1. Perhaps the chief limitation is the fact that we were not able to come out with a final program report for a number of internal reasons relating to time, personnel and previous planning efforts.

2. Another limitation was the fact that the findings of the Health Manpower Study on regional needs for physicians, dentists and other associated health professionals was not available at the time this report was written. Configurations have been limited to general program trends. Furthermore, given the rate of growth in recent years in graduate programs of the health sciences, it is extremely difficult to project the number and the needs of graduate students.

From the outset we have stressed the fact that this report will be constantly reviewed and revised where appropriate. This is the first time health science planning has been undertaken with such wide spread faculty participation. Our assumption has been that better program planning will come from the faculties' best judgment on what may be insufficient data than will come from lack of faculty participation and estimates on no data.

It will be noted that some of the subcommittee reports have striking similarities and may even appear repetitious at times. For the convenience of the reader we have attempted to summarize the subcommittee reports in two ways. First, we have abstracted major conclusions from the reports. Except when identified as being that of a specific committee, it can be assumed that the major conclusion applies to all or almost all of the health science units. Secondly, we have made a summary statement of role, objective and program for all of the health sciences. However, for greater detail about an individual area, your attention is invited to the specific subcommittee report.

The appointment of 65 faculty members indicates the breadth of representation and consultation. In addition, every member involved in the study was charged with the responsibility of keeping his faculty colleagues informed about the project, and encouraged to solicit their views on particular aspects of the study. It would not have been possible to ask each faculty member to pour through the 8-plus inches of paper and attend all of the committee discussions that have been generated by the project.

This is not an isolated effort of and for the health sciences. An attempt has been made to evaluate where health science programs stand in respect to related University programs. Relationships with the College of Biological Sciences, the University Computing Center, and the Institute of Technology are examples where such evaluation has been made.

In conclusion, the reasons for beginning this study still seem valid as we complete our preliminary program report. There is an internal need for this study; external pressures have made such a study a necessity; and finally, many circumstances in the history of the health science units indicate that we are about to embark on a new era. This does not mean that this report should be put in tablet form or shelved for the next twenty years, but there is a clear recognition that the health science units must respond to the internal and external pressures for change in a coordinated, integrated manner.

II. COMMITTEE ORGANIZATION

We have alluded to a full committee and six subcommittees in the introduction section. We should like to point out in a brief fashion how we organized, how we collected data and the techniques we used in an attempt to evaluate critically the past and present, and make objective judgments about the future.

President Wilson appointed 20 people to the full committee chaired by Dr. Learn. The full committee met several times in January and February, 1965, to determine what to study in order to carry out President Wilson's charge and then how to study the determined subject. It was decided that one could not consider space requirements for the future until something was known about the programs behind space requirements. Judgments about allotting more or less space could not be made on square footage and dollars alone, but must be based on programs and their just priority. This meant we needed to know the origin of the present programs in the health sciences and had to determine the basis upon which projections about future programs could be made.

These kinds of questions, while obviously involving the faculty, could be answered by having an outside consultant gather the necessary data and opinions or could be developed by the faculty itself. After looking over the work of outside consultants at other health science centers, and in view of the past history of faculty participation in these matters at Minnesota, the full committee decided to carry out an internal study of the programs in the health sciences. This was not as bleak a prospect as it first appeared, because of the talent, availability and willingness to cooperate of knowledgeable individuals within the faculty at the University.

The full committee decided to organize for the internal study by forming the following committees with the chairmen taken from the membership of the parent committee:

Subcommittee	Chairman
Ancillary	Frederic J. Kottke
Basic Sciences	Eugene D. Grim
Clinical Medicine & Hospital	N. L. Gault, Jr.
Clinical Medicine Task Force	Lyle A. French
Hospital Task Force	James W. Stephan
Dentistry	Mellor R. Holland
Nursing	Edna L. Fritz
Public Health	Gaylord W. Anderson

When the appointments to the various subcommittees had been completed (there was not a single refusal among those asked to participate), 46 additional

faculty members were added to the 20 originally appointed. In addition to the requirement that the chairman of each subcommittee come from the full committee, the full committee also decided that there be full cross-representation on all subcommittees. That is, each subcommittee contained at least one person from every other subcommittee area. The subcommittees were informed of each other's progress by having all minutes circulated to each of the 66 participating study members.

The technique used in gathering information varied from group to group. In all cases it was the responsibility of the chairman and his committee members to get as much information as needed so they could write a program report about the present and future. Some committees sent out questionnairs, some called department chairmen to meet with them, some used the members from the area they were studying who were on the committee to gather data and make recommendations. Some used a combination of methods.

What evidence is there that any critical evaluation went into the subcommittee reports? Some of the techniques used in an attempt to stimulate such a critical viewpoint include recognition that planning might merely concentrate on redressing present inadequacies. On the other hand, projections for future space requirements may fail to consider programmatic changes or resource limitations faced by the University. Therefore, the full committee was sensitive to the limitations of their approach and aware of the potential shortcomings.

Probably the most important factor was the quality of the people asked to serve on the study. The 46 members who accepted subcommittee assignments were selected on the basis of their independent thinking, breadth of vision about all of the health sciences, ability to evaluate critically incomplete data or impressionistic evidence and finally to make the best possible judgments on the evidence at hand.

The aforementioned cross-representation was thought to be a way of introducing an element of fresh, if not knowledgeable questions about what a particular unit was attempting to accomplish and of providing judgments at the subcommittee level by persons other than those directly associated with the area under study.

By circulating minutes to all members in the study, it was hoped that conflicts could be spotted and discussed. The executive secretary worked closely with the subcommittee chairmen in an attempt to focus on certain issues of concern to the parent committee.

Ultimately, the acceptance or rejection of the subcommittee reports rested with the full committee. By close examination of the written reports, and questioning of the subcommittee chairmen, it was hoped the full committee would make sure that important issues were being discussed and that the work of the subcommittees was being carried out in a coordinated framework.

How well have these techniques succeeded? It does seem that the subcommittee reports are long on aspirations and needs and short on priorities, however, part of this is due to the limitations previously mentioned. Our best judgment is that it is

better to come out with a preliminary report at this time and get on with the job of assigning space requirements to the programs rather than wait until all the variables have been sifted out. Conclusions about space are one way of assistance in making priority judgments about programs.

As the space figures become available, and when the Health Manpower Report is received, and when the faculty reaction to this report is apparent, then we will be in a better position to draft our final report on programs with the priorities for each area. We fully recognize that limited funds are one of the realities of University Health Science life and are prepared to make the necessary judgments about our future as more essential information becomes available.

III. CONCLUSIONS

These conclusions are based on the findings of the preliminary phase of the study. Many of these conclusions are repeated in the individual subcommittee reports. Most of the conclusions have space implications.

1. When the reports of the six subcommittees are evaluated, the collective programmatic summaries suggest major changes in future health science programs. Some of the important changes will revolve around these concepts:

   a. In the future the health science disciplines will utilize the ambulatory patient and community service programs in fulfilling their research and educational responsibilities to a far greater extent than the health sciences have done in the past. The existing facilities, constructed years ago for the primary purpose of rendering services to a medically indigent population and therefore lacking minimum requirements to serve as a laboratory for the teaching and practice of health care, are inadequate even for the present programs. These facilities are not only inadequate for the present quality of care demanded, but also seriously limit the educational programs. Projections for future teaching programs indicate greater attention to the quality of services rendered the ambulatory patient, in addition to the continuing emphasis on the hospitalized patient. High cost of in-patient care, rising patient expectations, increased government support for patient care, and the declining numbers of medically indigent patients, brought about by categorical health programs which provide free choice of vendor of health services, make it imparative that the University of Minnesota Health Sciences Center develop an efficient, comprehensive and competitive unit to attract patients. If this is not done, our ambulatory patient clinics will not be patronized sufficiently to support our educational programs.

   Although the service programs of the School of Dentistry have been largely outpatient, these programs have not been closely integrated with

the medical center ambulatory programs. In order to achieve a comprehensive health program, the dental services must be incorporated in the total ambulatory health programs of the center. In the longer range the necessity to accept responsibility for community health services will demand the incorporation of more clinically oriented School of Public Health educational programs.

b. Increased emphasis on an integrated team approach to health maintenance and care will be reflected in most of the programs, indicating a better utilization of highly skilled services and the increasing need for associated professional personnel. To accomplish the team approach objective, the health science teaching programs will be reviewed as a comprehensive unit, in order to determine at what level meaningful team educational experiences can be accomplished.

c. There will be a major program change in the School of Dentistry. The qualifications of the students and the quality of the training program will be upgraded to meet the stiffening demands of the profession. More depth in the basic science courses will be given. There will be increasing demands and needs for in-patient dental services, such as general anesthesia for handicapped or incorrigible patients with dental problems. The graduate and research programs will greatly expand, hence the number of full-time faculty will also increase. The curriculum will shift to a greater emphasis on preventive dentistry. There will also be experimentation with auxiliary programs aimed at relieving the dentist of his routine work.

d. The graduate programs and research endeavors, which have contributed enormously to the growth of the health sciences since the end of World War II, will continue to expand. It must be stressed that the programs for new ambulatory, dental and nursing innovations will not come at the expense of the strong existing graduate and research programs. In further committee study it will be as important to attempt to define the scope and needs of graduate programs as carefully as we now specify the undergraduate enrollment figures.

2. Programs of the health science units will give greater emphasis to SERVICE AND EDUCATIONAL EFFORTS THAT EXTEND INTO AND INVOLVE THE COMMUNITY.

Surveys of health needs, legislative programs and community desires all point to a greater interchange with the community. This is essential if the health science units are to round out their educational programs and be of assistance to the community in a service role.

3. The health science units recognize AN OBLIGATION TO PROVIDE POSTGRADUATE EDUCATION that is just as important as the obligation for undergraduate and graduate programs.

Post-Graudate programs, while differing in emphasis, should not be distinguished on the basis of a lower priority. At present, the size and scope of post-graduate activities does not begin to compare with undergraduate and graduate programs. If this obligation is to be translated into a reality for health science professionals in the field, it will take major resources not now available. The expanded post-graduate programs represent an additional effort on the part of the health science units and will not be strengthened at the expense of existing programs.

4. INVESTIGATION INTO TEACHING TECHNIQUES AND THE METHODOLOGY OF LEARNING will become major programs of the various health science units.

5. The health science units, in serving the needs of the state, can best achieve their objectives BY CONTINUING THE EMPHASIS ON HIGH QUALITY PROGRAMS. Plans for future growth must include a delineation of what constitutes high quality and how high quality can be preserved when programs are expanded.

   While this is a large University, its contribution in the health sciences cannot be measured on solely a quantitative basis. We are capable of and have been providing high quality educational programs. This is achieved through limited undergraduate enrollments and exemplary, model programs. Because certain programs are not available elsewhere in the community, there is often pressure on the health sciences to increase enrollments and become a major supplier in a particular field. While this has been done in some instances, limitations of space, staff, funds and lack of compatibility with existing primary programs prevent any widespread trend in this direction. The health sciences do recognize the important obligation to the state of turning out health professionals for employment in the state. In fact the faculties are prepared to undertake ADDITIONAL EDUCATIONAL OBLIGATIONS AND PROGRAMS provided they have the resources to carry out the charge and the increased obligation is of an orderly magnitude. Looking at it another way, the health science faculties do not believe that programs in research, education and service should have an absolute ceiling at this time.

   However, the faculties are aware of the limitations in the role of being all things to all people or "providing something for everyone." Where the health sciences are uniquely qualified to offer programs (such as dentistry and medicine), expansion would seem to be in order. Where other resources in the state could offer programs (such as nursing and x-ray technicians), it would seem the appropriate role for the health sciences would be to offer programs geared to training teachers, researchers, and leaders in the particular field.

6. There is a need for some CONTINUING EFFORTS AT COORDINATION OF PROGRAMS IN SERVICES, SPACE AND CURRICULUM.

This study has increased the awareness of the participants of the interdependence of the health sciences. Yet there is no clear mechanism to achieve a coordinated effort under the existing administrative arrangements.

There is inadequate space at present for the existing health science programs. A way must be found whereby people can move in and out of the health science center with a minimum of inconvenience. This idea is spelled out in the hospital report, but really is important to all of the health science units. Projected programs, in total, represent a dramatic shift from the existing pattern in the health sciences. This shift involves relationships among the health sciences and between the health sciences, the university and the community. Judgments about priorities must be tentative at this time without further data. When the data are available, conclusions can be made about the importance of teaching, service and research relationships among the health sciences. At this point, we can only point out general trends that will shape the future of the health sciences.

IV. SUMMARY STATEMENT OF ROLES, OBJECTIVES AND PROGRAMS FOR THE HEALTH SCIENCES

A. ROLES

TEACHING

1. The Health Sciences are primarily concerned with the education of undergraduate students from the state, graduate students from a national base and post-graduate professionals from the region and nation. This role includes the preparation of practicing professionals, highly specialized individuals requiring advanced work, research investigators, technical scientists and academicians among others.

   The health sciences recognize that there is an obligation to supply health science professionals for the state. At the same time there is an awareness of the important contributions that can and are made on a national and international basis.

RESEARCH

2. An integral part of the role of the Health Sciences is to investigate problems in the area, to extend the frontiers of knowledge through basic and applied research and to expose the students to the research process.

   Some students will seize this opportunity and become full-time investigators. The range of research activities extends from the students' introductory exposure to the development of complex research institutes. This role has been responsible, in large measure, for the growth and development of the health sciences since the second world war. From this research, major contributions have been made to the improvements in diagnosis, prevention

and therapy which in turn benefit the health of the individual, the community, the state, and the nation.

SERVICE

3. The role of service, while complimentary to the teaching and research roles, may extend beyond the minimum needs for these purposes. The health sciences render service in the form of patient care, assistance to health professionals in the area, and cooperative programs with community agencies and other organizations.

OTHER

4. A combination of the above roles is the overall role of interacting with communities and organizations and influencing the attitudes and standards of student and practicing health science professionals.

B. OBJECTIVES

TEACHING

1. To develop in the students the necessary knowledge, skills and attitudes to carry out their professional function. This objective is best accomplished through an integrated team approach.

2. To instill in the students an eternal dissatisfaction with the existing state of knowledge and practice and develop an attitude conducive to the pursuit of a lifetime of learning.

3. To develop programs that recognize external needs and pressures and yet represent a logical extension of internal developments. Implicit in this objective is the need to experiment with the methodology of learning, the subject matter and the application of knowledge and skills.

4. To develop methods for measuring what and how we teach.

5. To recognize the interdependence of the health sciences and develop appropriate programs that will involve the students in meaningful cooperation and prepare the students for the needs and demands society will place upon him.

RESEARCH

1. To create an environment conducive to investigation and research activities.

2. To extend the frontiers of knowledge through basic and applied programs.

3. To maintain interdisciplinary relationships in research and between research and instruction.

SERVICE

1. To provide exemplary service to our defined population, consistent with the educational mission.

2. To provide exemplary consultative and other services to members of the health profession and appropriate organizations.

3. To devote our resources in a manner that exemplary services will help elevate standards in the region. This involves sharing information about our activities and an interaction with individuals and organizations.

4. To recognize and create an awareness among our colleagues about areas in which additional or new services may be needed and to act as a catalyst to develop appropriate service patterns.

C. PROGRAMS

1. ANCILLARY

This subcommittee reviewed 15 programs. About half of the programs were well established in the College of Medical Sciences and half were programs which should be established or enlarged. Typically, these programs have started as vocational training for a person who would assist the physician or dentist to carry out specific tasks. The programs have extended the capabilities of the associated health individual (and indeed certain talents and skills which the physician or dentist doesn't possess) and of great importance in providing comprehensive health care. The University has often pioneered in the establishment of these programs and yet there is common and continual pressure within these programs, to achieve professional recognition.

Some of the reasons for this pressure are unrelated to their setting in the health sciences. It is a great advantage to be located within the University framework. However, there is a need for research in these areas and for a review of broad educational preparation. At present, all of the programs are under a clinical department. This is as it should be for the clinical aspects of their preparation. However, it may be worthwhile to explore an arrangement whereby the units could be administratively grouped together with the potential advantages of a broader approach to the health sciences, such as is practiced in the School of Public Health.

We agree with the basic principles developed by the subcommittee for evaluating the establishment and continuation of these programs. These principles are:

a. The College of Medical Sciences should be involved primarily in the establishment and teaching of courses leading to baccalaureate or graduate degrees. This would also apply to the School of Dentistry.

b. Technical training and subcollegiate courses, as a generality, should not be carried out by the University except when special facilities or personnel preclude such programs elsewhere.

c. The College of Medical Sciences and the School of Dentistry may initiate a subcollegiate course as a pilot program to develop the requirements for such a course.

d. Under certain circumstances it may be necessary for the College of Medical Sciences and the School of Dentistry to establish certain subcollegiate courses in order to meet its own or community needs. Insofar as possible this should be avoided or constitute a temporary service.

The subcommittee set up criteria for deciding which programs to include in their study. Programs in Public Health, Nursing and Dentistry were excluded. The following established programs were considered:

1. Medical Technology
2. Occupational Therapy
3. Physical Therapy
4. Radiologic Technology
5. Vocational Rehabilitation Counseling
6. Speech Pathology & Audiology
7. Clinical Psychology

No radical changes are anticipated in the above group. Projected developments and existing limitations would indicate the most severe space problems are in Medical Technology, Radiologic Technology and Audiology & Speech Pathology. Alternative training programs are available and these programs do have limited enrollments, with an objective of quality education for leaders and teachers. Even so, the concept of retaining the students in the clinical or service area must come under scrutiny when one considers the prospect of 330 undergraduate and graduate Medical Technology students by 1985, for example. The health team approach will have an impact on the design of future facilities.

The concept that the physician is dependent on associated health professionals carries with it an obligation for the University to establish or enlarge programs in new areas. The subcommittee report suggests the following fields:

8. Bioengineering
9. Biomedical data processing and information retrieval
10. Electroencephalography technicians
11. Inhalation therapy
12. Medical Art
13. Medical Record Librarians
14. Medical Social Work

These programs have implications for many of the health science units and underscore the need for an integrated cooperative educa-

tional and service approach.

2. BASIC SCIENCES

This traditionally has been one of the strong units of the health sciences. The reputation of this center to a considerable extent has been based on the achievements of the basic sciences. These units have undergone a striking shift in emphasis over the past ten years. The faculty has become increasingly concerned with basic research and has moved a long way from the instruction of the basic sciences as applied to medical students and dental students. Today, medical students occupy less than 40% of the curriculum time, take few of the higher level courses, and participate in a limited manner in the research programs. Graduate students occupy more time, take more high level courses and participate in more research than the medical and dental students.

At present in most departments, the basic medical school course is also taken by graduate students. It seems likely that these two groups will be separated in the future with the medical course stressing general principles and clinical applicability and the graduate course concerning itself with the more detailed and complex mechanisms underlying the general principles, according to the subcommittee report. The basic sciences are in accord with the objectives of the dental school to upgrade their course content and are prepared to undertake this project.

The basic sciences are asked to develop special programs for a large number of groups. They do not have the resources to accommodate all of the special requests but are willing to review their programs with the objective of teaching fewer courses to more groups.

There is no radical programmatic change foreseen over the next 20 years. Continuation of existing research programs will undoubtedly increase pressure for staff and facilities. The faculty is not inclined to put a ceiling on the number of graduate students. There is a program change, not radical in nature, that may have a major impact on the arrangement of facilities. When and if Dentistry and Nursing vacate the basic science complex, the subcommittee would like to have Microbiology rejoin them. Microbiology is now in the Mayo Memorial Building. This availability of space and the arrival of Microbiology could occasion a pooling of student laboratories. That is, the students would be divided up into laboratory modules of say 4 to 12 students, and the basic science departments would come to the student. The departments would be teaching the same programs but in a vastly different physical arrangement. A curriculum review may also indicate the desirability of including the basic sciences at a later time in the curriculum of the student and call for integrated programs with clinical medicine, clinical dentistry and clinical nursing, for example.

Changes in methodology might include adoption of programmed learning in some form, increased use of teaching aids (eg., films and video tape),

greater reliance on laboratory demonstrations as opposed to student experiments, etc., according to the subcommittee report. Perhaps experimentation should be undertaken to determine if some laboratories could be eliminated.

The relationship of the basic sciences to the new College of Biological Sciences must be worked out. At present, it would seem the College of Biological Sciences would undertake the small undergraduate load of the College of Medical Sciences Basic Science Departments. There is no way at this time to project the relationships with regard to the preparation of graduate students. This is another example of an area that needs to undergo constant review as the final program report and space report is developed.

3. CLINICAL MEDICINE AND HOSPITAL

CLINICAL MEDICINE

There will be many significant program changes in clinical medicine. A cursory examination of internal studies by other medical schools, legislation, public expectations, special study reports and publications suggests that medical education and patterns of health care are in a state of critical review and change. In general, faculties are hesitant to accept the above evidence as information that will affect them and their institution in a personal manner. But we would be short-sighted to deny they will not affect our staff, institution and organization of services. Denial of this situation does not alter its existence. Difficulty in predicting the form of the change does not alleviate the necessity for developing plans and programs that will serve the health sciences and the public in the future.

The clinical medicine group is aware of the Coggeshall Report (Planning For Medical Progress Through Education) and has come to many similar conclusions regarding programs at this center. Historically, the strong scientific orientation that has influenced the basic science departments has also shaped the clinical medicine departments. Minnesota graduates have earned the reputation of being well grounded scientific clinicians. Indeed, many of the clinical departments have strong basic research programs. The school is jealous of this accomplishment and will strive to maintain this essential orientation in future programs.

However, a new set of pressures are upon us and the clinical medicine departments need to examine and strengthen their programs in several areas. Some of the programs of the future will include:

a. Greater emphasis on ambulatory teaching and service programs in an environment more suited to the objectives of the participants.

b. Increased cooperation with the programs of the School of Dentistry.

c. Expansion of clinical research programs, particularly with reference to greater use of animals.

d. The strengthening and expansion of affiliations with hospitals in the community, ever mindful of the demonstrated elements essential to a high quality affiliation.

e. A meaningful emphasis on the team approach to comprehensive health care.

f. Greater reliance on the talents of associated health professionals is a major trend and must be dealt with in the educational framework.

It is recognized that these may sound like all-purpose statements applicable to any medical school. However, this does not lessen our need to be sensitive to the external pressures that are generated from a variety of sources with a genuine and legitimate concern about the future of clinical medicine. Unfortunately, this concern has yet to be channeled in a concerted effort to provide the resources necessary to carry out these trends and objectives. The clinical medicine departments cannot realistically accommodate these desirable changes without the means to do so. The departments will be limited in what programmatic changes they can implement until faculty physical facilities and financial support for these programs is given a priority that will insure their rapid implementation. The group realizes that many of these changes imply an important cooperative role with the hospital.

HOSPITAL

There will be many programmatic changes within the hospital. Some of these changes are related to the hospitals' service relationship with other health science units (particularly clinical medicine) but some of the changes reflect patterns of growth and improvement that would come about even if there were no medical school. No attempt will be made to distinguish the causative factors behind the changes.

A major conclusion, from even the preliminary report, is that the hospitals have projected a program that will call for space expansion on a large scale. The expansion will not necessarily be solely reflected in the more readily identifiable symbols of growth - beds, exam rooms, operating rooms, etc. - but must also provide space for expanded programs in the hospital departments. High quality service is and will continue to be the main business of the hospital. Following are some programs and general trends of service that will guide the hospital in the years to come.

* Development of ambulatory care facilities and services in a comprehensive manner which will give proper consideration to the emerging medical, organizational, and educational environment. As part of the environment of ambulatory care, thoughtful attention will be given to such demands and needs of the patient as:

- efficient appointment and scheduling systems
- provision of care in the shortest possible time

- adequate parking, transportation and traffic patterns
- appropriate housing and dining facilities

* Development of a comprehensive range of exemplary services. This program will include the definition of the optimum intrahospital distribution of beds, services and supportive facilities to provide a spectrum of properly sized, supported and coordinated units ranging from intensive care through nursing home levels with extension to ambulatory and home care services.

* Maximization of individualized patient care, giving recognition to the increasing sophistication and articulation of service demands by the public, greater freedom of choice of vendor for medical care by a larger segment of the population.

* Utilization of data processing procedures in a comprehensive application to the hospitals' operation. Also, a revision of accounting systems to provide improved efficiency in all phases of the fiscal operation, including the identification of cost centers for hospital services, educational programs, and research.

* The cooperation with the dental school in improving and expanding hospital dental services for all patients.

* The encouragement of cooperative associations with allied academic fields related to the operation of hospitals, eg., industrial engineering, sociology, social work, community medicine, dentistry, and public health.

The hospital will become involved in other teaching and research programs. Some of these are:

* Continued cooperation with the university and health science faculties to strengthen the contribution of the hospital to the total educational effort of the university.

* Expansion of the in-service training program on a hospital wide basis. Interpretation of the hospitals' multiple roles in teaching, research and service to interested individuals and organizations.

* The establishment of a formally organized, supported and coordinated effort to conduct research in hospital administrative services and establishment of an operations research or methods analysis program.

Like other units of the health sciences, the hospital is about to embark on a new era. It has a well kept, excellent physical plant. The services are soundly financed. Expansion has been made possible through the generous assistance of individuals (Eustis, Todd, and Christian) and or-

ganizations (Variety Club, Masonic Order, VFW). This hospital has become a strong, vigorous, independent entity in much the same manner as such departments as surgery, medicine and physiology. Now a new set of challenges have appeared. Excellent services, sound financing and a good plant will continue to be important. In addition, active participation in the provision of health services by a highly trained hospital staff will become of increasing importance. This in turn will call for a more active in-service training program for all employees. The hospital will also have to strengthen its external programs in order to integrate its services with other state hospital and health resources so that the referral system and continuity of care objectives are enhanced.

In summary, the hospital must progress in accord with the laws of social gravity. Most of the other reports note that we are entering a new era. Change in patterns of care, a critical look at what is being taught and how it is being taught, an upgrading in the expectation of an increasingly sophisticated public, a revision in the traditional roles of the health sciences and a growing self-awareness that things are not like they used to be but not yet clear as to what they will be. Many of these changes are translated into action in a hospital setting. The hospital looks upon this challenge as a wonderful opportunity to apply its imagination and skill. Then the words of objectives and programs will become acts of understanding and service to the people of this community.

4. DENTISTRY

The dental school is entering a new era. This unit has, perhaps, the most dramatic program changes. They include a major curriculum revision, higher entrance qualifications for the students, the addition of full-time faculty members, and more emphasis on preventive dentistry and dental research. In the 1920's and 1930's the dental school had a worldwide reputation for its excellence in restorative dentistry. In the 1950's the school gave more effort to research activities, graduate study, preventive dentistry and continuation education. All of this was done without impairing the outstanding restorative dentistry program. For a number of reasons, the fine starts made in the 1950's have not flourished as expected. After a full-scale curriculum review and a thorough program survey, the school is now ready to devote its resources to carrying out these desired programs. Highlights of these changes will be noted:

* The four year DDS program will recruit better qualified students by increasing the pre-dental liberal arts background, raising the minimum acceptable admission GPA, and pursuing a more active recruitment program. The curriculum will be improved by increasing the biologic orientation, greater utilization of the team approach, better preparation for the planning, direction and execution of oral health care, teaching students to work in the hospital setting, developing a major educational program in preventive dentistry, and providing free time and honors courses. The sum of the above changes will clearly establish the dentist as the physician of the oral cavity.

* Graduate students will increase in numbers as the investigative programs are expanded. A conscious effort will be made to develop research investigators and dental educators as well as educating students for the dental specialties. The graduate student recruitment program will be expanded as will the intern-residency program. The key to additional graduate programs will be the addition of faculty who will have the time and resources to devote all of their effort to investigative programs and graduate education.

* Another major change will be emphasis on upgrading the skills and responsibilities of the associated dental professionals. The school must devote major attention to this area if the dental practice of tomorrow is to fulfill its mission.

* The school will pursue a more integrated teaching, research and service role with other health science units. Examples of this expanded role would be cooperative ambulatory programs, expanded in-patient dental services, community public health programs and cooperative continuing education programs.

* With all of the changes in dental practice, the school finds it more urgent than ever to close the gap between the school and the practitioner via meaningful post-graduate programs.

* The school will develop a program to study the educational methods used within the school and make use of recent developments in teaching aids.

* A thread running through all of the programs will be the need for dental students to develop a feeling of social responsibility and sensitivity. This is the kind of program that cannot be described, measured, documented or readily made tangible. Faculty attitude, concern for the dignity and importance of the individual patient, responsiveness to requests from individual practitioners and community agencies are all a part of this very important program.

In summary, dentistry has not shared in the resources made available to the health science units over the past 15 years. Hence, the growth in dentistry has been more limited. A number of internal and external factors have prevented the school from realizing its full potential. Now, after several years of careful preparation, the school knows what it wants to achieve and how it can achieve its objectives. If adequate resources are made available, the school should develop some of the most exciting programs within the health sciences.

5. NURSING

The school of nursing has had a long and illustrious record in the field of nursing education. This school had one of the first graduate programs and has long been recognized as a school providing educators and

leaders for the profession. Key positions in education, as directors of nursing service and as representatives in organizations are filled throughout the country by Minnesota graduates. The last major curriculum change of the school was in 1962-63. This change was based on the premise that nursing had more than an assisting technical role in the care of patients.

In making this program report, the committee noted that quantitative and qualitative increases are going to be required of nursing and nursing education. Nursing, in concert with medicine, is going to have to decide whether assumption by nurses of the increasing technical components of medical care will best serve the public or whether a new worker will be needed to function as an assistant to physicians. Nursing will have to differentiate the vocational, technical and professional components within its service and prepare their students accordingly.

The following considerations have influenced the program projections:

a. The responsibility of the health team to society.

b. The place of nursing on the health team.

c. The education of professional nurses.

d. The place of non-professional assistants in nursing and their preparation.

e. Nursing needs and resources for meeting them in the nation, region and state.

It is projected that by 1985 the baccalaureate nursing programs may be general in nature and serve as a preparatory course for additional work in the technical practice of nursing. For the present:

* It will be necessary to evaluate the recent curriculum changes to evaluate in particular, whether it is possible to accomplish the stated objectives in the time alloted. There is a possibility that the length of the basic program will have to increase. In any case, the program should serve as a model, not as a primary supplier of nurses for the state or region. A careful review should be made of the public health nursing program (which is under the School of Public Health) because of the time consuming efforts required to coordinate the program with the undergraduate public health program of the School of Nursing.

* The graduate program will need to expand to accommodate the demand in this area. This is the only institution offering graduate nursing programs in Minnesota, North Dakota and South Dakota. Therefore, it would seem the expansion of graduate nursing programs would better fit in the role of the school and have a higher priority than expansion of the undergraduate program.

* Research programs are virtually non-existent. However, major emphasis should be put on creating a climate where a vigorous program could be carried out. The school is a logical choice for this research role. This role could involve the hospital and the nursing service department.

* The service programs of the school are taken on only in conjunction with the teaching and research roles. The faculty has developed guidelines for these programs and is concerned about being selective in their commitments in order not to dilute their primary objectives.

* There are many potential programmatic changes involving the methodology of teaching. The faculty is ready to reconcile their objectives of doing enough practice to maintain their expertise and adventuring into new methods of teaching to provide the students with an exciting approach and conserve the time of the faculty.

The national shortage of nurses imposes many demands on the School of Nursing. This school has the potential resources, the willingness and the imagination to pioneer new approaches to an old problem. Experimental programs in patterns of nursing care have broad implications for all the health services. The school is concerned with the nurse's role in meeting the needs of the patient and functioning as a member of the health team. Many of these programs call for the active participation and support of the medical staff, hospital, and School of Public Health.

6. PUBLIC HEALTH

The School of Public Health is one of the 12 accredited institutions receiving federal support under the Hill-Rhodes act for public health training as well as special project training grants. Minnesota has the second largest enrollment among public health schools and yet only two small schools have less space than Minnesota. In fact the total amount of space in the school is less than one-half the national average for other schools of public health.

There has been a trend within the schools of public health whereby emphasis is placed on activities resembling a research institute approach and the overall task of offering an educational opportunity to public health practitioners is being left to a smaller number of schools. Minnesota, while carrying on an active research program, has rejected the more narrow institute approach and has accepted the broader role of filling positions that exist in private and public health agencies.

In addition to the research programs and professional training for those who are to be employed in public health programs, the school also offers instruction in preventive medicine and public health, cultural health courses, training in biostatistics and instruction in physiological hygiene. The staff of the school are also actively engaged in public service enterprises as members of committees or consultants to many local, state, national and international agencies.

The School has the following programs:

* Health officer training course for physicians and dentists. This program will increase slightly in length and approximately double the number of students in the years ahead.

There are three divisions of this course. Public Health Administration (which needs full time staff, particularly if instruction in community medicine is included as the program develops. Minnesota is the only school in the country without a fully staffed division of public health administration). Epidemiology needs to expand its graduate program and be prepared to accommodate graduate students from other areas who would like to spend some free time with this division. Maternal and child health is now in a position to expand its minimum program but is desperately cramped by lack of staff and space. Clinical programs can be carried on in conjunction with the University Clinics but research programs require space adjacent to the division.

* Public Health Nursing is a program under pressure to expand as society demands more service from the public health agencies.

* Environmental Health has an active program aimed at training professional personnel for public health careers and also carries on extensive research and doctoral level programs. Again society's concern with issues of environmental health will be reflected in the support given this program.

* Health Education, although not a large program, will approximately double in size and could conceivably increase beyond this figure if this division is called upon to upgrade the abysmal state of health education in most school systems.

* Public Health Veterinarians are handled in conjunction with the School of Veterinary Medicine. It does not appear that this program will increase to any considerable extent.

* Biostatistics has been one of the fastest growing units within the school. The importance of this unit to the faculty and staff of the center cannot be over emphasized.

* Hospital Administration may double the size of its program. Doctoral level candidates may increase and it is likely that the faculty will be engaged in more research projects. Many in the department are located outside of the assigned space. If the program keeps the students on campus for two years, there would have to be a major adjustment in space planning.

* Medical Economics and Community Health Care. This is a proposed program which would greatly strengthen the health sciences.

* Mental Health has been a neglected area within the school. This program should be expanded, but the directions and programs are not clear at this time.

* Laboratory of Physiological Hygiene is badly in need of space to accommodate existing programs and to allow essential expansion.

Of the above, the School would give priority to (1) staff and space for Biostatistics programs, (2) more staff for mental health programs, (3) consolidation of Public Health facilities and (4) more space for epidemiology programs.

This school has taken a broad approach to the problems confronting a school of public health. From the above programs, many inter-relationships with the health sciences may be noted. Biostatistics and the faculties of the health sciences; environmental health and the University Health Service; Public Health Nursing and the School of Nursing; Maternal and Child Health and the University Clinics; Hospital Administration and University Hospitals.

Recent and proposed legislation points toward a rising expectation that these relationships will continue and grow stronger. The pressure is very strong for people in public health to become more clinically oriented, either as vendors of service or in partnership with organizations that do render service. These programs will have to be worked out within the framework of desired consolidation of all public health units. It may be that the trend away from consolidation toward closer ties with clinically oriented units will be a stronger force that the desire to consolidate for administrative convenience.

(This report will be followed by appendices containing statistical data about the health sciences and an organization chart of the Learn Committee and subcommittees.)

UNIVERSITY OF MINNESOTA STUDENT ENROLLMENT AT THE MEDICAL CENTER
1964-65

Data taken from Table I of Dean Howard's Report to Faculty Seminar, March 19 - 20, 1965 and from Dentistry Preliminary Report to Learn Committee on August 9, 1965.

	1964-65	Future
College of Medical Sciences Total	* 2541	
Medical School Departments Total	1801	
Medical Students	603	
Graduate Students	501	
Dental Students	154	
Pharmacy Students	62	
Arts College & Other	118	
Medical Technologists	111	
Laboratory Aides	60	
Occupational Therapists	49	
Physical Therapists	48	
X-Ray Technologists	95	
School of Public Health Total	+ 399	
Masters Programs	133	
Ph. D. Programs	26	
Arts College & Other	240	
School of Nursing Total	341	
Bachelors & Masters	296	
Practical Nursing	45	
School of Dentistry Total	937	1860 (By 1980)
4 Year D. D. S.	394	600
Graduates	40	125
Post-Graduates	8	35
Continuing Education	375	800
Auxiliary Personnel	120	300

NUMBER OF APPLICANTS TO DENTAL AND MEDICAL SCHOOLS IN THE NATION IN 1959 AND 1965

	MEDICAL SCHOOLS		DENTAL SCHOOLS	
	University of Minnesota	Nation	Minn.	Nation
1959	300	54,000	209	14,000
1965	800	80,000	340	19,000

* Full-time Student Equivalent

\+ According to the Public Health Report to Learn Committee, there were 110 students enrolled in S P H in 1955; 262 enrolled in 1965.

GRADUATE STUDENT TRENDS OF 100 LEADING INSTITUTIONS

DATA from Special Report on Five-Year Trend in Graduate Enrollment and Ph.D. Output in Scientific Fields at 100 Leading Institutions, 1959 - 60 to 1963 - 64, Resources For Medical Research, Report No. 6 - June, 1965, U.S. Department of Health, Education and Welfare, Public Health Service.

BIOLOGICAL SCIENCES

1959 - 60	10,676
1960 - 61	11,840
1961 - 62	12,962
1962 - 63	14,191
1963 - 64	16,115

BASIC MEDICAL SCIENCES

1959 - 60	4,594
1960 - 61	5,307
1961 - 62	5,713
1962 - 63	6,426
1963 - 64	7,396

UNIVERSITY OF MINNESOTA 1963 - 64

Total Biological Sciences 488

Basic Medical Sciences 261
Other Biological Sciences 227

In the past five years, from 1959 to 1964, there has been more than a 50% increase in Graduate Enrollments in the Biological Sciences at 100 leading institutions.

STAFF

Data taken from Table III of Dean Howard's Report to Faculty Seminar, March 19-20, 1965 and from the University of Minnesota School of Dentistry Educational, Research and Service Programs Syllabus of March 8, 1965.

Academic Staff	1964-65	
COLLEGE OF MEDICAL SCIENCES TOTAL	441.1	
(Civil Service Personnel)	(655)	(as of July 31, 1965 Payroll)
Medical School	354.9	(157.4 Regular & 197.5 Non-regular)
School of Public Health	55.2	(18.6 Regular & 36.6 Non-regular)
(Civil Service Personnel)	(64)	(as of July 31, 1965 Payroll)
School of Nursing	31.0	(28.0 Regular & 3.0 Non-regular)
(Civil Service Personnel)	(8)	
SCHOOL OF DENTISTRY		
(Civil Service Personnel)	(47)	
Full-time	25	
Half-time or more	5	
Less than half-time	87	
UNIVERSITY OF MINNESOTA HOSPITALS ADMINISTRATION	29	(Data from Medical Bulletin, Sept. 1965, p. 33)
Civil Service Personnel	1675	(As of July 31, 1965 Payroll)

* *

Data from Medical Bulletin, University of Minnesota, Vol. 37, No. 1, September 1965 pp. 33-48.

INTERNS	41
MEDICAL FELLOWS at U Minnesota	198
MEDICAL FELLOWS at other hospitals	167
MEDICAL FELLOW SPECIALISTS at U Minnesota	138
MEDICAL FELLOW SPECIALISTS at other hospitals	9

EMERGENCY CASES 1955 - 1965

Information taken from University of Minnesota Medical Bulletins; October 15, 1955; October 15, 1958; October, 1960; October, 1961; September, 1962; September, 1963; September, 1964; September, 1965.

	NEW PATIENTS	REVISITS	TOTALS
1964 - 65	4,225	14,428	18,653
1963 - 64	4,104	16,560	20,644
1962 - 63	3,595	16,665	20,260
1961 - 62	3,619	16,687	20,306
1960 - 61	3,440	15,247	19,123
1959 - 60	3,692	14,247	17,939
1958 - 59	3,378	19,279	22,657
1957 - 58	3,092	16,022	19,114
1956 - 57	2,944	15,360	18,304
1955 - 56	2,791	13,699	16,490

DENTAL VISITS TO OUTPATIENT DEPARTMENT 1955 - 1965

INFORMATION FROM SOURCE STATED ABOVE

	NEW PATIENTS	REVISITS	TOTALS
1964 - 65	950	598	1,548
1963 - 64	1,156	715	1,871
1962 - 63	900	1,029	1,929
1961 - 62	17	2,248	2,265
1960 - 61	36	2,387	2,423
1959 - 60	89	2,337	2,426
1958 - 59	85	2,369	2,454
1957 - 58	111	2,162	2,273
1956 - 57	105	2,119	2,224
1955 - 56	116	1,856	1,972

Visits to the dental clinic in 1955	About	115,000
Visits to the dental clinic in 1965	About	130,000

Bed Supply in PAHMM (Planning Agency for Hospitals of Metropolitan Minneapolis) Hospitals (Covering Anoka, Carver, Hennepin and Scott Counties)

ACUTE Beds	Medical-Surgical	Pediatric	Obstetrics	Total
October 1963	4,491	603	568	5,662
October 1964	4,505	638	539	5,682

OCCUPANCY RATES FOR PAHMM HOSPITALS

	Medical-Surgical	Pediatric	Obstetrics	Total
1963	85.2%	65.2%	62.3%	80.6%
1964	82.6%	67.7%	65.4%	79.3%

Bed Supply Related to Bed Demand in 1970

	Medical-Surgical	Pediatric	Obstetrics	Total
Available 10/64	4,505	683	539	5,682
Being Constructed or Planned	597	226	112	935
Total	5,102	864	651	6,617
Estimated Demand by 1970	4,691	764	632	6,087
Reserve or Surplus beds 1970	411	100	19	530

UNIVERSITY OF MINNESOTA MEDICAL CENTER

Building Projects Approved Under Hospital Construction (Hill-Burton) Program-1948 through June 30, 1964

University Health Service		Opened 9/25/50	Cost $ 905,816	($295,853=Federal Funds)
Variety Heart Hospital	78 Beds	Opened 3/20/51	Cost $1,466,497	($381,673=Federal Funds)
Mayo Memorial Hospital	106 Beds	Opened 10/1/54	Cost $12,153,405	($2,000,000=Federal Funds)
Masonic Hospital	80 Beds	Opened 10/15/58	Cost $1,247,210	($202,379=Federal Funds)
University Health Service Addition		Opened 9/16/59	Cost $1,041,620	($200,000=Federal Funds)
Children's Rehab.	40 Beds	Opening Bid 8/23/62	Cost $2,023,089	($893,043=Federal Funds)
Variety Heart Expansion of labs, diagnostic facilities, remodeling of patient areas		Opening Bid 4/30/64	Cost $1,109,560	($406,467=Federal Funds)
Masonic Hospital Addition	40 Beds		Cost About $1,490,440	
Mayo Memorial Expansion of laboratories and diagnostic facilities, primarily for outpatient dept.			Cost About $ 784,000	

DATA from Minnesota Department of Health, Division of Hospital Services Report on Projects Approved Under Hospital Construction (Hill-Burton) Program 1948 - June 30, 1964 and Proposed Policy Statement of Planning Agency for Hospitals of Metropolitan Minneapolis.

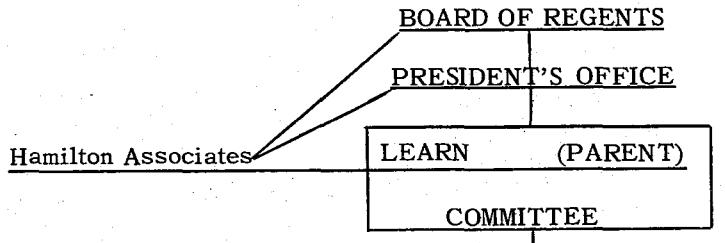
PATIENT CARE DATA 1955 - 1965

Information extracted from University of Minnesota Medical Bulletins: October 15, 1955; October 15, 1958; October, 1960; October, 1961; September, 1962; September, 1963; September, 1964; September, 1965.

YEAR:	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65
Admissions Inpatient	14,028	14,953	15,879	16,322	16,096	15,561	15,542	16,929	16,685	15,982
Outpatient	19,623	20,377	20,721	21,740	20,285	19,088	19,910	24,928	26,050	24,957
Average Daily Census	514.4	508	531.32	561.5	585.6	594.7	622.5	627	620	623
Average Length of Stay	13.4	12.4	12.2	12.6	13.3	13.9	14.6	13.5	13.6	14.2
Total Patient Days Hosp. Care	188,284	185,434	193,934	204,941	214,320	217,071	227,215	228,890	227,155	227,557
Patient Visits O.P.D.	116,369	119,683	125,174	131,293	119,602	121,830	124,940	128,585	131,107	123,056
Cost of Operation	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65
Outpatient	672,898	715,963	798,817	951,347	964,859	1,020,656	1,151,922	1,240,076	1,387,658	1,388,844
Inpatient	5,304,848	5,616,192	6,469.550	7,307,189	8,026,216	8,477,614	9,510,980	10,232,355	11,642,535	12,936,222
Total	$5,977,746	6,332,155	7,268,367	8,258,536	8,991,075	9,498,270	10,662,902	11,472,431	13,030,193	14,325,066

ORGANIZATION CHART

COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES FOR THE HEALTH SCIENCES



SUBCOMMITTEES

(see reverse side for membership list)

ANCILLARY

BASIC SCIENCES

CLINICAL MEDICINE & HOSPITAL

DENTISTRY

NURSING

PUBLIC HEALTH

Elmer Leam, CHAIRMAN
Assistant to the President

Gaylord Anderson, Director
School of Public Health

Winston Close, Architectural
Advisor

Lyle French, Director
Division of Neurosurgery

Edna Fritz, Director
School of Nursing

Sterling Garrison, Asst. to
V. President, Bus. Admin.

N.L. Gault, Jr., Assoc. Dean,
College Medical Sciences

Gertrude Gilman, Director
University Hospitals

Eugene Grim, Professor of
Physiology

Mellor Holland, Assistant
Dean, School of Dentistry

Robert Howard, Dean
College Medical Sciences

Robert J. Isaacson, Assistant
Professor, Dentistry

Ione Jackson, Associate
Professor, Dentistry

James Jensen, Professor
Dentistry

Frederick Kottke, Head
Phys. Medicine & Rehab.

Richard Magraw, Director
Comprehensive Clinic

Edwin Schaffer, Dean,
School of Dentistry

William Shepherd, Vice President
Academic Administration

James Stephan, Professor
Hospital Administration

John Westerman, Research
Associate, Medical Admin.

ORGANIZATION CHART (side 2)

COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES FOR THE HEALTH SCIENCES

SUBCOMMITTEES

ANCILLARY

Frederick Kottke, Chairman

(Pub Health Nursing) Eleanor Anderson

(Dentistry) Anna Hampel

(Medical Tech.) Ruth Hovde

(Physiology) John Johnson

(Phys. Med & Rehab.) William Kubicek

(Anatomy) Arnold Lazarow

(Nursing) Elizabeth Whitney

BASIC SCIENCES

Eugene Grim, Chairman

(Lab Med & Clin Labs) Ellis Benson

(Pub Health) Richard Bond

(Microbiology) K. Gerhard Brand

(Nursing) Isabel Harris

(Dentistry) Robert Isaacson

(Biochemistry) Joseph Larner

(Pathology) Lee Wattenberg

CLINICAL MEDICINE & HOSPITAL

N.L. Gault, Jr., Chairman

Clinical Medicine Task Force

Lyle French, Chairman

(Psychiatry) Richard Anderson

(Nursing) Nancy Cook

(Dentistry) Robert Gorlin

(Surgery) Richard Lillehei

(Med., Psych., Comp. Clinic) Richard Magraw

(Pediatrics) Paul Quie

(Medicine) Welsey Spink

Hospital Task Force

James Stephan Chairman

(Medicine) James Carey

(University Health Service) Donald Cowan

(Hosp. Admin.) Gerard Frawley

(Hosp. Admin.) Gertrude Gilman

(Dentistry) Norman Holte

(Nursing Svc.) Florence Julian

(Pub Health) Robert Laur

DENTISTRY

Mellor Holland, Chairman

(Pub Health) Allyn Bridge

(Anatomy) Carl Heggestad

(Nursing) JoAnn Hubbard

(Dentistry) James Jensen

(Hosp. Admin.) Glenn Mitchell

(Phys. Chem.) Leon Singer

(Surgery) Contin. Educ.) W. Albert Sullivan

NURSING

Edna Fritz, Chairman

(Microbiology) Gaylen Bradley

(Pediatrics Comp. Clinic) Edward Defoe

(Nursing) Frances Dunning

(Nursing) Frances Moncure

(P.H. Nursing) Marion Murphy

(Nursing Svc.) Betty Pederson

(Dentistry) Hubert Serr

(Nursing) Dorothy Titt

PUBLIC HEALTH

Gaylord Anderson, Chairman

(Pub Health) Richard Bond

(Pub Health) Allyn Bridge

(Nursing) Garland Lewis

(OB/GYN) Edgar Makowski

(Microbiology) Louis Muschel

(Pub Health) Lee Stauffer

(Dentistry) George Yamane

COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES
FOR THE HEALTH SCIENCES

Minutes of Meeting November 22, 1965 (#14)

Present: Elmer Learn, Chairman; Lee Stauffer for Gaylord Anderson, Lyle French, Edna Fritz, N. L. Gault, Jr., Gertrude Gilman, Eugene Grim, Mellor Holland, Ione Jackson, James Jensen, Graham Beaumont for Richard Magraw, Erwin Schaffer, James Stephan, Kathryn Ritzen, John Westerman

Absent: Winston Close, Sterling Garrison, Robert Howard, Robert Isaacson, Frederick Kottke, William Shepherd

Guests: Manual Bobenreith, Edward Nelson of Hamilton Associates

NEXT MEETING MONDAY, December 13, 1965, 3:30 P.M., 510 DIEHL HALL

1. Dr. Learn welcomed the guests to the meeting.

2. Since the last meeting of the parent committee on October 11, the following minutes and information have been distributed to members of the committee:

a.	Clinical Medicine	September 13 (#8)
b.	Dentistry	September 21 (#7)
c.	Nursing	October 1 (#7)
d.	Dentistry	October 5 (#8)
e.	Ancillary	October 7 (#6)
f.	Learn Committee	October 11 (#13)
g.	Draft of Learn Committee Report	November 22

3. The following correction should be made to page 5 of the minutes of the October 11 meeting of the Committee for the Study of Physical Facilities for the Health Sciences, regarding Dietetic Interns and Pharmacy Interns:

"Since only three courses for Dietetic Interns are offered in the State of Minnesota, the University program will be expanded to meet future needs. Similarly, it is likely that the Hospital Pharmacy will have expanded programs for graduate pharmacy training."

4. Dr. Learn called the committee's attention to the Draft Report which has been distributed to the entire committee and expressed hope that it would be approved by the committee after it has been thoroughly read, discussed and commented on. At the next meeting on December 13 we hope to vote our approval or disapproval of the Report. Therefore, any comments or suggestions regarding the Draft should be conveyed to Mr. Westerman before that meeting.

All of the Subcommittee Chairmen were notified by Tuesday, November 16, about the need to call meetings of their subcommittees to get their views on the Draft Report. We are pleased to note that meetings of the Clinical Medicine Task Force

and Hospital Task Force have already been planned.

DRAFT REPORT TO THE PRESIDENT

5. Dr. Learn launched a discussion of the Draft Report by sharing his views of it with the committee. He felt that although we have not yet accomplished all that we had hoped to do in compiling detailed information on future programs and establishing priorities, it is, nevertheless, appropriate to let the faculty and administration know at this time how we have proceeded up to now. We have more than begun our work, but we certainly have not completed it. If we were to use the analogy of taking a trip from Minneapolis to New York, one might say that by now we have reached Chicago.

Program and curriculum are inextricably interrelated. It is not this committee's prerogative to establish curriculum and, therefore, we are handicapped in trying to define program. Although that is true, it is nevertheless this committee's responsibility to see to it that the health science programs are established with consistency.

Looking at the other side of the problem, how can the faculty draw up a program until they know what resources are available to implement that program? Developing program and allocating resources must be worked out hand in hand. In other words, this committee's report must make tentative proposals and try them out on the administration for their support. This process must start with the faculty, even though there will have to be give and take between the faculty and administration to arrive at a full appreciation of both the academic and fiscal problems involved. This committee has to keep in mind the fact that we are trying to lay down a guide for development, not a definitive plan immune to the Legislature's deliberations or even the changes necessitated by the passage of time. Otherwise, we will plan facilities, but the nature of the facilities will plan our program. So, to accomplish our charge from the President to the best of our ability, continual interchange among the faculty will be necessary and more meetings dealing with more substantive problems seem called for.

ANNOUNCEMENT OF SPACE STUDY

6. This brings us to the next item on our agenda. It is difficult if not impossible for the subcommittees to do the technical job of analyzing present and future space in relation to program statements; to quantify the quality and interrelationships of the space needed to meet our desired objectives. Thanks to the generosity of the Hospital, the Medical and Dental Schools, and the University Planning Office, funds have been made available to conduct a space study for the health sciences. We owe particular thanks to Hamilton Associates for undertaking this study for costs only, at no profit. Hamilton Associates will act as space consultant working for, reporting to the Committee for the Study of Physical Facilities for the Health Sciences, through Mr. Westerman and Dr. Learn. Mr. Stephan of Hamilton Associates will coordinate the study, and Mr. Edward Nelson has been hired to work with Mr. Stephan on this.

It was also announced that the Hill Family Foundation will continue for another year to fund Mr. Westerman's work with the Learn Committee. Although the original grant was to support the Medical-Outpatient Clinic study, a study of the total health sciences at the University was necessary to accomplish this task. So we are indeed fortunate that the University is receiving Hill Foundation support for this undertaking so vital to its interests.

At this point Dr. Learn turned the meeting over to Mr. Stephan who outlined the scope of the space study. Mr. Stephan began by explaining that in the contract with the Learn Committee the space consultant agrees to assist the parent and subcommittees in developing a final statement of roles and programs, and facilities requirements for the next twenty years. This will involve determining the feasibility of integration of the health science programs and listing the number and quality of faculty required to carry out the programs. The health sciences are really in a better position to get involved in facility planning than the rest of the University, since federal money is more readily available in this field for construction and operation.

Further assistance will be given in the classification and utilization of present space in present programs. The space study already done by the Office of the Dean of the College of Medical Sciences will serve as the departure point for this study. We need to determine ancillary space, which was not included in the former study, and check on whether the space allotments are up to date. As you know, nothing changes faster than University Hospitals and teaching facilities, particularly laboratory use. In all of this, we will need advice on how to record space data in such a way as to keep a current, accurate tab on its use because this is important for federal grant requests. We feel that the space consultant will be most useful in asking the right questions, in prodding the faculty to come up with its space needs. For this we will need to tie in more faculty than those presently involved on the parent and subcommittees.

The next step is to assist the various subcommittees with determining the specific building units necessary to provide facilities. To begin with, we have to ask the question whether there is enough land available adjacent to the present complex to allow the needed expansion of the over-all medical center in the next twenty years. This might not necessarily mesh with dollars or priorities. One of the highest priorities we have established is that for a new Outpatient Clinic. But the major question here, which this committee will have to grapple with, is whether to jump ahead and put in a new Clinic without first looking at all the needs of the health sciences.

The location of building units and their integration for the desired relationships has to be determined. For example, we have to take a long view of the optimum relationships between the Hospitals, the Clinical offices, beds, research facilities. We have to determine the relationships between the Dentistry School and the Hospitals, between Basic Sciences and Clinical Medicine, between research and teaching. In finding answers to these questions we will be leading up to a complete recommendation of what should be built, at what approximate cost, the most suitable timing, and the best use of the present buildings, especially if the medical center

should go to a new site. It seems that at least another twelve months of concentrated study will be necessary to get the answers to these questions.

The Faculty Curriculum Committee is not likely to come up with a new program in less than six months, and more likely a year. The question is whether this will be too late to correlate with the space study and the program statement? It will take time to gather basic data for the space study, but it would be advisable to have, at the same time, some committee to start looking at the numbers of people to be trained, in the Basic Nursing curriculum, for example, in the Clinical specialties, in Master's and Doctoral programs. As a faculty group, we have never discussed graduate student numbers, only the departments have, and the Draft Report reflects this fact. The graduate program needs to be given careful scrutiny in regard to its projected growth. We don't want to force a curriculum revision in time for this space study, but we need to start nailing down hints about where our program is headed. Perhaps we could at least nail down the need for some curriculum change, and draw conclusions from that. The trend then becomes fairly obvious.

In the past, there has been no real correlation between graduate students and grants available for research. We have hired investigators who then enroll in a graduate school and we have found ourselves with graduate students. There's not a medical school in the country that can say how many graduate students they will train, but that's exactly what's needed. One price of planning is to put more stringent controls on grants because they do involve the use of space, and we haven't always had the space available for grants that were accepted. It is vital that we lay out rough guidelines for the administration in this area.

Mr. Stephan introduced Mr. Edward Nelson from Hamilton Associates, who will be working full-time on the space study. Thanks to Miss Gilman and Dr. Kottke, Mr. Nelson has an office, No. 150, in the new Rehabilitation and Physical Medicine building. Mr. Nelson can be reached by phone on extension 2018 or 2019. Other personnel who will be working on the study include a secretary for Mr. Nelson, also full-time; Mr. Westerman and Mr. Stephan, on a part-time basis; one faculty member from the Medical School and one from the Dental School, part-time. We would hope that someone from Public Health and Nursing might also help coordinate this project. That faculty person will be quite busy as a prime contact for the space consultant and will relate back to the various subcommittees. However, this really involves more knowledge than time, so we would want a knowledgeable individual for this task. From the Hospital we want one person, preferably a junior administrative officer, who can devote almost full-time work to the study.

After Mr. Stephan concluded his remarks, Dr. Learn made some further announcements. Since Mr. Stephan will be undertaking the responsibility of coordinating the space study, Dr. Gault will take over as Chairman of the Hospital Task Force when necessary. We hope to finish our original charge from the President by December 13, when the next meeting of the parent committee is planned. Then, we will probably lay out new charges and perhaps will want to reorganize our subcommittees. We can plan on periodic meetings between the parent committee and

our space consultants, since continual interaction will be necessary. Questions of space needs will force us down the program road sooner than we might otherwise get there, but from an administration viewpoint, this is desirable.

The Peterson study, which we expect to provide us with guidelines on the numbers of students we should be educating, was originally slated to come out by the first of the year, but it might well come out later. A time lag is inevitable in which the University will have to digest the findings of the Peterson Report and decide on whether to accept these findings and determine its role accordingly. Although the Administration will have to decide how to implement the Peterson Report, it will likely ask the advice of the Learn Committee, so we should bear this in mind. For example, I think the faculty agrees it will teach fifty more medical students if necessary,and if the Administration will provide more faculty.

Returning to the space study itself, this, of course, is not unlike what has been done elsewhere. What makes it unique is the degree of faculty involvement and we hope the wisdom of this plan will become increasingly evident. We have seen that the University of Wisconsin involved its faculty in planning a new facility to great advantage. With that in mind, please give this preliminary report your most careful attention and review it with your subcommittees, so that we might vote on it at the December 13 meeting.

Respectfully submitted,

John H. Westerman
Executive Secretary

COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES
FOR THE HEALTH SCIENCES

Minutes of Meeting December 13, 1965 (#15)

Present: Elmer Learn, Chairman; Gaylord Anderson, Lyle French, Isabel Harris for Edna Fritz, N. L. Gault, Jr., Gertrude Gilman, Eugene Grim, Mellor Holland, Robert Isaacson, Ione Jackson, William Kubicek for Frederick Kottke, Richard Magraw, Erwin Schaffer, Robert Laur for James Stephan, Kathryn Ritzen, John Westerman

Absent: Winston Close, Sterling Garrison, Robert Howard, James Jensen

Guests: Edmund Nelson, Hamilton Associates; Hugh G.S. Peacock, University Planner

NEXT MEETING MONDAY, JANUARY 10, 1966, 3:30 P.M., 510 DIEHL HALL

Sent Out Since the Last Meeting

a.	Learn Committee	November 22, 1965 (#14)
b.	Clinical Medicine	November 29, 1965 (#10)
c.	Hospital	November 30, 1965 (#9)
d.	Dentistry	December 3, 1965 (#9)
e.	Clinical Medicine & Hospital	December 6, 1965 (#2)
f.	Public Health	December 8, 1965 (#10)

Meetings Held But Reports Not Available

a.	Basic Sciences	December 9, 1965 (#6)

1. Dr. Learn introduced the guests and welcomed them to the meeting.

2. Dr. Learn announced that the Hill Family Foundation Health Manpower Study on Regional Needs for doctors, dentists and associated health professionals will hold a final committee meeting on January 17, 1966. Dean Howard should have additional information on the study for us after that date.

3. Dr. Learn discussed the method by which the parent and subcommittees might proceed from this point. Provided the parent committee approved the Preliminary Report to the President at this meeting, the Report would be printed and presented to the President. If the President approves of the Report, copies will be distributed to the health sciences faculty, from whom we would hope to get constructive feedback. The President would also submit the Report to the Board of Regents for their reaction to it.

The subcommittee reports brought out the interrelatedness of information they needed from one another to prepare their own reports properly. These interrelationships will be extremely important in carrying out the subcommittee's charge for the next six months' work both in their relationships to the space study by Hamilton Associates and in making the preliminary report more definitive in terms of program priorities. At the January 10 meeting we will discuss the comments on the preliminary report, the charge to the subcommittees for the next six months' work in relation to the Hamilton study, and the refinement of the preliminary document.

4. The subcommittee chairmen next reported on the meetings their committees held to review the Preliminary Report. Dr. French was first and he reviewed the Clinical Medicine Task Force reactions to the report. The changes and alterations suggested by that Task Force were, by and large, incorporated into the revised version of the Preliminary Report. Dr. French proposed that some of the concepts in his letter of February 8, 1965 to Mr. Westerman, concerning education in general and medical education in particular, be considered for inclusion in the Clinical Medicine Section of the Preliminary Report. The parent committee noted that the Preliminary Report already embodied some of the concepts. Dr. French agreed to review his letter and submit a revised version at a later date.

A further proposal of the Clinical Medicine Task Force was to split the office of Dean of the College of Medical Sciences from that of the Dean of the Medical School. The rationale for this is that the health sciences are growing to such a vast extent and becoming so complex, one office alone will not be able to cope adequately with the concerns of both the Medical School and the College of Medical Sciences.

Dr. Grim commented on the reference in the Clinical Medicine Section to the need for more animal space. He suggested that the Basic Sciences section be altered to also mention the need for more animal space.

In Mr. Stephan's absence, Mr. Laur discussed the Hospital Task Force's reactions to the preliminary report with the committee. An important point which Mr. Laur made was that the Hospital Task Force acutely felt the lack of data from other committees, especially concerning medicine, the Hill Foundation Study, etc., in trying to plan the Hospitals' service programs. The Hospital Task Force believes that Pharmacy and the Student Health Service ought to be brought into the scope of this study more formally. It would be helpful if Nursing and Public Health could give the Hospitals an idea of how they can use space in the hospital for clinical purposes. The Hospitals need more information about the type and number of patients that will be seen in the future. If the University sees a change in the service role of the University Hospitals, the Hospital Task Force must plan for this consideration.

Dr. Learn stressed that the latter point is of particular interest to others reading the report. It might be a good assignment for the Hospital Task Force and the Clinical Medical Task Force as well to make recommendations to this

committee about the changing service role of the hospital, since this largely determines the size of the hospital. After the hospital reaches some conclusions on this, it will then be a health sciences policy matter and later a University policy matter.

Dr. Gault felt however, that the Administration is in a better position to envision the kind of service role the Hospitals will have in the future, in view of changes in society and in the means of paying for patient care. Dr. Magraw pointed out that although the Administration is knowledgeable in the area of the Hospitals' service responsibility, the Clinical Services would certainly also want to have their say in this matter, since they provide the care. The Hospital is an institution for the medically indigent, according to the State, but the clinical staff today largely ignores this exclusive role. The Hospitals today are not really what the legislature once designated them, because even though the law has not changed, conditions have changed and they're more important.

The Report should foresee the tremendous changes that will be made in the next year or two regarding payment for medical care, since this relates to space needs. We can't plan for the future merely on the basis of existing policy and it's this committee's responsibility to force attention on issues such as this. The larger question is whether the University Medical Center will remain a referral institution. The revised Clinical Medicine Task Force report addresses itself to this question. The image of this institution has to change and that change must be reflected in the law. Until now the indigent have been used for teaching purposes simply because they were indigent.

Mr. Laur stated that the issue of our referral role or service role is so vital to determining hospital programs that the Hospital Task Force felt it was infringing on other territory when it tries to tackle this issue by itself. However, one of the purposes of these parent committee meetings is precisely to infringe on other committees. The parent committee's function is not so much to generate new information but rather to react to information gathered by the subcommittees.

In keeping with the Hospital Task Force's recommendation, Dr. Learn asked the parent committee members to think about and be prepared by the January 10 meeting to indicate whether Student Health Service, Pharmacy and Veterinary Medicine should be included in the study of physical facilities for the health sciences.

Dr. Holland reported on the Dentistry Subcommittee's comments about the Preliminary Report. The subcommittee approved of the summary of its own report with only minor changes. Dr. Holland emphasized that his subcommittee supports the concept of including dentistry as an integral part of outpatient care and hoped that there was widespread support throughout the health sciences for this. The Dentistry Subcommittee is prepared and anxious to help Hamilton Associates with its space study.

The next subcommittee chairman to report was Dr. Anderson for Public Health. He stated why his subcommittee felt that the Public Health section of the report had to be rewritten (the abstracts of the programs were too brief to accurately reflect the School of Public Health's activities) and furnished the parent committee with the rewritten statement. Dr. Anderson was questioned about the precise way in which the School of Public Health envisions its role in community health care. He replied that administration of community health care was the subcommittee's primary intention, particularly in regard to training people to administer hospitals, home health care and nursing homes. The Preliminary Report was revised to include this precise definition of the School of Public Health's role in community health care.

In Dr. Kottke's absence, Dr. Kubicek was called on to convey the Ancillary Subcommittee's views on the Preliminary Report. Dr. Kubicek stated that the Ancillary Committee had not met as a body to consider the report and consequently he had no remarks to make about the report. Dr. French, however, pointed out that Clinical Psychology doesn't feel it belongs in the category of professions encompassed in the Ancillary Report; rather, it should be in the Clinical Medicine realm as part of the Department of Psychology and Neurology. Therefore, it was agreed to delete Clinical Psychology from the list of disciplines included in the Ancillary section on page 11 of the report.

Dr. Grim spoke next for Basic Sciences,and voiced his subcommittee's general approval of the Preliminary Report. He pointed out the overwhelming importance of the graduate programs to the basic sciences, and outlined the changes and additions suggested to that section of the report. He also stated that it was the intention of the basic sciences to emphasize in the report that it valued its relationships with the clinical sciences, chemistry and physics much more than that with the College of Biological Sciences.

Finally, Isabel Harris was called on in Edna Fritz's absence to relate the Nursing Subcommittee's comments on the Preliminary Report. They felt that the Report ought to point out the essential need to provide teaching for nursing adjacent to ambulatory and in-patient units. It was agreed to incorporate this point, as well as a few corrections to the Nursing Section in the Report.

Dr. Learn concluded the meeting by asking the committee once again to give some thought to the Hospitals' Service role as it relates to the programs of all of the health sciences.

Respectfully submitted,

John H. Westerman
Executive Secretary

UNIVERSITY OF MINNESOTA

Minneapolis 55455

COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES FOR THE HEALTH SCIENCES

January 10, 1966

Office of the President

TO: SUBCOMMITTEE CHAIRMEN
FROM: ELMER LEARN
SUBJECT: INFORMATION ABOUT THE DETAILED PROGRAM AND PRELIMINARY SPACE REPORT FOR THE 1966 FALL REPORT

In March 1965 information about the scope of our preliminary program report was written to the subcommittee chairmen and posted to all of the full and subcommittee members. In this letter, we outlined three basic elements that should be considered in the preliminary report, namely (1) ROLE, (2) GOALS OR OBJECTIVES and (3) PROGRAM. This report has been submitted to President Wilson.

We should now begin consideration of items for the detailed program and preliminary space report. As a start, it may be well to review the terms of the agreement with James A. Hamilton Associates. The key point of this agreement is that the consultants will work with and assist the subcommittees. The detailed series of recommendations for the long range development of the health sciences will be a result of the joint activity of the committees and the consultants. To facilitate the study, the Medical School, the School of Dentistry, and the Hospitals each have agreed to furnish one person to whom the consultants can turn for assistance with the data gathering process.

The subcommittees and subsequently the full committee should achieve the following:

1. A detailed statement of roles and programs for the next 20 years.* We are all aware of the impossibility of accurate prediction for 20 years in the future of anything as dynamic as the health sciences. Nevertheless, we need the best judgments that can be made now as a basis for future planning with full knowledge that such judgments will be subject to continuous review and revision. We look forward to having such a detailed program statement prepared by the end of 1966.

Program discussions should at all times include full consideration of interrelationships that do or could exist among various health sciences. Several examples were mentioned in the preliminary report. Others such as relationships with

*We want to translate the program implications of the preliminary report into a more definitive statement of probable program developments.

Pharmacy and the Health Service were not included in earlier deliberations and must now be taken into account. One way of achieving this goal would be to list, in order of priority, the important relationships between programs within each subcommittee and important relationships between programs in other subcommittees.

2. A list of the type and number of health sciences staff required to carry out the above programs. This task will require extensive detailed consultation with the people responsible for the individual programs. The consultants have the time and experience necessary to develop this list with the subcommittees and individuals concerned.

3. An analysis of the classification, utilization, amount and adequacy of the present space in the facilities of the health sciences in relation to present programs. While the consultants can take an active role in the classification of present space, close cooperation between the consultants and the subcommittees will be required in the analysis of utilization, amount and adequacy of present space.

4. Preparation of a schedule of space required to carry out the above future programs. This item will be derived directly from the detailed programs mentioned in item 1. The basic programs and space requirements will have to come from the people responsible for the programs. However, the subcommittees will play an important role in evaluating the feasibility of such requests, questions on sharing space, program priorities from which priority of needs for space can be established. THIS WILL PERHAPS BE THE MOST IMPORTANT FUNCTION of the committees as they face the difficult task of reconciling what is the most desirable with what is possible in attempting to meet the objectives and programs of the preliminary report. In this respect the preliminary report should be a valuable reference document in working out this schedule.

5. Determination of the specific building units necessary to provide the physical facilities for the above proposed programs. Committee members are well aware of the tremendous space handicaps and will likely have to combine certain programs and relationships in a building unit. Important relationships can be created, continued or modified in this process.

6. Determination of the location of each building unit and of an integrated plan relating all buildings. Thus item 5 relates to intra-building relationships while this item calls for a listing of inter-building relationships. This is where the past experience of the committee and general overall knowledge of the health sciences will be valuable.

7. Development of a schematic listing of the units of space proposed for each of the contemplated building structures. The consultants and the assigned staff liaison person will probably carry the main burden on this item. This listing is largely a product of items 4, 5, and 6.

8. Development of recommendations ~~for~~

a. the listing of available space in present facilities not needed for health sciences purposes.

b. the utilization of the present facilities for health science purposes.
c. a priority listing of the alterations and new construction proposed.

Point a. is self-explanatory and requires no more than a listing of total square footage. Point b. involves the consideration of what the health sciences can do with space vacated because of new construction and reminds us that our thinking about space needs should not be entirely in terms of newly constructed space. The consultants should be most helpful in sharing their experience about what is most appropriate for old space and what functions typically demand new contruction. Point c. is really a summary of judgments made earlier in the study and involves a careful sifting of overall health science needs.

9. A general estimate of the approximate cost of alterations and of new construction of each of the proposed major building structures sufficient for adminiatrative decisions of general programming. The consultants will have primary responsibility for this item which is essentially a multiplication of typical unit costs for various types of health science space.

We are now beginning the most difficult phase of our planning task. The items listed above cannot be achieved in neat chronological order. Thus, there will be many occasions when issues previously considered resolved will have to be reopened because of facts uncovered at a later stage. Most difficult of all will be the need to translate generalities and trends into specific programs, resource needs and time schedules. The consultants have made it quite clear that they will be of little value to us unless we are willing to make these decisions as the planning proceeds.

As you plan for the work ahead it may be that you would like to alter the composition of your subcommittee or the nature of your subcommittee organization. I have asked John Westerman to visit with each of you in this regard.

Because we are in a more detailed phase of our planning does not mean that all the uncertainties and variables that beset us the first year will suddenly become resolved. We expect guesses will have to be made in many instances and with so many judgments it is certain that some errors will be made. I think we all recognized the limitations of such a major planning effort when we started but the consequences of not planning are so much worse.

If you have any questions please bring them before the full committee meeting or feel free to raise them with John Westerman or me at any time.

Sincerely,

Elmer W. Learn
Assistant to the President

COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES
FOR THE HEALTH SCIENCES

Minutes of Meeting January 10, 1966 (#16)

Present: Elmer Learn, Chairman; Gaylord Anderson, Sterling Garrison, N. L. Gault, Jr., Eugene Grim, Mellor Holland, Robert Howard, James Jensen, Frederick Kottke, Richard Magraw, Erwin Schaffer, James Stephan, John Westerman, Edmund Nelson, Hugh Peacock, Kathryn Ritzen.

Absent: Winston Close, Lyle French, Edna Fritz, Gertrude Gilman, Robert Isaacson, Ione Jackson, William Shepherd.

Guests: Manual Bobenreith, McCollum Brasfield, Gerard Frawley.

NEXT MEETING MONDAY, JANUARY 31, 1966, 3:30 P.M., 510 DIEHL HALL

CONFIRMED

Sent Out Since Last Meeting

a. Learn Committee — December 13, 1965 (#15)
b. Dr. Learn's Letter Concerning Information for Fall 1966 Report

Meetings Held but Reports Not Available

a. Basic Sciences — December 9, 1965 (#6)
b. Clinical Medicine & Hospital — December 31, 1965 (#3)

1. Dr. Learn introduced the guests and welcomed them to the meeting.

2. Dr. Gault reported on the building projects completed in 1965, in progress in 1966, and proposed for the future. The list of these building projects, which Dr. Gault circulated to the committee, is appended to these minutes. Dean Howard added two other proposed building projects: 1) development of the area on the Como site for storage facilities and 2) development of an outpatient dental unit. Dean Schaffer also had building projects to report: the dental clinic in Owre Hall, which now extends from the third through the fourth floor, will be divided into two levels, with the dental clinic occupying only the third floor, and the fourth floor being developed for research facilities for Genetics, Periodontics, and Oral Physiology. This construction will cost about $500,000, is scheduled to begin in June and be completed by January 1967.

3. Mr. Stephan was asked on behalf of Hamilton Associates to report on the progress of the space study. Work has begun on the study of space in the Dental, Basic Sciences and Powell Hall units, and a person has been assigned from each of those areas to help the space consultant in the study. Right now, the most urgent need is for the Hospitals to assign a person to work with the

Space consultant on Hospitals space. Mr. Frawley stated that a person from each building of the Hospitals complex will be assigned to familiarize Mr. Nelson with the space in each of those areas. The appointment of an individual to coordinate the over-all space study of the Hospitals awaits further deliberations. Mr. Stephan summarized progress to date as the collection of preliminary information which will later have to be translated into definitive space and detailed programs for that space.

4. Dr. Learn announced that the Preliminary Report to the President from the Committee for the Study of Physical Facilities for the Health Sciences will be out this week and delivered to Central Administration. Dr. Learn said that he hopes to have the Report distributed to all Health Sciences faculty after the Administration indicates it approves doing so. Much of the follow up work to the Preliminary Report will be in the hands of Mr. Stephan and Mr. Nelson, and this is what the second informational letter to the subcommittee chairmen is about. It will require the joint efforts of the subcommittees and the space consultants to provide answers to the nine questions asked in this second letter. (Since typographical errors were found, Dr. Learn's letter will be corrected, rerun and then distributed to all 66 members of the Learn Committee.)

Drawing up a meaningful space program, which is our ultimate goal, still depends on our ability to clearly delineate what programs in the health sciences will be needed in the future and the priorities to be assigned to those programs. We need to continue work on refining our program statements and making judgments about priorities. Feedback or comments on the Preliminary Report ought to be helpful to the subcommittees in bringing program specifics to light.

As the Committee members work with the space consultants and proceed with their refinement of programs, it may be necessary to alter the membership of the subcommittees, either enlarging them or replacing members who, for one reason or another, can no longer carry out their responsibilities. The subcommittee chairmen are requested to let either Dr. Learn or John Westerman know about any changes in subcommittee membership.

Another area for future consideration will be the development of information on pre-doctoral and post-doctoral students. Neither Dr. Kottke's Committee nor the other committees have fully gone into this area which must ultimately mesh with the findings of Hill Health Manpower Study. In short, the only place programs can be spelled out is at the faculty level, so this task rests essentially with the subcommittees and their chairmen. This is true of space needs as well. The faculty can recommend space programs, but it must make priorities, too.

QUESTION: Has the faculty really been informed that this committee exists for the purpose of long-range planning for the health sciences? There was one announcement of this committee's work in the Administrative Committee minutes, and the Clinic Directors report to the Learn Committee was circulated to all of the Health Sciences faculty. The point is well-taken, however, and we hope it will be covered by mailing the Preliminary Report to all of the Health Sciences faculty with a covering letter explaining the nature of this committee and its work.

There was some discussion of whether the entire Preliminary Report, including appendixes, should be sent to all Health Sciences faculty, since reading the report may require more time than most faculty would have. It was agreed that only the summary report would be sent to all faculty, along with a covering letter indicating where the full report, including the individual subcommittee reports, will be available. The full Learn Committee, as well as each health sciences department, will have copies of the complete report.

5. Dean Howard was asked to report on the progress of the Hill Commission Study on Regional Health Manpower Needs. So far there have been two meetings of this commission, with the next one planned for January 21-22, 1966 at the Sheraton Ritz. At the previous meetings the committee has been presented some impressive data collected in an excellent manner; the forthcoming meeting promises to be a get-down-to-business meeting, as far as coming up with conclusions is concerned. So far we have a superb picture of the history and current status of medical and dental specialists and generalists in Minnesota, as well as in the Dakotas. But we have no statements yet of what the ultimate recommendations ought to be. Dean Howard has just completed preparing his own proposals (as an individual, not as a representative of this University) for the Commission to consider. He hopes by the end of the day, on January 22, to have a clearer idea of what the Commission is going to recommend and be able to report it to this committee.

Since Dean Howard's report of the Hill Study's recommendations will be critical information for this committee, he would like to share this information with us at the earliest possible date. Therefore, we have scheduled the next meeting for Monday, January 31. If there is no significant information from the Hill Study by then, we may postpone our next meeting to a later date.

6. Dr. Learn called the committee's attention to the publication early this month of Dr. Magraw's book, FERMENT IN MEDICINE (W. B. Saunders Company, Philadelphia and London, 1966). Dr. Learn congratulated Dr. Magraw on his book and highly recommended it to the committee. The book should be available in the Mayo Bookstore within a short time.

7. Since the minutes of the last meeting were not completely clear on this point, Dr. Learn charged the Hospital Task Force with the responsibility to define the Hospitals' service role and how it would relate to the future needs of all of the health sciences. Clinical medicine, Public Health and Nursing are particularly involved in the implications of this service role. However, it would seem a good idea to have a draft proposal for all of us to consider and that is why Mr. Robert Laur was asked to have the hospital group prepare such a statement.

Respectfully submitted,

John H. Westerman
Executive Secretary

REVIEW OF BUILDING PROJECTS IN THE MEDICAL CENTER

Compiled by Dr. N. L. Gault, Jr.,
Associate Dean, College of Medical Sciences
January 10, 1966

COMPLETED IN 1965 . . . . . Total	$ 3,220,300
Remodeling of Todd Wing of the Hospital - Stations 30, 31, 40, 41, 50	$ 600,000
Children's Rehabilitation Center	2,175,000
Diehl Hall Laboratories for OB & GYN	64,000
Meditation Room	175,000
Medical Specialties Outpatient Area	55,000
Air Conditioned Station 30	30,000
Remodeled 1st Floor Eustis Wing for Child Development Study	42,300
Remodeled the Stenographic Pool	22,000
Hospital Elevators	
North Clinic	30,000
Service Elevator in Eustis	27,000
IN PROGRESS IN 1966 . . . . . Total	$ 4,497,500
Jackson Hall Roofhouse	330,000
VCHH Addition and Remodeling of 1st Floor	1,150,000
Data Processing Center in Basement of Masonic Hospital	50,500
Addition of 3rd and 4th Floors of Masonic Hospital	1,100,000
Remodeling of Remainder of Todd Wing (Stations 31, 40, 41, 50)	
Remodeling of 3rd Floor of Lyon Laboratories	309,000
Remodeling of Former Cancer Detection Center Area in Todd Wing (2nd Floor)	25,000
Construction of Addition in Southwest Court	1,200,000
Remodeling of Building at Rosemount for Animal Hospital	50,000
Remodeling of Stations 58 and 59	249,000
Hospital Elevators - OPD Wing (2)	34,000

REVIEW OF BUILDING PROJECTS IN THE MEDICAL CENTER (Cont'd)

PROPOSED

Addition of 3rd and 4th Floors of VFW Cancer Research Laboratories	
Animal Hospital Expansion (on Minneapolis Campus)	
Wangensteen - Phillips Research Building	$ 3,000,000
Outpatient Clinic Building	
Dental Clinic (in Medical Outpatient area)	
Pharmacy	
Eustis Wing - Pediatrics Wards	
Radiation Therapy	
Kitchens	
New Intensive Care Unit	
Respiratory Ward	
VCHH - additional 3 floors	
Hospital Elevators	
Psychiatry (Christian Area)	25,000
Elliott	25,000
Airconditioning and Ventilation of OR	
Emergency Power for Hospital	
Conversion to 13.5 KV feeder lines	150,000
Development of Como Site for Storage	

School of Dentistry - Dr. Schaffer

4th floor Owre addition for Genetics, Periodontics and Oral Physiology laboratory space	500,000
Proposed new School of Dentistry	

Miss Rausch.

COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES FOR THE HEALTH SCIENCES

Suggested Agenda - January 31, 1966 (#17)

1. Welcome guests
2. Reaction to Preliminary Report by President Wilson - group
3. Mr. Stephan's report on the space study
4. Dean Howard's report on the Hill Commission Health Manpower Study
5. Other
6. <u>Sent out Since the Last Meeting</u>
   a. Preliminary Report to the President
   b. Learn Committee — January 10, 1966 (#16)
   c. Dr. Learn's Second Informational Letter - Revised
   d. Basic Sciences Meeting — December 9, 1966 (#6)
   e. Clinical Medicine & Hospital — December 31, 1966(#3)
   f. Hospital Program Report — January 1, 1966
7. <u>Meetings Held but Reports Not Available</u>
   a. Ancillary Committee — January 24, 1966 (#7)

Report has not clarified programmatic changes -- places greater pressure upon us to perform in this area.

Next meeting? 28th

COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES
FOR THE HEALTH SCIENCES

Minutes of Meeting January 31, 1966 (#17)

PRESENT: Elmer Learn, Chairman; Gaylord Anderson, Winston Close, Lyle French, Edna Fritz, Sterling Garrison, Gertrude Gilman, Eugene Grim, Mellor Holland, Robert Howard, Robert Isaacson, Ione Jackson, Mrs. Verna Rausch for Frederic Kottke, Richard Magraw, Edwin Schaffer, William Shepherd, James Stephan, John Westerman, Edmund Nelson, Hugh Peacock, Kathryn Ritzen

ABSENT: N. L. Gault, Jr., James Jensen

NEXT MEETING MONDAY, FEBRUARY 28, 1966, 3:30 P.M., 510 DIEHL HALL

Sent Out Since Last Meeting

a.	Basic Sciences Meeting	December 9, 1965 (#6)
b.	Clinical Medicine & Hospital	December 31, 1966 (#3)
c.	Hospital Program Report	January 1, 1966
d.	Preliminary Report to the President	
e.	Learn Committee	January 10, 1966 (#16)
f.	Dr. Learn's Second Informational Letter-Revised	January 10, 1966

Meetings Held but Reports Not Available

a.	Ancillary Committee	January 24, 1966 (#7)

1. Dr. Learn welcomed Mrs. Rausch for Dr. Kottke.

2. President Wilson, who is in the process of reading the Learn Committee's Preliminary Report, asked Dr. Learn to convey his appreciation for the Report. The President looks forward to working with the Learn Committee in sharply defining specific recommendations for the health sciences physical facilities. At the same time, the President urges the Committee to work out its own priorities.

3. The space study is proceeding satisfactorily, according to Mr. Stephan and Mr. Nelson.

4. Dean Howard's report on the Health Manpower Study was the main topic of the meeting. Dean Howard traced the background of the study, pointing out that it was instituted primarily to answer the Board of Regent's question: "Does the University of Minnesota need to increase the number of its medical and dental students?".

From the January 21-22 meetings of the Health Manpower Commission, Dean Howard indicated that the Report, which will be unanimous, recommends that the

University of Minnesota:

1. INCREASE THE NUMBER OF MEDICAL STUDENTS TO 200 PER CLASS AS SOON AS FEASIBLE.
2. INCREASE THE NUMBER OF DENTAL STUDENTS TO 150 PER CLASS AS SOON AS POSSIBLE.
3. CONSIDER INCREASING THE NUMBERS IN 1. and 2. TO 250 MEDICAL STUDENTS AND 200 DENTAL STUDENTS RESPECTIVELY IN APPROXIMATELY A DOZEN YEARS.
4. INCREASE THE THIRD AND FOURTH YEAR MEDICAL CLASSES BEYOND THE PROJECTED 200 AND 250 FIGURES BY ACCEPTING ADDITIONAL TRANSFERS FROM THE DAKOTA MEDICAL SCHOOLS IN THE CLINICAL YEARS (PERHAPS FROM 6 TO 25 DAKOTA TRANSFER STUDENTS).
5. NEED NOT INCREASE THE SIZE OF UNIVERSITY HOSPITALS COMMENSURATE WITH THE INCREASE IN STUDENT ENROLLMENT, BUT MAKE GREATER USE OF AFFILIATED TEACHING.
6. BE SENSITIVE TO THE NEED FOR AN INCREASING NUMBER OF FAMILY PHYSICIANS TO PRACTICE IN THE REGIONAL COMMUNITIES. (THERE IS LESS NEED FOR AN INCREASE IN SURGICAL SPECIALTIES THAN OTHER AREAS)
7. SHOULD CONTINUE AND INCREASE THE EMPHASIS ON A HEALTH TEAM APPROACH TO MEDICAL AND DENTAL CARE.

The question was asked whether the number of students from North and South Dakota would be affected by this increase? There is interest in working out a plan whereby the University can accept an increasing number of students from North and South Dakota, but the fiscal questions have not been worked out. Dr. Howard said that the point of the study was basically to encourage a larger number of graduates to stay in this region. The area where the medical student receives his training is a decisive factor in determining where he will practice.

Is a quota for Dakota students implied in the recommended increase in medical and dental students? No, any qualified Dakota student can be admitted to the University. At present we take six from the Dakotas on a quota basis: three from each state, one from each third of his class recommended by his Dean. Any others are strictly on the basis of quality competition.

If the Dakota's need about 25 medical and dental students, but some get below the minimum G. P. A. level, what does the University of Minnesota do? Our experience has shown that those who come close to meeting G. P. A. requirements often do quite well here.

Was there any discussion of other health science professionals? Not really. However Dentistry's needs for an expanded basic science program were considered and are really a part of the recommended increase in the College of Medical Sciences Basic Science group.

Did the study participants talk about establishing any two year dental schools in the Dakotas? No. Was there any discussion about the greater use of auxiliaries in dentistry? Yes, but we couldn't handle that topic well because the basic issues of dental and medical education, with their overwhelming importance, occupied almost all of our time and attention. There will be a general statement on the use of auxiliary personnel.

Were fiscal responsibility and support of students discussed at all? Yes, but again, we couldn't handle that problem in a definitive way. It was assumed that if increased medical and dental education can be handled at the academic level, the states should get together to work out the financing. Did Dean Harwood of North Dakota say anything about this? Yes, that North Dakota already puts a very large segment of her public wealth into education, and it would therefore be very hard for her to increase educational support.

Dean Howard pointed out that one thing that became very clear to the Health Manpower Study participants was that this type of commission ought to be an ongoing thing, to handle the issues that are always coming up in health sciences education. The Commission doesn't feel that it's really completed its entire job, but it has simply answered the question put forth by the Board of Regents in time to make a legislative appropriations request. Do you think the states in this region might be willing to continue to support the commission as an ongoing group? That's hard to tell, but the Hill Family Foundation might be willing to. The foundation's willingness would depend to a considerable extent on the manner in which this first report is received. If no action is taken and the report is shelved, there is less likelihood of continued foundation support.

On what data were the figures 200 and 150 based? Data was gathered on the number of physicians in the state, where graduates go, the rate of departure from the state, the retirement and death rate, the overall pattern of physicians in the state from other schools, etc, and then a physician deficit was projected (how far behind we would be by 1975 or 1980 if we needed the same number of doctors per population as we do now). Of course, this begs the issue of how many physicians and dentists we really need. The data on which our findings

are based will be included in the report and much of it will prove quite interesting.

Anticipated changes in training and practice of medicine and dentistry were not discussed, but the Report will probably touch on the issue of the family physician. The distribution of health personnel was discussed, but no firm recommendations were made.

Since there is no guarantee that physicians trained in the area will really stay in the area, was any attention given to what other states are doing about this? Yes, a report on health manpower for Michigan was studied, although it's not entirely comparable in that Michigan doesn't have an entire region to care for as Minnesota does. California has new schools at San Diego and Davis and has taken over an Osteopathic School as a Medical School. Still, California's population growth outstrips their provision of physicians.

What is the anticipated effect of the Hill Commission Report on the Minnesota Legislature's funding? There wasn't much talk about this, but the University of Minnesota made it known that it would depend on legislative funding to carry out the recommendations. We hope this will receive appropriate newspaper coverage, although the Minneapolis papers have been disappointing in this respect. St. Paul did carry an editorial about the Study a month ago. The populace needs to be prepared to support these recommendations. The Hill Foundation not the University, will be in charge of publicizing the report, while University news services will be available to them.

Was the possibility of other institutions helping to prepare other health science professionals considered? The problem of increased demand for personnel in other health science areas was talked about a little, but the Report won't deal with this definitively.

February 19 is the date of the next Hill Commission meeting, when we expect to agree on the wording of the Report.

Dr. Learn felt that the Hill Commission Report would be invaluable in defining the number of the undergraduate students in medicine and dentistry, but it still won't answer many of the difficult questions which the Learn Committee itself will have to answer. These are questions such as, what type of training will be given to physicians and dentists, how many doctoral and post-doctoral students will we have to provide for? The Hill Report does accentuate the need for more community physicians, so this helps us a little in postulating the type of basic sciences training many of our physicians should receive, although there will be no specific guidelines on this. Larger numbers of students ought to be encouraged, then, to enter this area.

Has the Hill Commission kept tabs on the National Health Manpower (Folsom) Commission Report? A number of their preliminary reports are available now, and they consider the same problems, i.e., the health personnel needs of the nation. The Commission itself hasn't discussed these Folsom Reports, although Dr. Peterson has been cognizant of them.

Dr. Learn thanked Dr. Howard for sharing this information with the Committee, since these are vital matters in our long-range planning for the health sciences. Dr. Learn also urged the committee to continue forwarding comments and reactions concerning the Preliminary Report to John Westerman.

The next meeting will take place on Monday, February 28, at 3:30.

Respectfully submitted,

John Westerman
Executive Secretary

COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES FOR THE HEALTH SCIENCES

Minutes of Meeting April 21, 1966 (#18)

Present: Elmer Learn, Chairman; Gaylord Anderson, Robert K. Anderson for William Thorp, Sterling Garrison, Gertrude Gilman, Eugene Grim, Mellor Holland, Robert Howard, Frederic Kottke, Robert Laur for James Stephan, Richard Magraw, Erwin Schaffer, Lawrence Weaver, John Westerman, McCollum Brasfield, Edmund Nelson, Kathryn Ritzen.

Absent: Lyle French, N. L. Gault, Jr., Robert Isaacson, Ione Jackson, James Jensen, Hugh Peacock, William Shepherd.

Guests: President O. Meredith Wilson, Manual Bobenreith, John Rollins.

NEXT MEETING: MONDAY, MAY 9, 1966, at 3:30 P.M., IN THE REGENTS ROOM, MORRILL HALL

Sent Out Since Last Meeting

a.	Ancillary Committee Minutes	January 24, 1966 (# 7)
b.	Learn Committee Minutes	January 31, 1966 (#17)
c.	Clinical Medicine Task Force Minutes	February 2, 1966 (#11)
d.	Clinical Medicine Task Force Minutes	February 10, 1966 (#12)
e.	Clinical Directors Report	February 25, 1966
f.	Clinical Medicine Hospital Subcommittee	February 16, 1966 (# 4)
g.	Report on Health Programs for Children by Dr. John Anderson	
h.	Clinical Medicine Task Force	March 1, 1966 (#13)
i.	Clinical Medicine Task Force	April 5, 1966 (#14)

1. Dr. Learn welcomed the new members of the Committee, Robert K. Anderson for Dean William Thorp of the College of Veterinary Medicine and Dean Lawrence Weaver of the College of Pharmacy. Dr. Learn also welcomed the guests.

2. The purpose of this meeting was to exchange views with President Wilson on the major facets of the Preliminary Report. Each subcommittee chairman was asked to briefly state the key aspects of his subcommittee's report and point out the problems he foresaw in implementing the report.

ANCILLARY

Dr. Kottke said that the major needs for the ancillary professions were integrated physical facilities and integrated teaching. If a cooperative team approach to comprehensive medical care is to be taught effectively to associated health personnel, a physically integrated unit must be planned where it's possible to communi-

cate and cooperate with relative ease. To plan a more efficient health sciences unit for the future, Dr. Kottke felt that the advice of a person with insight and experience in the logistics of the supply of medical services would be invaluable.

QUESTION: President Wilson asked whether the programs under Section A on page 40 of the Report were all in existence at present. They are. Dr. Wilson also asked where Speech Pathology and Audiology were housed. Dr. Kottke replied that they are in three different places: the Department of Otolaryngology, the Rehab unit and the Department of Speech in CLA. Is there any duplication of low decibel rooms? We have such rooms in Otolaryngology but not in Speech Pathology. There is good cooperation between the two, but poor logistics. Vocational Rehabilitation is located in the Psychology Department and the Rehab unit. The program's effectiveness is hindered by its physical separation and lack of good coordination between the two units. Dr. Wilson asked whether separate staffs worked in those separate units. In most cases, two separate staffs do function, although in Audiology some staff have to commute from unit to unit.

Dr. Wilson inquired whether there were any problems with existing ancillary programs. Dr. Kottke replied that in general, problems with existing programs relate to the lack of space. President Wilson wanted to know if the Ancillary Committee had solved the problem of how to have Speech Pathology located in two places with efficiency, since the College of Liberal Arts is not willing to surrender its portion. Dr. Kottke said that the committee had not really been able to solve this, although this is not so much of a problem as it is divided now. The main problem is the presently scattered state of all the allied medical sciences, and it would be no solution to locate them in one place away from the heart of the medical center. Dr. Wilson suggested the Ancillary Subcommittee work on solving the Speech Pathology/Audiology problem as a medically centered program in cooperation with the Speech Department program.

President Wilson asked whether the program listed under B and C, page 40, were all established programs, and Dr. Kottke replied that not all were. Bioengineering has made a modest start, but the more ambitious plans for it have been frustrated by outside factors. The problems connected with the other programs listed are more clearly paramedical.

Dr. Kottke expressed the reluctance of the College of Medical Sciences to accept Mortuary Sciences as a department. President Wilson reminded the committee that Mortuary Sciences arrived on the scene a long time ago and the University is obligated to continue this service under one administrative arrangement or another. Dean Howard felt that the Mortuary Sciences question really is part of the larger question of how we are going to treat the Health Sciences in this University. If we conceive of an institute of the Health Sciences, then Dean Howard said personally he didn't see anything wrong with including Mortuary Sciences under this aegis.

In order for the health care team to learn to work together, President Wilson agreed that all entities of the health sciences ought to be brought together in close community. However, President Wilson said the solution to this problem would seem to require high-rise, high-density architecture characteristic of a complex

urban institution rather than a low-rise campus type facility. The space consultant's preliminary plan for the 1967 legislative request suggests that this is what will be required for health sciences expansion on this campus.

BASIC SCIENCES

Dr. Grim explained that the basic sciences differ from the clinical fields in having little service function. Their expansion, therefore, is primarily related to teaching and research. An increase in the number of medical students will require an increase in basic sciences faculty. However, graduate student teaching is the major activity of the basic sciences and it is in this area that the largest amount of growth can be expected. Each professor can effectively carry a load of only three to four graduate students because they are taught mainly by the apprenticeship method. Closely related to graduate education is research, which is bound to continue growing, requiring more space, more complex equipment and more technical personnel.

Another factor which will have an important bearing on growth of the basic sciences will be a curriculum review which will be undertaken sometime in the future. It's possible such a review could result in suggestions such as a shift from the lecture method to seminar teaching and individual student research. At the same time, it will always be desirable for the basic sciences to be close to the clinical departments and other parts of the University, such as Chemistry, Physics, Math, and ideally, the College of Biological Sciences.

QUESTION: President Wilson asked Dr. Grim exactly how the basic sciences projected their growth. What percent of basic science efforts are devoted to the present 150 medical students and what percent to graduate students, whose numbers seem to have increased four-fold in the past ten years? Dr. Grim replied that although it is difficult to give exact figures for the two groups, more staff time clearly goes into graduate student training than to the instruction of medical students. President Wilson asked whether the basic sciences faculty would like to extend the trend line of past growth into the next ten years, or restrain graduate expansion? Dr. Grim said he wouldn't like to see the trend line extended much more, although the reason it has so dramatically increased is because we were at such a low ebb of graduate student instruction 10 or 15 years ago. President Wilson stated that it would be useful to have a crystal clear statement of the ideal ratio of graduate students to professors. The committee concluded that the best way to proceed is to increase graduate students only as staffing increases are required. Dr. Grim reported that the opinion of the basic sciences staff was that if the number of medical students increases, the staff will have to be increased to handle these students, and will not be increased just to enlarge the number of graduate students. President Wilson pointed out that following present growth trends and the independent factors involved, the basic sciences might discover it impossible to respond to the free market of graduate students without creating two faculties, including a separate one for the medical students.

CLINICAL MEDICINE

In place of Dr. French who was not present, Dean Howard outlined the major points of the Clinical Medicine Report. The basic underlying assumption of the report was that the number of medical students would be increased from 150 to 200 per class. One important recommendation of the report, although not directly related to physical facilities, is to strengthen affiliations with community hospitals. This does not mean that the University Hospitals is of sufficient size to meet growing needs here, and therefore some expansion of the hospital is still required, particularly to allow development of new programs, some of which cannot even be foreseen at present.

There is an urgent need for streamlining and expanding the ambulatory care program. The present facility is totally inadequate. The changing nature of medicine, with third party payments, the increased expense of hospitalization, the recognized need to do a better job of training family physicians, are all considerations which require a larger, more efficient ambulatory facility.

As in the basic sciences, there will be continuing growth in research in the Clinical areas. The report did not define this as clearly as it should have, as it relates to faculty and undergraduate programs. Finally, the report states the growing interest in and importance of post-graduate programs. These programs are not yet at their optimum growth, but the need for them is recognized and future efforts will be made to fulfill our obligations in this area.

QUESTION: President Wilson asked whether the Clinical Medicine section of the Report made a clear statement about the need for beds. Dean Howard replied that 200-300 beds were mentioned but that the subcommittee deliberately did not state a precise figure and was careful not to recommend an increase of beds strictly commensurate with the proposed increase of medical students. President Wilson wondered whether particular beds or just additional beds were in demand. For example, how would an increase in Masonic beds affect the need for beds? Dean Howard said that particular beds were needed. Dr. Wilson asked if the report says whether additional beds could simply be provided in a new building or whether all of Mayo would be affected? Dean Howard explained that the subcommittee has avoided a specific answer to this type of question until the overall report is more clearly defined.

Dr. Wilson wanted to know if paragraph 10 on page 60 referred to surrounding the physician with paramedical personnel. President Wilson questioned the meaning of paragraph 9 which seemed very obscure. Paragraph 9 concerns the problem of research bringing higher rewards and recognition than teaching and service. President Wilson felt that if this conflict is an important problem, it ought to be stated more clearly in the report.

HOSPITAL

In Mr. Stephan's absence, Mr. Laur of the Hospital Task Force related the major conclusions of the Hospital Report. The essence of the report is that

the hospital has unique burdens in an educational setting. The report reflects the concern that the University Hospital not lose the excellence in patient care it has attained. However, the University Hospital is particularly challenged by the rapid changes in medicine, medical economics, and social conditions. It is not clear now which patients are most suited for medical education purposes (eg., families, the aged, the mentally ill), and this presents related physical problems for the hospital. What is the proper physical plant designed for the team approach to comprehensive medical care? What systems are needed to be added to the present physical plant? Mr. Laur confessed that the Task Force was dismayed it could not answer some of the questions it raised, but the group is working hard on these questions and becoming better acquainted with the problems involved.

Another element for consideration is the relationship between obligations to the State and the hospitals' service burdens. For example, how long should we be in the Heart Hospital business? The Task Force senses that the relations between the University and the community are very profound and pose special problems for the Hospital.

President Wilson acknowledged that the Hospital is a special problem. Segments of the community feel the need to symbolize their generosity to medicine by making gifts and donations such as the Heart Hospital. Certain aspects of medicine are more dramatic than others and this results in many contributions which don't necessarily respond to overall facility or curriculum needs. However, we shall always have to make room in our plans for the generous gifts of the community. And since in the future we will still have funding problems and the problem of segregated teaching units, our planning of physical facilities, type of health sciences curriculum and mode of education will have to take into consideration these random contributions within the overall pattern.

At this point President Wilson had to leave the meeting and expressed his apologies for not having the time to hear from the other subcommittee chairmen about their reports.

Dr. Learn called the committee's attention to the next steps to be taken in the overall planning effort. On the basis of the Preliminary Report, the space consultant has provided information to help the University prepare building requests for the 1967 legislative session. For this session the University won't request a dental/outpatient building, but will ask for money to purchase land for health sciences expansion, and planning money for an outpatient-dental-hospital building in 1969. Mr. Stephan has already presented this preliminary information to the Vice Presidents and will present it to this committee at the next meeting. The job that this committee must do is to refine the program statement contained in the Preliminary Report and help Mr. Stephan fit it into a physical plant program.

Respectfully submitted,

John H. Westerman
Executive Secretary

COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES
FOR THE HEALTH SCIENCES

Minutes of Meeting May 9, 1966 (#19)

Present: Elmer Learn, Chairman; Lee Stauffer for Gaylord Anderson, Lyle French, Edna Fritz, Sterling Garrison, N. L. Gault, Jr., Gertrude Gilman, Eugene Grim, Robert Howard, Robert Isaacson, Frederic Kottke, Richard Magraw, Hugh Peacock, Erwin Schaffer, James Stephan, William Thorp, Lawrence Weaver, John Westerman, McCollum Brasfield, Edmund Nelson, Kathryn Ritzen.

Absent: Winston Close, Mellor Holland, Ione Jackson, James Jensen, William Shepherd

Guest: James A. Hamilton, Director, Program in Hospital Administration

NEXT MEETING: MONDAY, JUNE 6, 1966, 3:30 P.M., 510 DIEHL HALL

Sent Out Since Last Meeting

a.	Learn Committee Minutes	April 21, 1966 (#18)
b.	Clinical Medicine Task Force Minutes	May 3, 1966 (#15)

1. Dr. Learn welcomed Dr. Stauffer for Dr. Anderson, Dean Thorp from Veterinary Medicine as a new member of this committee, and Mr. Hamilton, whom the University has retained as space consultant.

2. Dr. Learn called the committee's attention to several articles: One article reported that President Johnson had created a National Advisory Committee on Health Manpower. It appears that this committee will attempt to do nationally what the Hill Family Foundation Health Manpower Study has done for the upper mid-west region. Dr. Learn noted that Mr. Hamilton had met recently with President Johnson to make a final report in his capacity as a member of the Folsom Committee. Mr. Hamilton made a few remarks about the Folsom Committee's work.

The other articles mentioned by Dr. Learn were "Our Backward Medical Schools," in the May issue of THE ATLANTIC - a criticism of the typical medical school curriculum - and "Hospital Planning Today," by James Stephan in the May 1, 1966 issue of HOSPITALS. This entire issue is particularly appropriate for our planning, and copies will be ordered for the committee.

3. The main purpose of this meeting was to consider the space consultants' estimate of the health sciences' future space needs. In evaluating the space con-

sultant proposal, it is important to understand the background and reasons for making this estimate before our own study has been concluded. In view of the long-standing need for a new dental facility and a new outpatient clinic facility, we had to determine whether sole construction of such a building now on the land we have access to would impair the future expansion of all the health sciences in this area. Since the only answer to that question lies in comprehensive planning for all the health sciences, which our committee is carrying out, and since the University Administration must prepare a legislative request for the 1967-69 session now, the space consultants were asked to make an educated guess as to what would be needed. The plan which the space consultants came up with is by no means definitive or final, but it is based on the findings of the Preliminary Report and the Clinic Directors Outpatient Planning Report, and will serve the administration as a guide on what to request from the legislature in the way of land purchase and planning monies. Mr. Stephan and Mr. Hamilton presented such a plan to the President and Vice Presidents in April, and their reaction was most favorable. However, the committee should not feel constrained by the consultants' preliminary judgment in their efforts to formulate alternatives to this plan and arrive at a completely refined document for the health sciences. Rather, the favorable reaction of the administration to what can likely be expected from this committee and the appointment of a state legislative committee headed by Representative Fitzsimons to increase our output of physicians, should further increase the challenge to this committee. Dr. Learn then turned the meeting over to Mr. Stephan.

Mr. Stephan prefaced his presentation by emphasizing the tentativeness of the allocations he was about to describe. First, he summarized the present status of the health sciences in terms of numbers of students, faculty, hospital beds, and various facilities.

STUDENTS

We now have 150 medical students per class, with a total of about 603. There are 110 dentistry students per class, totaling about 400. At that same time, there are 80 dental hygienists and 35 dental assistants enrolled. Approximately 300 nursing students are enrolled in B.A. and M.A. programs, with 45 practical nursing students. There are 97 physical and occupational therapy students. Public Health has 133 students in Master's programs, and 26 in Ph.D. programs. Laboratory technologists number about 111, laboratory aides about 60, and X-ray technicians total 95. A total of 553 interns and fellows are in training at our institution, as well as 8 post doctoral students. We have not been able even to calculate the number engaged in continuing education here.

BEDS

Our bed program includes 586 in the Mayo complex, 78 in Heart, 120 in Masonic and 40 in Rehabilitation, for a total of 824.

These are just some of the pertinent figures for the health science complex. In all, our total health sciences buildings and facilities add up to about 1,277,566 square feet of space.

ASSUMPTIONS

Since the Health Manpower Study has called for increases in the number of medical and dental students at the University, we have planned that medical students will increase from 150 to 200 per class, and dental students from 110 to 150 per class (the total of dental hygienists increasing to 300 and dental assistants to 150). We've assumed that other students will increase in proportion to the number of faculty, and we have figured that every faculty increase requires an increase in research, office and teaching space. We need to increase the number of hospital beds by about 200 to meet the requirements of particular services. An attempt has been made to project a somewhat complete, but economical space program. To house our programs for the foreseeable future, we estimate that facilities with 2,089,626 square feet of space will be required. This includes increased space for Dentistry, Nursing, Public Health, Basic Sciences, Outpatient Clinics, Clinical Research and the Hospital. This can be achieved through both remodeling of present facilities and major new construction, with a total cost of approximately $51 million, plus a probably $1 million for land purchase. Not all of this money would have to be provided by the legislature, since matching funds are available, and we would ask for the state money over three sessions.

Mr. Stephan projected a slide of a sketch showing a high rise structure of three distinct portions extending from Washington Avenue to Diehl Hall along Union Street. The section closest to Washington Avenue would be the Dentistry School, next to that would be a combination clinic-hospital facility, and closest to Diehl Hall would be the proposed clinical research (Phillips-Wangensteen) building. Two floors below the structure would be garage and hospital services. The Dentistry School would be 11 stories, the Clinic-Hospital would be 12 stories (2 basements, 5 floors of clinics, 5 floors of beds), while the Clinical research building would probably have only six stories to start, with the possibility of adding more stories later. So the complex should be built to expand upward and outward eventually, and the remaining land to the east should be preserved for unforeseeable future expansion. It's possible that eventually Powell Hall would have to be razed, but until then it could well be used for an interim clinic facility, enabling the School of Nursing to vacate Millard Hall and move into vacated clinic space in Mayo, and after that for the Continuation Medical Education Center. This proposal would enable the Basic Sciences to expand first into present Nursing space and finally into vacated Dental space.

PROBLEMS

There are several problems involved in expanding the health sciences on this site. The space consultants did consider moving the entire site east of Oak Street, but the available land there is limited also. Moving to the St. Paul campus would mean forfeiting at least $60 million in replacement costs, plus the additional costs required for expansion. Building a high rise structure on the present site would result in a heavy concentration of land usage, but this is difficult to avoid given our needs and limitations. Traffic is one of the principal problems in this area, with a major bottleneck caused by having the only access

to the Mayo garage and Coffman Union off Church Street. We need to relocate the Mayo garage entrance to Harvard Street, which will be a major artery from Washington Street to the River Road. It would be desirable to have entrances to the new Clinical Research, Medical and Dental buildings on Union Street. Parking space is a perennial problem, but provision for parking is not included in the cost estimates for the proposed expansion. It's likely, however, that eventually the Frankfurter apartments would be torn down to make way for a parking ramp, and there should also be a ramp across Washington Avenue, with an overpass to the Dental, Medical, Clinical Research structure.

REACTIONS

Several comments were made on the space consultants' proposal. Dean Schaffer pointed out that the present entrance to the Mayo garage would be a possible site for Basic Sciences expansion from Jackson Hall across to North Clinic. Dean Howard reported that the River Flats had been effectively eliminated as a possible site to build on.

Dr. Learn felt the need to underscore the basic assumptions and hypotheses of the space consultants. Would the proposal, as Mr. Stephan outlined it, meet the needs of the health sciences and still comply with the major considerations of the Preliminary Report, i. e., with teaching, research and patient care space kept as close as possible, given the land limitations? The proposal does achieve this, without tearing down existing structures, and allows some land to remain for later development. The question we have to answer is whether we are willing to accept high density in order to meet our goals of proximity.

QUESTION: Dr. Kottke asked what the disadvantages were of high density. One is the psychological effect of feeling closed in. Congested traffic movement is another and the lack of openness. The latter could be overcome, however, by putting the structure up on stilts. The architects use a ratio of one foot of height for so much ground area for a campus, but we're not sure what the proper ratio is for a health sciences center. So we need to explore the costs, disadvantages, benefits and alternatives of such a plan. An imaginative architect could minimize many of the disadvantages of erecting a high rise structure.

QUESTION: It was asked why the heights of the three buildings are not the same. Mr. Stephan replied that they were projected solely on the basis of how much space is needed in each of those facilities. Mr. Hamilton pointed out that it is often better to have vertical rather than horizontal traffic, since it cuts down on through traffic from one building to another.

As far as clinical teaching and research space needed for 1985 is concerned, the space consultant's projection actually approaches 1973 only. The consultants are hesitant to speed up the natural process of arriving at specific figures for fear that the committee might be unduly influenced by these figures, instead of going ahead to determine programs and deduce space figures from the programs.

QUESTION: Dean Thorp asked whether any greater density was planned for a high rise structure here than at any other health science center? The density would not be any greater here. Another consideration is how human beings ought to be handled in a large health sciences center, in comparison with how they're handled elsewhere. Another point is that some horizontal separation between student traffic and other traffic would be achieved by the proposed facilities. However, traffic questions still remain concerning outpatients and dormitory students cutting across campus.

Dr. Gault said that he was disturbed by the idea of putting about 270 beds in a new facility, thus spreading in-patient activities over two and a half blocks, and he suggested instead erecting a new bed unit in the Powell Hall area. Mr. Hamilton, however, pointed out that it is actually better to have bed units on a radial spread, with the main unit in the center. Ideally, it would be best to have all of the beds in the top of a new high rise structure, but that's not practical with our commitments to Heart and Masonic.

Dr. Learn announced that Mr. Westerman and the space consultants have been asked to investigate the possibility of using Powell Hall for interim clinic expansion and come to a tentative conclusion in time for the legislative building request this year. Another action we should begin this year is the purchase of the two apartment buildings which are on the site of the proposed highrise structure.

QUESTION: Miss Gilman asked what was going to be done to follow up President Wilson's endorsement of gifts to the hospital from grateful people. Dr. Learn replied that we would hope to receive such gifts for this new facility, too, and re-emphasized that we hope the cost to the legislature for this plan would be no more than $25 million after matching funds are secured.

We need to reach early decisions about our proposed land purchases, to evolve a strategy for the 1967 session. So we have to approach alternatives very soon. We have already concluded that it is feasible to consider expansion of the health sciences within the general confines here, despite our not knowing all of the specifics involved in expansion at this time. But it is up to the committees to define the specifics of our growth.

QUESTION: Would the new structure permit as much expansion as the committees feel they need? The space consultants don't really know yet, since they don't have all of the figures from the committees at this point. The proposed size of the structures represents guesses based on balancing all of the known elements of expansion. The hope is that the projected plan will free space for expansion of the Basic Sciences, Nursing, Public Health and clinical teaching. Hospital operating costs should become more economical, too, with standardized nursing stations and mechanized supply transport system.

QUESTION: What is the timetable for making all of the changes mentioned? The phasing schedule still has to be worked out, but it would be done in such a way as to prevent interference with the carrying out of any programs.

CHARGE TO THE COMMITTEE AND SUBCOMMITTEES

Dr. Learn thanked Mr. Hamilton and Mr. Stephan for their presentation. The projected expansion, plus the state legislative committee to increase the number of physicians, plus the Health Manpower Study Report all put pressure on our long range planning committee to finish the task we set out to do. Between now and the next meeting of this committee, it's appropriate for the subcommittee chairmen to call meetings to discuss the transition from where we are now to the final report.

At the next meeting of this committee, we should be prepared to lay out plans for the summer and fall work, leading to the final report to the President. This work should go on concurrently with the development of space data. We need a good program statement by the time the legislature is convened in January, 1967 and we need to refine our space program before the end of the legislative session. Since it's likely that we will receive planning money during that session, we should begin architectural studies by the end of next year and we should have architectural designs by the time the 1969 legislature convenes. We should also realize that the work we have done will be very useful to the legislative committee charged with investigating ways to increase the number of physicians for Minnesota.

Respectfully submitted,

John H. Westerman
Executive Secretary

COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES FOR THE HEALTH SCIENCES

May 23, 1966

TO: COMMITTEE MEMBERS

FROM: ELMER LEARN

SUBJECT: ANNOUNCEMENT OF NEXT COMMITTEE MEETING

Our next meeting will take place on MONDAY, JUNE 6, 1966 at 3:30 P.M. in 510 DIEHL HALL. As I mentioned at our last meeting on May 9, it is appropriate now for the subcommittees to be meeting to discuss the transition from our Preliminary Report to the final report. On June 6, we should be prepared to lay out plans for our summer and fall work, leading to the formulation of our final report. Of necessity, we shall have to coordinate our program statement with the development of space data by the consultants. We need to have a definitive report ready by the opening of the legislative session in January 1967.

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COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES FOR THE HEALTH SCIENCES

Suggested Agenda for Meeting, Monday, June 6, 1966, (#20)

1. Welcome Guests

2. Report on Building Plan presentation to Board of Regents June 10 & 11

   and

   Brochure for June 23 presentation to State Legislative Committee

3. Discuss liklihood of publicity from above and raise question about desirability of short one or two page letter to faculty from the Learn Committee.

4. "Plans for summer and fall work, leading to the final report to the President"
   Taken from May 9th meeting as agenda item for June- perhaps tie into the timetable discussed at Deans & Consultants Luncheon meeting

5. Information item about status of Powell Hall Study

6. Information item about Clinic Directors Building Subcommittee is now an official task force of the Clinical Medicine and Hospital subcommittee, particularly the clinical medicine group under Dr. French.

7. Other

*. SENT OUT SINCE THE LAST MEETING

a.	Learn Committee Minutes	May 9, 1966 (#19)
b.	Basic Sciences	May 19, 1966 (#)

DR Learn

COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES FOR THE HEALTH SCIENCES

Minutes of Meeting June 6, 1966 (#20)

Present: Elmer Learn, Chairman; Gaylord Anderson, Lyle French, Edna Fritz, Sterling Garrison, Gertrude Gilman, Eugene Grim, Mellor Holland, Robert Howard, Robert Isaacson, Ione Jackson, Hugh Peacock, James Stephan, William Thorp, John Westerman, McCollum Brasfield, Edmund Nelson, Kathryn Ritzen

Absent: Winston Close, N. L. Gault, Jr., James Jensen, Frederic Kottke, Richard Magraw, William Shepherd, Lawrence Weaver

NEXT MEETING: AT THE CALL OF THE CHAIRMAN

Sent Out Since Last Meeting

a.	Learn Committee Minutes	May 9, 1966 (#19)
b.	Basic Sciences Subcommittee Minutes	May, 19, 1966 (# 8)

1. Dr. Learn began the meeting by discussing the legislative building request, which includes substantial funds for land purchase and planning monies for the health sciences. The justification for this request is essentially the expansion plan which the space consultants outlined to the President and Vice Presidents on April 11. This will be presented as a separate part of the total legislative request.

On June 23 Dean Howard will be present at a session of the Fitzsimons Health Manpower Committee to answer questions about the expansion of the medical school and the training of family physicians. The activities of the Fitzsimons Committee and the publicity which immediately will be given to our building request as soon as it's presented to the Legislative Building Committee about the middle of June, will put additional pressure on our committee to complete its work by December of this year. Accordingly, Dr. Learn suggested that this committee send a letter to the health sciences faculty, before the Legislative Building Committee meeting, explaining the nature and status of the present expansion proposal. Mr. Westerman, as Executive Secretary, was asked to compose and distribute such a letter.

2. The proposal to use Powell Hall as an interim clinic facility was discussed next. Dr. Learn reported that the Administration might request some funds this legislative session for converting Powell Hall into a temporary outpatient clinic, providing that it could be done for minimum cost with a minimum

of remodeling. The Clinic Directors, Dr. Learn noted, have been very responsible in their preliminary consideration of this possibility, suggesting only minor necessary modifications. If the move were to take place, the School of Nursing could be expected to occupy some of the vacated clinic area, allowing Basic Sciences and Dentistry to expand into vacated nursing space. Remodeling of Powell Hall could not even begin before Spring quarter 1967; however, real feasibility and costs are still the determining factors in the proposal.

Since Nursing would move into vacated clinic space, Miss Fritz inquired whether funds for remodeling should be requested now under the Nurse Training Act. Dr. Learn asked Mr. Stephan and Mr. Westerman to discuss with Miss Fritz the type and cost of remodeling that would be necessary, and any funds that should be requested.

3. Dr. Learn announced that the Clinic Directors Building Subcommittee has been made a task force of the Clinical Medicine-Hospital Subcommittee.

4. The most important business of the meeting was the discussion of completing the basic assignment of long-range planning for the health sciences. The publicity following the legislative request will be such that we will be committed to presenting a complete, detailed expansion plan to the 1969 legislature. The needs in the health sciences are so great that we can expect general acceptance of our plan even now when we make our land and planning fund request. Our assignment has to be completed, however, in time to assign overall University priorities by eighteen months from now. Therefore, we need a final, definitive report before January 1967. The subcommittees should plan to hold meetings this summer to examine the preliminary report and begin transforming generalities into specifics.

In refining the subcommittee reports, planning should now be on the basis of 200 medical students and 150 dental students, with appropriate adjustments in other student categories. In addition to more definitive program statements and specific numbers of students, the subcommittees need to estimate the number and types of faculty, as well as the size of the civil service staff, the cost figures and operating budget required to carry out the program. The subcommittees should work with the space consultants to translate program activity relating to teaching, research and service into specific space terms (numbers of offices, classrooms, laboratories, etc.). Since each subcommittee will concentrate on its own area. Mr. Stephan, Nelson and Westerman were asked to be responsible for removing space conflicts or duplications cutting across subcommittee jurisdictions.

THE GOAL IS FOR EACH SUBCOMMITTEE TO HAVE A REVISED PROGRAM STATEMENT BY OCTOBER 1, 1966. Although this may not represent the final version, it should contain the questions to be answered in the final analysis. It is obvious how important it is that the University Health Sciences expansion program be so well supported by analysis that the legislature virtually has no choice but to accept it.

In composing the reports, the subcommittees should act as more than a funnel for everyone's requests, and should be prepared to make hard judgments about priorities. In response to a question about planning on the basis of space likely to be allotted, Dr. Learn advised that this should not be done at the outset, since space figures should be derived from the anticipated numbers of students, faculty, laboratories, etc. Although there are at present no good standards pertaining to unit sizes for health sciences space, Mr. Stephan suggested that a subcommittee be formed to help set such standards. Dr. Learn suggested that the committee include Mr. Stephan, Mr. Peacock, and Mr. Vernon Ausen.

Since the health sciences expansion plan realistically will not be completed before 7 to 10 years, the space consultants need projections from the departments on the timetable for increasing the number of students and staff, in order to have a comparable timetable for construction. IT IS PARTICULARLY IMPORTANT THAT THE ACADEMIC VICE PRESIDENT BE CONSULTED BEFORE FINAL DECISIONS ARE MADE ON THE NUMBER OF FACULTY TO BE HIRED. IT WOULD BE WELL FOR THE SUBCOMMITTEES, IN THE MINUTES OF THEIR MEETINGS, TO SPECIFICALLY REQUEST VICE PRESIDENT SHEPHERD, DEAN HOWARD AND DEAN SCHAFFER TO COMMENT ON THE NUMBERS OF FACULTY, BEFORE DEVELOPING DETAILED SPACE NEEDS. The programmatic statements will have to justify increases that go beyond strict ratios of increased faculty to increased students. Judgments will have to be made about the extent of research commitments since this will have a direct bearing on the physical facilities planned for.

5. Dr. Learn reported that Dean Weaver is very interested in the work of this committee and is concerned that we take account of the College of Pharmacy in our planning. He would like to talk to the committee about the relationship of Pharmacy to the rest of the health sciences, perhaps at our next meeting or in a special summer meeting.

Respectfully submitted,

John H. Westerman
Executive Secretary

M E M O R A N D U M

August 18, 1966

TO: The Clinic Directors and all Members of the Health Sciences Long Range Planning Committee

FROM: John H. Westerman, Chairman, Clinic Directors Building Subcommittee and Executive Secretary, Health Sciences Long Range Planning Committee

SUBJECT: Attached Information

Attached are excerpts from a report to the Clinic Directors Building Subcommittee by Dr. Paul E. Strandjord, Associate Professor, Laboratory Medicine. Dr. Strandjord was asked to report to the subcommittee on the possibility of setting up a multiphasic screening laboratory for clinic patients here at the University. His report is divided into three parts: 1) the rationale for such a battery of screening tests, and summary of findings of various screening studies; 2) a review of what's been done in this field elsewhere in the United States; and 3) a possible approach to a screening laboratory for clinic patients at the University of Minnesota. It must be emphasized that Dr. Strandjord's proposal is just one possible approach to what could be done here, not a definitive example of what should be done.

The Clinic Directors Building Subcommittee and the Clinic Directors group itself have endorsed this concept, as Dr. Strandjord reported it, for further exploration and consideration. To keep you abreast of our thinking, this material, which represents Parts I and III of the report, is being sent to you, for your information. A copy of the complete report will be sent to you at a future date.

STUDIES OF THE UTILIZATION OF
THE CLINICAL LABORATORY AS A ROUTINE ADJUNT TO
THE HISTORY AND PHYSICAL EXAMINATION

Rationale[1]

"Classically there are three major avenues of gathering information with reference to patient management: the history, the physical examination, and the laboratory examination. The roles of the history and the physical examination have become relatively well established. The role of the laboratory examination is rapidly changing, however, and may be expected to change even more dramatically in coming years. It is now accepted practice to gather historical information and physical findings concerning all of the major systems of the body at the time of a detailed clinical examination. It will soon be feasible to provide a similar laboratory examination which will reflect information regarding many of the major systems of the body. Such a battery of tests will be directly analagous to the current screening type of physical examination which provides information regarding heart, lungs, liver, etc. Laboratory examinations of this type will be performed at the time of hospital admission, as well as during periodic health examinations. Information gathered from such examinations will be recorded in a form facilitating retrieval and will be helpful in detecting asymptomatic pathology, in facilitating earlier diagnoses, and in shortening periods of hospitalization. Data will be considered not only on the basis of what is normal in the general population, but what may be considered normal for an individual of a specific age and sex. In addition, compilation of such information will facilitate establishing normal values for given individuals. Values which could be considered normal in reference to norms based on the general population may appear abnormal when considered in reference to a patient's own established 'normal values'."

Summary of Findings of Several Recent Screening Studies:[2]

I. Glucose and diabetes mellitus.

A. Determinations of both blood and urine glucose concentration should be performed one hour after a "carbohydrate load".

B. A number of studies have shown that the average incidence of unsuspected diabetes is approximately 1.14% or 1 case of diabetes for every 100 people tested. (The number of undiagnosed cases of diabetes mellitus is probably equal to the number of known cases of this disease.)

C. False positive blood and urine glucose tests occur especially in young children and pregnant women.

D. Unsuspected abnormalities in blood sugar tests--2%, in urine sugar tests--6%.

1. P.E. Strandjord, Lab. Med.--A Prospectus, Minnesota Med., May, 1966, 773.
2. The data include only findings picked up as a direct result of the screening procedures under investigation.

II. Serum calcium and parathyroid function.

A. The incidence of unsuspected hyperparathyroidism is about 0.15%; hypoparathyroidism about 0.03%; and pseudohyperparathyroidism about 0.04%.

B. The incidence of unsuspected serum calcium abnormalities has been reported as being 0.96% or approximately 1 in 100 subjects tested.

III. Serum uric acid and gout.

A. Unsuspected gout--0.6%.

B. Unsuspected abnormalities in uric acid--4%.

IV. Kidney function tests and renal disease.

A. Unsuspected renal disease--0.5%.

B. Unsuspected abnormalities: BUN--1%, Cr--0.5%, Urine albumin--3.8%

V. Hemoglobin and anemia.

A. The incidence of unsuspected anemia is about 0.8%.

VI. Serologic test for syphilis.

A. The incidence of unknown syphilis is about 0.3%. (The incidence varies significantly in different areas of the United States.)

VII. Chest X-Ray.

A. Unsuspected pulmonary abnormalities--0.8%.

B. Unsuspected cardiac abnormalities--0.5%.

VIII. Blood pressure and hypertension.

A. Incidence of unsuspected hypertension--5%.

IX. EKG and heart disease.

A. Unsuspected heart disease of various kinds--3%.

B. 6 or 12 lead EKG is usually recommended.

X. Height, weight and obesity.

A. Approximately 6% of the population is overweight.

XI. Impaired Vision.

A. 16% of those tested are unaware they have faulty vision.

XII. Impaired Hearing.

A. Approximately 3% of the subjects tested are unaware of a hearing deficit.

The preceding outline mentions only some of the diseases and laboratory tests that have been studied. In most studies the incidence of unsuspected abnormalities is surprisingly high. Many of the people in these studies were considered to be well and healthy by themselves and by their physicians. Others may have been hospitalized during the study but not for the diseases or conditions that were discovered by the screening tests. In the majority of diseases or conditions discovered early diagnosis and early treatment are beneficial to the patient. Detailed information regarding the studies cited in this summary are presented in the following pages.

PLANS FOR ROUTINE LABORATORY STUDIES

AT THE UNIVERSITY OF MINNESOTA HOSPITALS

Test	I All Patients*	II Tests Selected on Basis of Findings in I	III Age & Sex Selected
Height and weight	X	---	---
Blood Pressure	X	---	---
Visual Acuity	X	---	---
Intra-ocular tension	---	---	X
Retinal Photography	---	---	X
Audiometry	X	---	---
EKG	---	---	X
X-Ray, Chest	---	---	X
X-Ray, Abdomen	---	---	X
Dental Screen	X	---	---
Blood			
VDRL	X	---	---
Glucose (after carbo. load)	X	---	---
Urea	X	---	---
Calcium	X	---	---
Sodium and	X	(Bicarbonate & chloride	---
Potassium	X	if Na or K is abnormal)	---
Cholesterol and	---	---	---
Triglycerides	---	---	---
Total Protein	X	---	---
Protein Electrophoresis	X	---	---
Uric Acid	---	---	X
Hemoglobin	X	---	---
White Blood Cell Count	X	---	---
Lactate Dehydrogenase	X	(LDH isoenzyme separation if LDH is abnormal)	---
Ornithine Carbamoyl Transferase	X	---	---
Alkaline Phosphatase	X	---	---
Acid Phosphatase	X	---	X
Urine			
Glucose (after carbo. load)	X	---	---
Protein	X	---	---
Microscopic Examination	X	---	---

*Expanded or deleted as indicated by clinical judgment and economic considerations. It does not include, at present, tests such as motor performance which would be selected on the basis of age and sex for pediatric patients.

ESTIMATE OF SPACE, EQUIPMENT AND PERSONNEL REQUIREMENTS

This list would be dependent on the equipment which is developed during the interim between August, 1966 and the time this laboratory is opened.

Space Requirements--Approximately 3,000 square feet

Equipment--Marked advances are occurring continually

Determination	Instrumentation	Man Hours/Day Based on 100 Patients/Day
Height and Weight	---	---
Blood Pressure	---	---
Visual Acuity	---	---
Intra-ocular Tension	---	---
Retinal Photography	---	---
Audiometry	---	---
EKG	---	---
X-Ray, Chest	---	---
X-Ray, Abdomen	---	---
Dental Screen	---	---
VDRL	Rotator $ 110	2
Glucose (Blood) & Urea	6,800	4
Calcium	8,300	6
Sodium & Potassium	2,200	4
Cholesterol & Triglycerides	9,000	6
Total Protein (Blood)*	5,000	2
Protein Electrophoresis	10,000	16
Uric Acid*	---	4
Hemoglobin	2,000	2
White Blood Cell Count	4,400	2
Lactate Dehydrogenase	10,000	4
Ornithine Carbamoyl Transferase	5,000	4
Alkaline Phosphatase**	6,800	4
Acid Phosphatase**	---	4
Glucose (urine)	---	
Protein (urine)	---	
Urine Microscopic Examination	800	4
Bicarbonate***	3,500	1
Chloride***	800	1
LDH Isozyme Fractionation***	3,000	4
SUBTOTAL (for Equipment Listed)	$77,710	74 Hours
Additional man hours to cover unforseen problems, reagent preparation, etc., 25%		18 Hours
SUBTOTAL (Man Hours)		92 Hours

* Employ Same Instrument
** Employ Same Instrument
*** Based on 20/Day

ESTIMATION OF EXPENSE OF BATTERY TO PATIENT

BASED ON SUBTOTALS ON PREVIOUS PAGE

Patient Number: (Estimate based on 100 patients per day, 5 days per week, 52 weeks per year with ten holidays) 25,000 patients.

Amortization of Equipment over Five Years: $16,000/year.

Personnel: Estimate $56,000/year.

Subtotal: $76,000/year per 25,000 batteries.

Tentative Conclusion: On the basis of these estimates and subtotal figures, it would appear feasible to charge about $15.00 per patient for this service. This is approximately the current price of a more limited battery in use at Duke University.

DR Learn
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COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES FOR THE HEALTH SCIENCES

Suggested Agenda for Meeting #21

Monday, October 10, 1966, 3:30 P.M., 510 Diehl Hall

1. Welcome guests:
   a. Dr. Magraw's substitute
   b. Mr. John Stockwell, Administrator, Children's Hospital, Minneapolis & will be Administrator, New University Hospital of U of Mass. Medical School.
   c. Dr. William Kane, Chairman, Clinic Directors

   Announcements:
   Mr. Brasfield has been appointed Assistant Executive Secretary for Planning.

2. Review of major events since last meeting June 6, 1966.

   * Hand out: a. President's Report
   b. Health Manpower Study
   c. Draft of Second Planning Report

3. Mr. Westerman will review the Second Planning Committee Report.

4. Dr. Learn will lead discussion of the report.
   a. Charge to group of what needs to be done.
   b. Note Dentistry example of subcommittee use; i.e., Nursing, Public Health and Hospital in particular will work out plans within the School of Division, but still use the Subcommittee as a sounding board. Call on DR Anderson

   - How the Learn Committee will function in reference to the subcommittees.

   c. Handout and review Planning Timetable.

5. For the record:

   a. Note departure of Drs. Makowski and Stauffer.

   b. Record of Minutes Since Last Meeting (June 6):

1.	Learn Committee Minutes	June 6, 1966 (#21)
2.	Basic Sciences Subcommittee Minutes	June 16, 1966 (#9)
3.	Nursing Subcommittee	July 12, 1966 (#9)
4.	Ancillary Subcommittee	July 12, 1966 (#8)
5.	Clinical Medicine Task Force	July 18, 1966(#16)
6.	Dentistry Building Subcommittee	July 29,1966 (# 1)
7.	Dentistry Building Subcommittee	August 5, 1966(#2)
8.	Dentistry Building Subcommittee	August 12, 1966(#3)

   c. Direct Mrs. Ritzen to append a roster of the parent committee and subcommittees to these minutes.
   Direct MR Westerman to write up DR Gault's report of oct 3 Deans + Consultants meeting

6. Next meeting: _____

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* Agenda Item for October 10, 1966 Learn Committee Meeting

TENTATIVE TIME SCHEDULE FOR HEALTH SCIENCES PLANNING

October 1, 1966

First draft - Program, Personnel and Space Report submitted to Learn Committee.

November 15, 1966

Second Learn Committee Report submitted to President. If accepted, an editing committee will assist in condensing the report for the legislature.

January - August, 1967 - Learn Committee and School committees will continue to plan.

(1) Refinement and elaboration of second plan with particular emphasis on more detailed program statement.

(2) Health Science legislative request will be presented as part of University request. The request includes $500,000 for planning and $600,000 for land acquisition. If planning money is appropriated, the Board of Regents will have to give approval before architects can be retained.

(3) Late summer 1967, appointment of architect to proceed with development of plans for established programs.

January, 1968

University Administration will need preliminary architectural plans, cost estimates, etc., for incorporation into the University request to the Building Commission in July 1968.

By the time an architect is hired, the program, space needs and site designation should be worked out.

July, 1968

Presentation of University building request (including health sciences) to the Building Commission.

January, 1969

Presentation of staff and building requests to the 1969 legislature.

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COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES FOR THE HEALTH SCIENCES

Minutes of Meeting Monday, October 10, 1966 (#21)

Present: Elmer Learn, Chairman; Gaylord Anderson, McCollum Brasfield, Winston Close, Lyle French, Edna Frtiz, Sterling Garrison, Gertrude Gilman, Mellor Holland, Robert Howard, Robert Isaacson, James Jensen, Frederic Kottke, Erwin Schaffer, James Stephan, Lawrence Weaver, John Westerman, Edmund Nelson, Hugh Peacock, Kathryn Ritzen

Absent: N. L. Gault, Jr., Eugene Grim, Ione Jackson, Richard Magraw, William Shepherd, William Thorp

Guests: Mr. John Stockwell, Administrator, Children's Hospital, Minneapolis and future Administrator, new University of Massachusetts Medical School.

Dr. William Kane, Chairman, Clinic Directors Group, Medical School

NEXT MEETING: MONDAY, OCTOBER 31, 1966, at 3:30 P.M., 510 Medical School

1. Dr. Learn welcomed Mr. Stockwell and Dr. Kane to the meeting. He announced the appointment of Mr. Brasfield as Assistant Executive Secretary of the committee, and explained that this appointment was largely necessitated by Mr. Westerman's new responsibilities as the next Director of the Hospitals.

2. Next, Dr. Learn brielfy reviewed some of the major events since the last meeting in June.

a. In July, President Wilson presented to the Board of Regents, and subsequently to the Legislative Building Commission, a health sciences expansion plan, based principally on this committee's Preliminary Report and the estimates made by Hamilton Associates, as well as on the Peterson Report. Both bodies received the report warmly and with initial favor. The President and Dean Howard also testified before the Fitzsimons Committee, a special committee of the legislature concerned with the supply of physicians in the state, particularly in rural areas.

b. The essence of the plan which President Wilson presented to the Building Commission is as follows:

1) An increase in the Medical School class from 150 to 200.
2) Acceptance of all qualified graduates from two-year medical schools in the Dakotas.
3) An increase from 110 to 150 in the Dental School class.
4) A request to purchase land for expansion north of

Deihl Hall.

5) A request for planning funds.
6) Funds to study the future of family practice.
7) An anticipated $54 million plan for health sciences expansion, to be presented to the 1969 legislature.

c. The $54 million expansion plan, as it now stands, is based on Hamilton Associates' estimates and envisions a high density building complex just north of the present site. Dr. Learn emphasized that this proposal should be treated as a hypothesis rather than an actual plan. Although the University is virtually bound to the $54 million figure, the planning committees are not bound to the details of the plan as such. However, the publicity and initial warm reception given the preliminary proposal is such that the medical center is under the responsibility to provide the best expansion program possible, roughly within the stated cost, and to do so in time for the 1969 legislature. The enactment of the President's program is yet ahead, and it largely depends on this committee's planning and the effective enunciation of its programs. Therefore, the subcommittees, with the help of the consultants, must work toward the preparation of the final report.

d. At this juncture, Dean Howard warned the committee that the public would interpret the $54 million plan as the price for 50 additional medical students per class, and as such, would probably be contrasted with other proposals to increase the number of medical graduates. On the contrary, it should be understood that the University already has a standing 10 year health sceinces expansion plan totalling $34 million. Therefore, only $20 million of the proposed $54 million can be at all accurately said to relate to an increase of the student body, and the increase pertains to dentists and other health professionals, as well as to medical students. It's also true that this estimate of $54 million reflects the rise in costs which has taken place since the $34 million plan was conceived.

3. Mr. Westerman distributed copies of a draft of the Second Planning Committee Report, and briefly reviewed its contents. First, he acknowledged the assistance of Mr. Nelson in helping the subcommittees compile data for the report. Then he emphasized:

1) comprehensive, detailed program statements are not included in this draft;
2) space and student projections are incomplete;
3) the primary information concerns personnel projections which, by and large, have not yet been reviewed for for possible reduction by the administration;
4) in essence, this is a working report containing raw data and is not for distribution to others in the University at this time.
5) Pages 6-8 summarize Program, Personnel and Space projections. Supporting figures for personnel and space projections are contained in the individual subcommittee sections of the report.

6) The designations "150", "200" and "250 medical students" at the head of the colums on page 8 (Personnel Projections) are improper and should be deleted.
7) Page 9, Space Projections--Most of the figures in the 1966 column were derived from Page 5 of President Wilson's Report, which is included in the Appendix of the draft report. The projected figures of the subcommittees differ in some cases from the President's (eg., Public Health, Dentistry etc.). The Clinic Directors are, however, planning on the basis of the President's figures (Outpatient Clinic space is included in the Hospital projections).
8) The Clinical Medicine Program was stated such as it is, simply to explain how additional space would be used.
9) The projections raise certain questions which the program statements will have to answer. For example, Anesthesia projects an increas from 7 faculty at present, to 10 faculty by 1973 (p. 21). At the same time, it projects a space increase from 2,220 square feet at present, to 10,506 square feet by 1973. (p. 23). The disparity between the faculty increase and the space increase must be explained and justified in the program statement.

   The Space Justification submitted by Dentistry was recommended as a model for this purpose.

Dean Howard expressed his views on the report. Considering the ultimate consumption of this report, tie space and faculty increases to projected increases in the Medical School class size, since the proposed expansion, as noted above, is really based on other equally important considerations. At this point, there was discussion of how best to express the increases, whether in terms of present inadequacies or proportionate increases in other segments of the undergraduate student body. Dr. Learn cautioned that the narrative must be extremely careful in dealing with this problem, so as to base personnel and space increases on total programmatic projections and not just on one facet alone. On the other hand, the report which this committee is preparing is intended for the President, the Regents and, ultimately, an architect and therefore should be composed with that intention in mind. The draft itself is only a working paper for this committee, and has not yet been seen or approved by the Deans and Vice Presidents.

4. Next, Dr. Learn outlined what further work needs to be done in preparing a final report for the President:

a) <u>More specific documentation of programs</u> is required, to satisfy the justly inquisitive Vice Presidents and

members of the legislative committees concerned. Each subcommittee must revise its program to support its projections of space and personnel.

b) Integration of the subcommittee statements into a meaningful statement of the total health sciences program.

c) The subcommittees themselves need to sift and synthesize the program, space and personnel projections, to produce a thoughtful statement, rather than a mere accumulation of facts. In doing this, the subcommittees are in the best position to make preliminary judgments ane assign priorities before the programs reach the Deans and Vice Presidents.

Next year, when hopefully an architect will be appointed, we will need to set up Program Committees to assist in preparing the architectural program. It's imperative, therefore, that we initiate that task with the best possible program statement from the planning committee.

d) Dr. Learn reviewed the tentative time schedule for further health sciences planning, copies of which were distributed at the meeting. Between November 15 and December 1, 1966 the planning committee should have completed a refinement of this draft report, including a refined program statement, as well as personnel and space projections. Dr. Learn confided that he would be inclined even to delay the personnel and space report, if necessary, in order to present with it a sound, detailed program statement. From January to August, 1967 the committees should continue to work for further refinement of the report and be prepared with information if called upon by the legislature to defend the planning that has been done. By June, 1968 the University Building Commission, along with preliminary architectural sketches. Dr. Learn thought we could aim at disbanding this comm- by May or June of 1968, and designate some form of continuing committee to carry on from there.

e) In order to complete a final program, space and personnel plan which will not increase the original price estimate of $54 million, Mr. Stephan stressed the necessity of planning new ways to run the health sciences comples with better space utilization than ever before. He urged the

committee and subcommittees to try to envision improved space sharing, new teaching methods which require less space proportionately, and to consider examples elsewhere of successful approaches to more effective space utilization. Mr. Stephan and Mr. Nelson are available to help the subcommittees plan ways to reduce space requirements.

f) The question of finanacing the proposed health sciences expansion was brought up. It is planned that financing will be a combination of legislative appropriations and federal matching fund. Question: How closely can the tentative timetable be used in seeking to secure matching funds? Dr. Learn thought that by the summer of 1968 this committee hopefully could begin talking to federal agencies about matching funds. Dean Howard, however, cautioned that, although discussion with federal agencies could begin at that time, the agencies cannot actually schedule funds for payment until the state legislature has appropriated its share of the money.

g) In connection with funding the expansion, Dean Schaffer wanted to know the trend in rising building costs. Mr. Close stated that the University has planned on a 9% increase in building costs per legislative biennium, a conservative estimate. Mr. Stephan said that the cost of constructing medical facilities has consistently gone up 5% a year. Dr. Learn said that this expansion plan, thus far, has taken into account the rise in costs, as well as the cost occasioned by the new University rule that new buildings must be air conditioned.

5. For the record:

a. Drs. Makowski and Stauffer, both members of the Public Health Subcommittee, have left the University since the last meeting on June 6.
b. Mrs. Ritzen was asked to append an up-to-date roster of committee and subcommittee membership to these minutes.
c. Also appended to these minutes is a brief report on the status of health science building projects.
d. <u>Record of Minutes Sent Out Since the Last Meeting</u>

1. Learn Committee	June 6, 1966 (#21)
2. Basic Sciences Subcommittee	June 16, 1966 (#9)
3. Nursing Subcommittee	July 12, 1966 (#9)
4. Ancillary Subcommittee	July 12, 1966 (#8)
5. Clinical Medicine Task Force	July 18, 1966 (#16)

6. Dentistry Building Subcommittee July 29, 1966 (#1)
7. Dentistry Building Subcommittee August 5, 1966 (#2)
8. Dentistry Building Subcommittee August 12, 1966 (#3)
9. Dentistry Building Subcommittee September 9, 1966 (#4)

Meetings Held For Which Minutes Not Yet Available

1. Dentistry Building Subcommittee September 15, 1966 (#5)
2. Clinic Directors Building Subcommittee Sept. 16, 1966(#6)
3. Dentistry Building Subcommittee September 23, 1966(#6)
4. Dentistry Building Subcommittee September 30, 1966 (#7)
5. Public Health Subcommittee October 3, 1966 (#11)

The NEXT MEETING will take place Monday, October 31, 1966, 3:30 P.M., in 510 DIEHI. At that meeting members should be prepared to comment on the draft report. Between now and that time, the subcommittees should meet to review the draft report and work on ways to incorporate the program into the space and personnel report.

Respectfully submitted,

John H. Westerman
Executive Secretary

ADDENDUM TO LEARN COMMITTEE MINUTES OF MONDAY, OCTOBER 10, 1966 (#21)

Status of Health Science Building Projects

October, 1966

This information was provided by Dean N.L. Gault, Jr., for the College of Medical Sciences and by Dean Erwin M. Schaffer for the School of Dentistry.

1. Pediatric Clinical Research Unit

A proposal, if approved, would involve remodeling stations 35, 45 and 46. The existing Social Service Department would also have to be relocated. A site visit has been made and approval for federal funds is awaited.

2. V.F.W. Addition

This proposal would involve the addition of two floors to the existing V.F.W. structure. Third floor would be for expansion of the Computer Center and fourth floor would be to provide research space for the Department of Medicine. Some funds are available for this project. The project is in the talking stage and there has recently been some discussion of building a fifth floor roof facility for animal quarters.

3. Variety Heart Hospital Addition

A. Two floors were dedicated on September 27, 1966. These contain room for clinics, offices, a new heart cath lab, radiology, and cardio-pulmonary function space.

B. Some money is available to add two floors to the new unit. A planning committee has been appointed. It was suggested that this committee have liaison with Dr. French's Clinical Medicine Committee, in the same manner that the Clinic Directors do.

4. Acquisition of Midway (Naegele) Property

This building contains 46,000 square feet. A new committee on space allocation for the College of Medical Sciences, under the chairmanship of Dr. Varco, is soliciting requests for space. Dr. Varco's committee will first develop criteria for the allocation of space in this building (and approximately 50 rooms in Powell Hall) and then make recommendations as to priorities.

5. Powell Hall

Some space has been converted to house the in-service education program of the Nursing Service Department. Another six rooms have been temporarily assigned as office space. Approximately 50 more rooms will be available for office assignment by next spring.

6. Cancer, Heart and Stroke Application

The regional planning group has submitted a request for planning funds to Washington, D.C. Dr. Robert Ulstrom has been appointed Associate Dean and University Medical School coordinator on this project. Recruitment is under way for the regional group planning staff.

7. Mental Retardation Report

The decision was reaffirmed that the University Health Sciences will not plan for this kind of program.

8. Dentistry Addition

Eight thousand gross square feet were added in the fourth floor Owre remodeling project. Genetics, Periodontics and Oral Physiology will gain space in this expansion.

STERLING GARRISON

UNIVERSITY OF *Minnesota*

OFFICE OF THE PRESIDENT • MINNEAPOLIS, MINNESOTA 55455

August 29, 1966

MEMORANDUM

To: Members of the Committee for the Study of Physical Facilities for the Health Sciences

From: Elmer W. Learn *EWL.*

Subject: Date of next meeting

The next meeting of the Committee is scheduled for Monday, October 3, in Room 510, Diehl Hall at 3:30 p.m. We hope at that time to review progress of the various sub-committees during the summer, specifically regarding development of the preliminary draft of the next report. We will also report on hearings with the various legislative committees and on the report of the Health Manpower Commission. We hope everyone will make an effort to attend.

EWL:jl

OCTOBER 3.

UNIVERSITY OF *Minnesota*

OFFICE OF THE PRESIDENT • MINNEAPOLIS, MINNESOTA 55455

September 6, 1966

MEMO TO: Members of the Committee for the Study of Physical Facilities for the Health Sciences

FROM: Elmer W. Learn

SUBJECT: Change in Meeting Date

Due to several conflicts, it is necessary to change the date of our next meeting from October 3 at 3:30 to October 10 at 3:30 in 510 Diehl Hall.

Oct 10 1966

UNIVERSITY OF *Minnesota*

OFFICE OF THE PLANNING COORDINATOR • MINNEAPOLIS, MINNESOTA 55455

October 25, 1966

MEMO TO: Members of the Committee for the Study of Physical Facilities for the Health Sciences

FROM: Elmer W. Learn

SUBJECT: Change in Meeting Date

In order that the subcommittees may have more time to work with the preliminary draft of Part II, Program, Personnel and Space Report, the meeting scheduled for October 31 at 3:30 has been changed to November 7 at 3:30 in 510 Diehl Hall.

Nov. 7, 1966

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COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES
FOR THE HEALTH SCIENCES

Minutes of Meeting Monday, November 7, 1966 (#22)

Present: Elmer Learn, Chairman; Gaylord Anderson, McCollum Brasfield, Winston Close, Lyle Franch, Edna Fritz, Sterling Garrison, N.L. Gault, Jr., Gertrude Gilman, Eugene Grim, Mellow Holland, Robert Howard, Robert Isaacson, James Jensen, Richard Magraw, William Thorp, John Westerman, Edmund Nelson, Hugh Peacock, Kathryn Ritzen.

Absent: Ione Jackson, Frederic Kottke, Erwin Schaffer, William Shepherd, James Stephan, Lawrence Weaver.

Guests: Mr. John Stockwell, Administrator, Children's Hospital & future Administrator, new University Hospital, U of Massachusetts Medical School; Mr. Peter Sammond, new Associate Director, University Hospitals.

NEXT MEETING: MONDAY, NOVEMBER 28, 1966, 3:30 P.M.,510 DIEHL HALL

I. Dr. Learn introduced Mr. Stockwell and Mr. Sammond and welcomed them to the meeting.

II. Next, Dr. Learn read his letter of October 26, 1966, addressed to the subcommittee chairmen, outlining the remaining work to be done for the final report. The floor was then opened to comments from subcommittee chairmen on their subcommittees' progress or problems with implementing the charge contained in Dr. Learn's letter. As encouragement, Dr. Learn reported that, at a meeting the previous week, the State Planning Office had indicated it was very impressed with the health sciences planning efforts.

III. Subcommittee Progress and Problems.

1. Dr. Holland asked if December 1 were the date for submission of the final report. Dr. Learn said that he would like subcommittee drafts of their new contributions to the final report by the next meeting of this committee on November 28. This would allow about two weeks' discussion of the final report by the parent committee, aiming for submission of the report to University Administration by January 1. The report needs to be printed and available for the state legislature early in the year.

2. Dr. Holland reported that the Dentistry Building and Planning Committees had met jointly to review their portion of the Part II report. They found it difficult to distinguish the bases for programs from the student ratios.

3. Dr. Learn emphasized the need to document faculty and space projections for the legislature, and part-time faculty estimates now ought to be included as well, where they are important.

4. Dr. Holland pointed out that the tables in the Part II draft report fluctuate from gross to net square feet, and will have to be corrected.

The tables have enabled the dental subcommittee to detect duplications and omissions, but Dr. Holland expressed the reluctance of his committee to confront his faculty with this information and ask again for estimates.

5. Dr. Learn felt that at this point, it is the subcommittee's responsibility to pare faculty estimates and to bring duplications to the attention of the faculty.

6. In response to a question from Dr. Holland, Dr. Learn said that the $54 Million package is based on present construction costs, not future ones, but they are generous figures.

7. Dr. Learn commended the form of the dentistry tables and justification, and recommended them as a model for the final report.

8. Dr. Fritz reported that the Nursing Subcommittee had not yet met, but they have reviewed the Part II report and are ready to work on it.

9. Dr. Anderson said he was calling a meeting of his division directors to review the report, and will hold a public health subcommittee meeting afterward. He did not anticipate much change in the Public Health report.

10. Dr. French reported that at the last meeting, the Clinical Medicine Subcommittee had decided to re-adjust faculty extimates on the basis of time spent on various program efforts. A meeting has been scheduled for November 15 to review the results of this re-adjustment.

11. Dr. Grim said a Basic Sciences Subcommittee meeting was scheduled for November 10, to review the projections which members have compiled for the final report.

12. In regard to faculty projections, Dr. Learn said that, on viewing the raw data in the Part II draft report, University Administration wants the subcommittees to divide staff estimates by student-faculty ratios. 6.3:1 is the average used by University Administration to justify claims for new faculty in the professional schools; this ratio is not necessarily used in allocating existing faculty. This ratio seems to be the limit of state support. Any faculty increase in excess of this ratio will have to be rigorously justified. The Deans and Vice-Presidents will have to review the estimates, and this committee will ultimately become involved with paring down requests. Dean Howard pointed out, however, that in cases where faculty ratios are exceeded, each case will be judged individually on a program basis; there will be no across-the-board cuts.

13. Dr. Gault asked how faculty increases caused by program changes which re-define faculty activity, would be viewed. Dean Howard said that one problem of basing faculty increases on program changes is that this logically leads to formulation of a line-item budget. Such a budget is then subject to legislative approval or disapproval of individual programs, with resulting obvious drawbacks.

14. Mr. Brasfield reported that the Ancillary Subcommittee had met and found some cases of duplication between its estimates and those of the Clinical Medicine Subcommittee.

IV. Charge to the Committee. Dr. Learn told the committee that the kind of quantitative information desired, backed up by program justifications, could be a precedent for overall management and budgeting. A common ground of data is required for proper administrative judgments, and the long range planning report should provide that, at least to some extent. This report will serve as a master document to guide future planning and expansion. For example, all future applications for research grants ought to be reviewed more critically for their faculty and space implications, and compared with the long range planning report for consistency with overall objectives.

Recognizing the concern of some that the estimates made now could become a straight jacket for the future, Dr. Learn emphasized the Administration's desire and expectation that the report should be consistently updated to reflect the best judgment of the time. It is recognized that curriculum reviews will answer questions that cannot be answered now, and may even change the direction of health science activities from what the report has stated. But faced with an immutable deadline, i.e., the convening of the legislature in January, the University must support its requests with the best information available now.

V. Record of Minutes Distributed Since the Last Meeting:

a.	Clinic Directors Building Subcommittee	September 15, 1966 (#5)
b.	Learn Committee Minutes & Addendum	October 10, 1966 (#21)
c.	Revised Membership Roster	
d.	Ancillary Subcommittee	October 24, 1966 (#9)
e.	Clinical Medicine Task Force	October 26, 1966 (#17)

Meetings Held for Which Minutes Not Yet Available

a.	Dentistry Building Subcommittee	September 15, 1966 (#5)
b.	Dentistry Building Subcommittee	September 23, 1966 (#6)
c.	Dentistry Building Subcommittee	September 30, 1966 (#7)
d.	Public Health Subcommittee	October 3, 1966 (#11)
e.	Dentistry Planning & Building Subcommittee	October 28, 1966 (#8)
f.	Basic Sciences	November 10, 1966 (#10)
g.	Ancillary Subcommittee	November 14, 1966 (#10)

VI. Next committee meeting. It was agreed that the committee meet again on Monday, November 28, at 3:30 P.M. in 510 Diehl Hall. A draft of the final report should be available for the committee at that time, and review of the report will be the main agenda item.

Respectfully submitted,

John H. Westerman
Executive Secretary

COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES FOR THE HEALTH SCIENCES

Minutes of meeting March 31, 1967 #26

Present: Elmer Learn, Chairman; Richard Bond for Gaylord Anderson, Edna Fritz, Sterling Garrison, Mellor Holland, Robert Isaacson, Richard Magraw, Hugh Peacock, John Westerman, McCollum Brasfield, Edmund Nelson

NEXT MEETING: AT THE CALL OF THE CHAIRMAN

Because the meeting attendance was poor, Dr. Learn discussed what he would put in a letter to the committee members.

BOARD OF REGENTS SEMINAR

Dr. Learn told the Committee of the plans for the April 14 seminar with the Board of Regents. Dr. Learn will introduce the topic, explaining what we mean by Health Sciences and giving the history of the planning effort. Dean Howard, Dean Schaffer, Dean Weaver and Mr. Westerman will spend 30 minutes on what the Health Sciences do and how they interact with each other and with the total University. Dr. Learn will close the presentation with a summary, reminding the Regents of what they approved last summer and placed before the legislature. A half hour of discussion will follow.

The aim is to make this seminar a learning experience for the Board of Regents, not a plea for support. If we are successful, Dr. Learn feels, the Regents will be convinced of the work done in the Health Sciences and the quality of work going into the planning, and there will be no question about the Regents' accepting the final report. There will also be a large press group attending the seminar.

FINAL REPORT

Copies of the "Summary of Existing and Projected Space, Faculty and Student Enrollment in the Health Sciences" were circulated. The major gap in the Basic Sciences summary has not yet been resolved. This summary will serve as a skeleton around which the Editing Committee will put flesh to make up the final fifty page report for circulation to the central administration and Board of Regents in May or June.

Miss Fritz asked that a statement be made in the final report regarding the Nursing Subcommittee's feeling that the space projections are inadequate to carry on a progressing school of nursing. The Nursing Subcommittee fears in the future the report readers will question the soundness of the planning, and that legislators will point to the report and ask why the departments cannot carry out effective programs within these projections. Miss Fritz feels we should not prepare a report which will embarrass us at a later time.

Professor Bond said the Public Health Subcommittee also feels the projections are inadequate. Other schools of public health are expanding at such a rate that Minnesota's school is losing ground.

Miss Fritz pointed out that while space projections were cut, the number of students projected was not cut. The Nursing School is under constant pressure to expand their programs. Miss Fritz suggested that perhaps the University should not have its own Nursing School, that they should get personnel from other centers rather than operating a less than adequate department.

Mr. Garrison reminded the Committee there would be changes over the years in the storage and retrieval of information and in teaching methods. Presently our space may be inadequate, but we should find ways to adapt and ways of more effective space utilization.

Considering the limited resources of the State of Minnesota, Dr. Magraw suggested that we may have a better University and College of Medical Sciences than we have a right to expect.

Dr. Learn wishes the final report to be written in a positive vein. It will clearly be a summary document reflecting the realities of the $54 million. The matter of inadequate projections will be taken into account when the Editing Committee prepares the report. Individuals interested in looking into the planning effort at greater depth will be referred to Part III - Subcommittee Program and Space Reports.

After the Editing Committee has prepared the final report, the committee will meet again for approval of this report.

Minutes sent out since the last meeting:

a. Learn Committee	February 27, 1967	#24
b. Nursing Subcommittee	February 16, 1967	
c. Dentistry Subcommittee	March 2, 1967	#11
d. Clinical Medicine Task Force	March 8, 1967	#20
e. Learn Committee	March 13, 1967	#25

Respectfully submitted,

John H. Westerman
Executive Secretary

Summary of Existing and Projected Space, Faculty and Student Enrollment in the Health Sciences

UNIVERSITY OF MINNESOTA

Prepared
by

Committee for the Study
of Physical Facilities
for the
Health Sciences

March 31, 1967

SUMMARY

ANCILLARY DEPARTMENTS

	Space (Net Square Feet)	
	Existing (1966)	Projected (1973)
Medical Technology	1,590	11,405
Occupational Therapy	4,775	9,611
Physical Therapy	5,208	9,950
Radiologic Technology	1,150	1,350
Vocational Rehabilitation Counseling	651	1,543
Computing Sciences	1,710	12,710
Medical Art and Photography	3,150	5,750
Mortuary Science	1,500	3,400
Total	19,734	55,719

	Faculty	
	Existing (1966)	Projected (1973)
Medical Technology	13	31
Occupational Therapy	5	10
Physical Therapy	9	12
Radiologic Technology	1	1
Vocational Rehabilitation Counseling	3	4
Computing Sciences	1	4
Medical Art and Photography	1	6
Mortuary Science	4	6
Total	37	74

	Students (Undergraduate/Graduate)	
	Existing (1966)	Projected (1973)
Medical Technology	260/11	420/30
Laboratory Assistants	60/0	
Occupational Therapy	52/0	80/4
Physical Therapy	50/2	90/5
Radiologic Technology	40/0	80/1
Affiliated Radiological Technicians	175/0	300/0
Vocational Rehabilitation Counseling	0/15	0/25
Computing Sciences		0/15
Medical Art and Photography		0/4
Mortuary Science	126/0	165/5
Total	763/28	1,135/89

3/31/67

SUMMARY

Basic Medical Sciences

Department	Space (Net Square Feet) Existing (1966)	Space (Net Square Feet) Projected (1973)
Anatomy		
Biochemistry		
Microbiology		
Pathology		
Pharmacology		
Physiology		
Total	160,495	223,200

	Faculty Existing (1966)	Faculty Projected (1973)
Anatomy		
Biochemistry		
Microbiology		
Pathology		
Pharmacology		
Physiology		
Total	68	93

	Students Existing (1966)	Students Projected (1973)
Graduate	230	372
Undergraduate Dental	400	560
Undergraduate Medical	600	800
Other Undergraduate		
Total		

3/31/67

SUMMARY

CLINICAL MEDICINE DEPARTMENTS

	Space (Net Square Feet)	
	Existing (1966)	Projected (1973)
Anesthesia	2,220	8,541
Laboratory Medicine	32,989	54,614
Department of Medicine		
Internal Medicine and Departmental Facilities	22,725	36,244
Dermatology	3,343	7,332
Obstetrics - Gynecology	5,175	8,254
Ophthalmology	4,155	6,627
Otolaryngology	3,839	6,123
Pediatrics	31,344	49,869
Physical Medicine and Rehabilitation	40,051	49,000
Psychiatry-Neurology Department		
Neurology	13,286	21,190
Adult Psychiatry and Departmental Facilities	4,175	7,659
Child Psychiatry	1,883	4,003
Clinical Psychology	1,746	3,785
Psychiatric Research	8,505	13,565
Radiology Department		
Departmental Facilities	6,023	12,606
Diagnostic	13,597	21,686
Therapy	6,754	10,772
Department of Surgery		
Departmental Facilities	10,956	17,474
General Surgery	20,341	32,442
Neurosurgery	2,681	4,276
Orthopedic Surgery	871	1,389
Urology	1,719	2,742
Total	238,378	380,193

	Faculty	
	Existing (1966)	Projected (1973)
Anesthesia	7	11
Laboratory Medicine	27	35
Department of Medicine		
Internal Medicine	30	39
Dermatology	1	3
Obstetrics - Gynecology	5	7
Ophthalmology	4	5
Otolaryngology	4	5
Pediatrics	40	44
Physical Medicine and Rehabilitation	39	45

Clinical Medicine Departments (continued)

	Faculty	
	Existing (1966)	Projected (1973)
Psychiatry - Neurology		
Neurology	20	25
Adult Psychiatry	7	9
Child Psychiatry	3	4
Clinical Psychology	10	13
Psychiatric Research	7	9
Radiology Department		
Diagnostic	9	13
Therapeutic	6	10
Department of Surgery		
General Surgery	15	19
Neurosurgery	4	5
Orthopedic Surgery	3	4
Urology	3	4
College of Medical Sciences Admin.	3	3
Total	247	312

	Students	
	Existing (1966)	Projected (1973)
Undergraduate Medical	600	800
Medical Fellows and Residents	275	397
Total	875	1,197

SUMMARY

SCHOOL OF DENTISTRY

Program	Space (Net Square Feet) Existing (1966)	Projected (1973)
Research	16,966	65,195
Clinical	28,284	107,275
Preclinical Facilities	12,638	20,049
Dental Hygiene and Dental Assisting Facilities	2,111	16,625
Miscellaneous	7,398	20,856
Total	67,397*	230,000
Hospital Program	487	20,564

	Faculty Existing (1966)	Projected (1973)
Research	12	32
Clinical	43.5	86
Preclinical Facilities	3	4
Dental Hygiene and Dental Assisting Facilities	3.2	15
Hospital Program	1	7
Miscellaneous	1.5	3
Total	64.2	147

	Students Existing (1966)	Projected (1973)
Undergraduate D.D.S.	400	560
Graduate Study and Advanced Clinical Training	47	163
University Hospital Program		
Rotating Interns		8
Resident Dental Fellows		8
Dental Hygiene (2 year)	81	285
Dental Assisting (1 year)	35	140
Postgraduate	6	20
Continuing Education	495	800
Total	1,064	1,984

*Adjusted by Sub-Committee from 63,190

3/31/67

SUMMARY

SCHOOL OF PUBLIC HEALTH

	Space (Net Square Feet)	
	Existing (1966)	Projected (1973)
Administration	925	1,700
General Purpose	2,195	3,880
Biostatistics	3,638	10,000
Environmental Health	13,432	20,500
Epidemiology	2,470	10,000
Health Education	1,000	2,500
Hospital Administration	4,076	10,800
Mat. and Child Health	496	2,500
Mental	118	700
Personal	251	500
Physical Hygiene	10,881	20,000
Public Health Nursing	1,038	600
		2,000
Total	40,520	85,680

	Faculty	
	Existing (1966)	Projected (1973)
Full-Time Faculty	37	63

	Students	
	Existing (1966)	Projected (1973)
Graduate		
Biostatistics	35	60
Environmental Health	55	80
Epidemiology	5	15
Health Administration	15	30
Health Education	12	30
Hospital Administration	74	74
Public Health Nursing	60	80
Veterinary Public Health	7	12
Other	6	15
Sub-Total	269	396
Undergraduate Courses:		
Personal and Community Health	5,000	7,000 (est.)
Total	5,269	7,396

3/31/67

SUMMARY

SCHOOL OF NURSING

Function	Space (Net Square Feet) Existing (1966)	Projected (1973)
Administration	2,327	2,878
Teaching	9,990	25,839
Research	165	4,283
Total	12,482	33,000

	Faculty Existing (1966)	Projected (1973)
Full-Time Faculty	37	66

	Students Existing (1966)	Projected (1973)
Practical Nurse Program	43	-
Undergraduate	328	398
Graduate	66	138
Adult Special	4	14
Total	441	550

3/31/67

UNIVERSITY OF Minnesota

OFFICE OF THE PLANNING COORDINATOR · MINNEAPOLIS, MINNESOTA 55455

COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES OF THE HEALTH SCIENCES

TO: MEMBERS OF THE LEARN COMMITTEE AND SUBCOMMITTEE

FROM: JOHN H. WESTERMAN, EXECUTIVE SECRETARY

RE: PAPERS RELATING TO PLANNING

In keeping with our policy of distributing information on the planning process, I am enclosing two papers from the recent International Hospital Congress:

1. The Relationship of the Health Teaching Complex to the University and the Total Health Community by Dean J.F. McCreary

2. Teaching and Research Requirements in a Health Teaching Complex, by James W. Stephan

Our last Learn Committee meeting (#26) was March 31, 1967. It is anticipated that University Administration will soon complete plans for the expenditure of $500,000 planning money granted by the 1967 legislature. Therefore we can look forward to a resumption of the health science planning project within a very short time.

TEACHING AND RESEARCH REQUIREMENTS IN A HEALTH TEACHING COMPLEX

by James W. Stephan
President, James A. Hamilton Associates, Inc.
Professor, Hospital Administration
University of Minnesota, Minneapolis, Minnesota

Position Paper for the Fifteenth International Hospital Congress, Chicago
August 24-29, 1967

A health teaching complex involves a number of facilities which, heretofore, were considered as separate units. These are the following: a medical school; a school of dentistry; a school of public health; a school of health administration; a school of nursing; a school of allied medical sciences (occupational therapy, physical therapy, speech therapy, laboratory technology, x-ray techniques, etc.); a university teaching and research hospital; other teaching hospitals, either service or research (Veterans Administration, city, county, state, religious or community); public and private health agencies (state board of health, city health department, mental health clinics, etc.); specialty hospitals (extended care, nursing homes, psychiatric, rehabilitation, children's, etc.); ambulatory care and outpatient facilities; special research institutes, both for basic science and clinical sciences; biomedical library; continuation educational facilities; and student housing. Not all of these units will be found in all complexes. In addition, a well defined population group is essential.

There are a few instances where a totally ideal environment can be created, bringing together the personnel, equipment, and facilities considered desirable for a health teaching center. Not only is there

the problem of deciding what are the desirable elements in such a complex and in what proportions they should be brought together, but the existing patterns of care and the structures that are already in operation usually complicate the "ideal situation."

There is, however, general agreement that there should be a close physical relationship between the various elements of the health teaching complex. While this objective also applies to other disciplines in the university, it is particularly applicable to this discipline.

One important point in building a teaching hospital on a university campus is that it usually introduces a service to the general public that is not usually paralleled in any way by other facilities on the campus. It is the degree of public service which the institution is to provide to the community in which it is located, and the relationship of the teaching hospital on campus to other hospitals, that will have a major bearing on planning and in the teaching and research requirements.

For example, in some countries (e.g., Great Britain) the teaching hospital is expected to be the center of a regional program of patient service, so that the number of beds, provided in the institution, will be larger than if the hospital were not expected to provide this service function for the community. In such instances, the size of the hospital will run between 1000 and 3000 beds, depending on the size of the population and on its service area. In this instance, the facilities for teaching and research activities of the medical school and other health programs would likely be located in the same buildings as the service beds for the population.

In comparison with this arrangement is the concept of locating the teaching hospital on the university campus where it will provide service to a small number of referred patients. It would not be regarded as the prime service facility for a community in which it is located. In this instance, the demand for routine hospital service in the community would be met by other service hospitals in the area, and the teaching hospital could be sized for the teaching and research needs of the health center.

By locating the hospital on the university campus, close contact is possible with the other faculties and disciplines of the university. In this way, the other sciences and humanities may have an influence on the growth and development of health facilities and sciences. Care must be taken to ensure that there is a continuous contact and interchange of ideas between the basic medical scientist and the clinical scientist of the health group. Being located on the university campus, this could ensure a continuous transfer of ideas from the academic environment of other faculties to the health sciences, and the application of these ideas to patient care. However, there is a disadvantage in having a referral hospital located on campus if it is the only source of teaching material for the health student. If this is the case, then the student will see an unbalanced sample of teaching material. Therefore, to ensure that the student will see a complete spectrum of types of patients, there should be a very close affiliation of the academic teaching hospital on the campus with the service hospital or hospitals in the community. It is in the latter hospitals that students will see the "run of the mill" type of patient and gain

an understanding of how medicine is practiced in the community. Under this sort of an arrangement, the ideal situation would be to have a small referral hospital on the university campus where emphasis would be given to teaching and research activities, with every effort made to integrate the complex into the "total" university campus. If possible, the clinical nursing areas, outpatient departments, clinical research, and basic science laboratories, as well as faculty offices, should be in close proximity to each other, and if possible, on the same floor of the structure.

If this closely integrated facility cannot be arranged and some separation must be made, it is felt that this first separation might be between the basic sciences and clinical sciences departments. If this separation is carried out, then the basic sciences departments should be located on the university campus, so that they could react and relate to their counterparts in the university proper. However, it may be decided that such a break is not feasible or desirable, and all the health group may be kept together with the separation coming between the rest of the campus and the total health facilities.

Other less drastic separations could occur, such as the separation of the outpatient department from the nursing areas. If further separation is required, then possibly the research areas could be removed from nursing units and from faculty offices.

In the area of teaching, surveys have shown that the majority of hospitals in which teaching takes place were not planned with this activity in mind. Rather, they have been service hospitals with teaching activities forced into them. The increase in teaching activity

that is taking place in the clinical areas demands that ample conference and seminar rooms, treatment, and examination areas, as well as offices for teachers of the various disciplines, such as nursing, dietetics, social work, etc., be provided as an integral part of the nursing area.

The emergence of the team concept in teaching and treatment makes it desirable for these groups to receive instruction together, not only on the nursing units, but in a common teaching facility as well. The former can be accomplished by providing the facilities already mentioned, the latter by specially designed instructional resources areas, where lecture halls and seminar rooms, study cubicles, etc., are grouped together in a complex especially designed for this purpose. Such a complex should incorporate the newest in teaching aids, such as backscreen projections, single-shot film reels, computerized student teaching devices, and so on. While some of these are still in the developmental stage, there is no doubt that they will be incorporated in teaching facilities in the future. The need to incorporate these is even more pressing if the shortage of qualified health teachers becomes more acute.

The use of the new teaching media, closed circuit television, rear screen projection, video tape, computerized student teaching equipment will require facilities where the teacher may learn how to use these media and also make films for use in the classroom. This will require a completely new type of staff and facility, and should be included in any new health teaching complex being planned today.

One of the fast emerging areas of research is related to the application of the computer to health services. It is incorrect to assume that the automated systems and procedures that have been successful in industry and commerce will be equally as successful when applied to the health field. On the contrary, the requirements in industry that the successfully automated processes require consistently constant raw material cannot be met in the treatment of patients, since each patient is different, and inconsistency is the rule, not the exception. The result is that each treatment pattern is individually designed for each patient and at times requires adjustment as the process is being carried out since the patient may change during this process.

The modern health teaching research facility requires a computer laboratory, both where research may be undertaken and where the service needs of the institution can be handled more effectively and more efficiently.

The size of the research facilities needed and to be provided is a most complex problem. This relates to the number of professionals who will want to do research, to their competence and in our country their ability to attract research funds for construction and staff, and to the degree of interest and support this activity can obtain from the top-level administration. The number of individuals involved (top investigators, postdoctoral fellows) depand to a degree upon the space and the research support money available. The square footage of net research areas provided at present vary from approximately 500 to 1500 for each basic scientist, and from approximately 300 to 1000 for each clinician. A senior staff man in a medical school is very likely

to request an area of 2000 net square feet for his research department. There is absolutely no criteria for number of doctoral and postdoctoral students.

The design of a research structure has been the subject of much discussion. The main question is that of the vertical development versus horizontal. As medical centers expand in size, serious difficulties are being encountered in the obtaining of sufficient ground area for this development. As a result, there has been a tendency for buildings to be constructed vertically with the opinion being expressed that this tends to isolate, by specialties, the individuals who work in the vertical towers. It is felt that if buildings could be constructed horizontally, where space permits this, there will be more contact between the various departments; for example, basic and clinical sciences, since individuals are more likely to move horizontally on the same floor than they are to take elevators to go between floors.

The saying that facilities should be within "bare headed distance" suggests that they should be built in close proximity and, if this is the case, we are expected to provide laboratories for research and to meet the increasing demand for this type of area, utilizing the funds made available. It seems inevitable that vertical expansion will be necessary in complexes that are presently built, but that horizontal development might be considered in new facilities.

The tremendous amount of money that has been made available in the past is probably going to level off somewhat. Even so, the demands which will continue to be made for space, equipment, and personnel in the field of research will very likely continue for some considerable time.

In summary, medical teaching and research complexes being planned at the present time should include new areas that have not been envisioned previously. There should be computer laboratories, centralized instructional resources, expanded space for both basic and clinical research, and the ability for flexibility as interests and funds change.

The teaching and research activities should be located as close by the offices of faculty, the nursing areas, and the diagnostic and treatment facilities of the hospital as can be obtained. Where this close arrangement is not possible, the separation between the various units of basic sciences, clinical research, and patient service will depend on the circumstances and the philosophies followed by the individuals in charge of developing the center. Emphasis should be placed on having health integrated into the university.

In any event, the basic concepts and policies of the university and the health teaching complex, as well as the community in which they are located, should first be examined very carefully before any planning is undertaken for these facilities for the future. These basic concepts and policies are essential to the creation of a successful health science center.

THE RELATIONSHIP OF THE HEALTH TEACHING COMPLEX TO THE UNIVERSITY AND THE TOTAL HEALTH COMMUNITY

Address by Dean J.F. McCreary at the
15th International Hospital Congress, Chicago
August 24-29, 1967

The education of physicians must change and adapt to newly emerging social forces and community needs. With these changes the facilities for medical education including teaching hospitals must modify their roles. I would like to draw to your attention today the problems which face medical schools and the modifications in teaching facilities that must be made to meet these new changes.

1. Increase in Medical Knowledge

When I graduated from medical school over 30 years ago it was possible for my instructors to expose me to all that was known about medicine. I could emerge into practice with the comfortable feeling that with ordinary intelligence I should be able to practice medicine as well as anyone in the world. How very different it is today. It has been stated that 80 per cent of all that is known about biological science has been discovered during the past 40 years. It is stated that knowledge in medicine doubles every 10 years and the World Health Organization tells us that a new medical article is being published every 23 seconds in the world today. This explosion of medical knowledge has made the tasks of medical educators very much more difficult. There are many evidences of the unrest which this has produced in medical schools. There has been more universal dissatisfaction expressed with the end product of the process of medical education and more true puzzlement about how to improve that end product than ever before. And

this unrest has not been confined to medical educators. There has been more outside criticism of medical schools in recent years certainly than in the years when I was an undergraduate. There has been criticism that the schools were too scientific, that they were too demanding or not demanding enough. There have been many complaints that they were not producing physicians who were capable of doing general practice. Yet I know of no medical school which has set as its goal the production of general practitioners. Rather, all schools attempt to graduate an undifferentiated physician capable with further training of doing general practice, a clinical specialty, public health, or basic medical research.

Let me describe briefly some of the experiments and movements which criticism and unrest have stimulated in medical schools. One study which has been thought provoking and disturbing to medical educators was performed by Peterson and his colleagues in the examination of medical practice in North Carolina. Some of you may be familiar with the work done by Clute on general practice in Canada. Both studies indicated that there was little or no relationship between the quality of the practice which was undertaken by the physician and the nature of his training in medical school.

Another aspect of medical education which has been carefully studied is the length of time required to prepare a physician for his tasks. Rather intense studies have taken place in a number of universities. As you know on this continent the usual pattern is that the individual graduates from medical school eight years after he has graduated from highschool. He takes four years for a college degree and then four years of medicine. One indication of the frank uncertainty

about the correctness of our present standards is indicated by the fact that among four universities that have studied this matter most carefully, three have reduced the length of time for a segment of their medical students to six years instead of eight whereas in the fourth another year has been added increasing the time to nine years. It is clear that we really don't know how much time is required to educate a physician.

Still another approach has been to take a long hard look at the learning process and try to develop the concept of life-long learning in medicine. For many years we tended to believe that as medical educators we did not need to be concerned with the basic techniques of education. After all, we were teaching doctors and the process was very different from teaching highschool students. George Miller, an able and respected young internist originally at the University of Buffalo, pioneered the examination of our teaching techniques and methods. The work which Dr. Miller began some 15 years ago has spread through medical schools on this continent and elsewhere. He has been able to demonstrate that many, if not most of our methods of instruction, make no demand whatever on the student but permit him to be a passive recipient of spoon-fed material. He has accentuated the fact that however great is the student's knowledge at the time of graduation he will be seriously and perhaps dangerously out of date ten years after graduation unless he continues a process of self-education. He has demonstrated clearly that the technique of teaching to the physician must be essentially one of problem solving with the student himself taking most of the initiative for the work. Dr. Miller's studies have been immensely valuable in improving methods of medical education.

Another manner in which medical education has attempted to improve the situation is by the reorganization of the curriculum, the introduction of integrated teaching, the attempt to relate basic medical science teaching with meaningful clinical problems and vice versa. These approaches represent a rapidly growing trend in medical schools all over this continent.

I think it is safe to say that there is scarcely a medical school today that is not attempting some experiment with curriculum or teaching techniques in attempting to improve the end product of the educational process. In view of the fact that it is only with the greatest difficulty that we can find evidence that even radical changes in teaching methods and curricula result in any signficant change in the graduate, it seems realistic to anticipate widespread success from such attempts.

What do these evidences of unrest in medical education signify? Why has the criticism of medical education developed? Why have educators suddenly become so generally concerned about the methods of instruction and the effectiveness of their end product? Surely it is not because of a sudden development of conscience among medical educators. I am quite certain that our predecessors were every bit as anxious to turn out able physicians as we are. They were quite as conscientious and sensitive to the goals of medical education as any medical educators alive today.

2. <u>The Changing Role of the Physician</u>

Surely the reason for this discontent, this more or less blind groping for appropriate answers to medical education lies in a deeper and more fundamental change. Some part of it at least lies in the changing pattern of medical care and the changing role of the doctor

to the community which he serves; in the changing attitude of patients toward physicians; in the changing amount of power that the physician possesses over the individuals whom he treats.

It is abundantly clear that great changes have taken place in some of these fundamental areas. Let us examine some of these to see how they could influence our reactions towards the adequacy of medical education.

During the lifetime of most of us in this room we have seen profound changes in the methods of medical care. We have seen the ability to diagnose and treat, effectively and dramatically, increase; we have also seen the power of the physician to harm as well as to help his patient increase greatly. Those of my age group have seen the popular picture of the physician change drastically from the kindly well meaning little man whose services were rather ineffectual but who could never consider doing harm to a patient to the powerful effective distributor of medical miracles. If the medical miracles are not forthcoming, it is usually considered to be because the physician has made an error or has been uncaring or derelict in his duty. For the first time, because of vastly increased powers put into our hands by the advances in medicine, we are subject to censure and blame when things go wrong.

The attitude of people towards medicine has changed quite as much as medicine itself. They know very much more about medicine, they appreciate what it has to offer and they want it. They consider that they have a fundamental right to good medical care.

Whereas the physician himself was the object of great respect in past generations and the services which he provided were considered

pleasant and comfortable but not necessarily important, nor it is medicine which is respected as being powerful, important and necessary to well being. The purveyors of medicine are open to critical evaluation if they do not provide this powerful force in the manner which the public deems to be correct.

Further the forces which medicine can bring to bear are being demanded by increasing numbers of patients for a steadily increasing variety of complaints. At one time the physician was called upon to treat only what seemed to be serious physical illness. Now, in addition to his being called for less and less serious physical complaints, he is called to play roles other than those traditionally ascribed to the physician. The roles of parent, teacher and pastor are increasingly presented to the physician. Also, as life expectancy increases the increased numbers of elderly patients have greater demands for medical care thus increasing the load still further. All of this is a natural result of the respect which has developed for the services which the physician has at his command--but it greatly increases the responsibilities which he must face.

3. The Declining Number of General Practitioners

The increasingly difficult task which the physician faces is changing the pattern of practice today. Fewer and fewer of our recent graduates contemplate general practice. We have become increasingly conscious of this in medical schools. We have become aware of the fact that with virtually all of the teaching done by specialists and very little by general practitioners there is a constant and subtle propaganda influencing the sutdent toward specialty training.

In our own medical school we have attempted to combat this by bringing general practitioners into the teaching program in every possible way. In the first year we have insured that one of the students' first contacts is an able general practitioner. Frequently the attachment made at this early stage has lasted throughout medical school and the general physician has continued to act as the student's tutor and friend. We have a preceptorship program also in which students are encouraged to participate but above all, our clinical teaching is now being done in an open hospital in which 900 physicians, many of whom are general practitioners, practice. For all of these reasons we had thought that there should be a large percentage of our students encouraged to enter general practice. However, such has not been the case.

When we try to evaluate the reasons we find that the prestige associated with a specialty may have some influence. Income certainly does not play a role in our particular city because the general practitioners with unrestricted hospital privileges have generally higher incomes than any other group. The most commonly stated reason is the doubt on the part of the student that his abilities will permit him to provide medical care of high quality to his patients if he attempts to cover the whole spectre of disease. The nature and complexity of medicine as he has seen it in his undergraduate and intern days makes him unwilling to accept the responsibilities of general practice. And so to protect himself and insure that he will be able to practice a level of medicine which is compatible with his ideals he narrows his interests. Year after year we see the phenomenon of a high and increasing percent-

age of students proceeding to specialist practice while fewer and fewer proceed to general work. Many of those who do plan to do a general practice do so for economic reasons. They have a family to support or they are already heavily in debt.

On the group who do enter general practice, responsibilities fall rapidly. The shortage of general men guarantees the development of a large practice within a short period of time. Most find the first few years exciting and challenging and for some the excitement continues. For many, however, the pressures of long hours, interrupted sleep and inability to find time to keep up to date with medical progress combine to make general practice increasingly unattractive. Before many years have elapsed a significant number of the group who entered practice as general practitioners are taking time off to prepare for specialty practice. And so the load falls on progressively fewer shoulders and the fundamental problem becomes more acute. In the meantime, the growing group practicing a specialty proceed happily enough in their restricted field. They have withdrawn from the problem and cease to participate in the increasingly difficult task of providing comprehensive and complete health care. We have some startling statistics from our own country to indicate the significance of this problem. In Canada we have not kept pace with the increase in population and are not producing sufficient physicians. The 850 graduating from our 12 medical schools annually are swelled by 500 to 600 per year immigrating from other countries and still our physician-population ratio is worse than that of 20 other countries. In the years since World War II we have seen the specialist population of our total medical work force more than double from 22 per cent to 50 per cent; with great rapidity

we are moving away from a G.P. oriented practice into what? In fact, one becomes increasingly impressed with the likelihood that we will find no satisfactory answers to medical education until we find the answers to the problems of provision of medical care.

4. A New Concept of the General Practitioner

Fundamentally our problem is that the role of the general practitioner of the past years is largely untenable today. The general practitioner has represented the keystone of health care. His has been the responsibility for providing an overall supervision of the patient calling in specialist help when it was required. Some may say that the disintegration of this system is no great loss and accept the fact that we are progressing towards specialist oriented practice with occasional general practitioners serving as sign posts to send patients in the right direction. I cannot find this an acceptable goal. Apart from the fact that the continuity of care and the comprehensiveness of care would undoubtedly be reduced in any population groups so managed we have the problem that in many parts of the world the population is widely spread and sparce and the entirely specialist oriented scheme is impractical.

The alternative to completely specialist oriented medicine is to find a way of producing individuals who can provide a more comprehensive service than the narrowly trained specialist. I am sure that individual will not be the general practitioner as we know him today. He will probably confine his activities to a narrower range. It is unlikely that he will perform technical procedures such as surgery. Perhaps he will be more completely trained in the behavioral sciences than at present and occupy a semi-specialist's role as a personal physician.

But however broad his training and whatever we name him he must find a more attractive, rewarding and secure place for himself than the general practitioner occupies today. Under government supported prepaid care, it should be possible to legislate attractions into the role of the generalist of the future. It should be possible, for example, to insure that he is reasonably remunerated. However, the real task is to take some of the load from the shoulders of this new generalist so that he can take pride in his work and derive satisfaction from his endeavors somewhat free from the pressures of today. There is no legitimate reason to believe that there will be any lessening of his load either from the viewpoint of increasing knowledge which he must learn and apply or from the viewpoint of increasing demand for his services.

I can find no way of easing his burdens other than by finding him more help. We now have large groups of people in the health sciences who should be able to share the load of the practitioner of medicine to a greater degree than they now do. My own experience in practice would certainly tend to bear this out. I had five years in the general practice of pediatrics. A great deal--maybe the majority--of the work which I did could have been done as well or better by public health nurses, dieticians, clinical psychologists and others of the health group. It was a ridiculously costly arrangement for one who had taken a medical degree and 7 years of postgraduate training to be performing tasks which could be better done by less costly personnel. But how can we make more effective use of the health team? How can we insure that the public health nurse, the physiotherapist, the occupational

therapist, the social worker, the clinical psychologist and the pharmacologist contribute as effectively as possible to the overall pattern of health care?

5. The Physician and the Health Team

At the present time we have incorporated these other health professions into the care of patients in hospital. We would not think of running a hospital without physiotherapists, occupational therapists, social workers, psychologists, pharmacists, and others, as well as nurses and doctors. We have not similarly integrated them into the provision of health services outside of hospitals. Rather the doctor has continued to perform virtually all the services which his patient required. He has continued to be all things to all patients without taking cognizance of the availability of the other health professionals. No logical answer to the problem which we face seems apparent other than our acceptance of increasing assistance from the allied health professionals.

It seems likely that if careful studies could be made of the type of health services required by a community it would be apparent that many of the duties now performed by over-worked doctors could be undertaken successfully by individuals with significantly lesser training. It is clear that studies of the exact nature of the health needs of a community must be made. We must learn precisely how the public health nurse, the physiotherapist, the social worker and the doctor are contributing and how they could contribute. With the cooperation of all professional groups we must frankly experiment with the use of the various health professions and try to find the most effective and economic methods of meeting the needs of our patients.

Such studies have not as yet been made. It is only in recent years that the feeling of urgency concerning this problem of the provision of primary health care has resulted in sources of funds being made available for such examinations.

And so it seems apparent that the pattern of health care will change within the foreseeable future. No longer will the doctor be responsible for all aspects of care which his practice now demands. He will become a leader of a team, a team made up of nurses, social workers, clinical psychologists, dieticians, physiotherapists, occupational therapists and others. It seems likely that the day is not too far away when nurses will make the initial contact with a certain number of patients and will carry out certain screening procedures and will perform a good deal of the follow up work reporting the results back to the physician. With increasing demands on the part of our population for guidance in dealing with emotional problems, it seems likely that it will be only a matter of time before the doctor spares himself by turning this sort of problem over to the social worker or the clinical psychologist involved in his group practice. It seems likely that group practices will flourish to an even greater degree than they do at the present moment. These groups will be able to more effectively employ and utilize the services of other health professionals than can be done by the individual physician.

But this is a meeting about teaching hospitals. I have talked for a long time about the problems of medical education and the apparent reasons why such problems exist. How will the changes which must be put into effect by medical schools to meet these changing social demands change the teaching hospital of the future? I think I can best

demonstrate the proven inadequacy of our present teaching methods by quoting some statistics produced in 1961 by Dr. Kerr White and others. His group had studied large population groups in various parts of the world including the United States, the United Kingdom and Central Europe. These were groups under all sorts of different patterns of health care. They found that of every 1000 individuals who were studied no less than 750 turned to someone for health care each month. Of this large number who sought assistance in the field of health only 250 or 1/3 turned to physicians. The remaining 500 or 2/3 went to nurses, pharmacists, relatives, neighbors, and others. Of the 250 who turned to physicians for assistance in the field of health, nine only were referred to hospital and one to a university teaching and research center. If the experience we give to our medical students is confined to the one in 750 who demand health services each month that ends up in a teaching hospital then surely we are giving a badly biased picture of the problems of health care. Also, presenting to the student these small numbers of most seriously ill patients, we are accenting the role of the specialist and downgrading the role of the general practitioner.

Our teaching hospitals have been, in the past, very completely removed from the hurly-burly of ordinary practice. To them have come the most seriously ill patients who require the highly developed services which these hospitals provide and the role of the teaching hospital in the local community has been minimal. It has played the part of a referral center for a region, a state or a province and its value to the community to which it is located is little greater than to distant parts of the region.

One of the major factors which will force change in our teaching hospitals will be the recognition of the fact that the quality of care in the teaching hospital is the highest quality available anywhere in the land. This has become increasingly accepted as the years have passed and has been responsible for the referrals to our teaching and research centers and for their development as regional referral hospitals.

It has always been true that significant groups in the populations of all countries do not receive good health care. In recent years, however, the right to obtain good health care has become accepted and people are beginning to demand the sort of care that is provided in the teaching hospital. Thus, even if it were not advisable from the point of view of providing the undergraduate and graduate student with a broader view of medicine, university teaching hospitals in the future will become the base of large group practices in medicine because the services which they provide are increasingly in demand. They will become very much more important to the community in which they are located. They will serve not just the sophisticated problems that are too puzzling for the community hospitals but they will serve a cross section of the community both in and out of hospital. In this group practice much of the training of the undergraduate and the graduate physician will take place. In it the student will have the opportunity of seeing a very much broader picture of the health needs of the community than he does under the existing arrangements. In this environment, perhaps, he will learn the rewards of the provision of primary health care. Certainly in this environment the medical school must take the responsibility for frankly experimenting with different

methods of health care in order to find the most effective means of providing services in the home and in the physician's office or the outpatient department of the hospital. It seems very clear from the outset that there are not going to be enough physicians to provide this high quality of care to all people who desire it and under these circumstances, large numbers of auxiliary health personnel must be trained and the medical student and the physician must learn how to work with these auxiliary health personnel. Medical schools will be required to specify the number and the types of people they need and they can only do this upon the basis of research conducted into the provision of primary health care.

And so the teaching hospital of the future, I believe, will be a very different type of facility than it has been in the past. Instead of being discreet and withholding its services from all save those who need its highly complex facilities, it will be the center for the provision of health services. It will be the focal point which will provide staffing for the primary health care of large areas of population. Some medical schools in this country are making already arrangements to provide the health care for entire cities that are springing into being. Some medical schools have taken the responsibility for significant areas of rural practice. It seems to me that in a relatively short period of time every teaching hospital will be the focal point for the provision of services not only in its own community but also in areas dispersed from that community.

In this bustling environment in which health services are provided to all who seek them the medical school must become very much more than the training ground for physicians. The teaching hospital must become a training center for all members of the health professions.

In it the physician, the nurse, the dentist, the pharmacist, the social worker, the rehabilitation therapist, the dietician and others must experience the rewards of working together each one participating to the degree that he can in the provision of the care of patients not only in hospital but in their homes and in the outpatient department. The whole attitude and organization of the teaching hospital must change. The Department of Pharmacy within the hospital should no longer be a service department. Rather it will be closely associated with the Faculty of Pharmacy in order to ensure that it is providing the best teaching and research arrangements for the students. It will be a matter of the greatest importance that the pharmacy student participate along with the medical student, the nursing student, and others in the provision of these services. In order to ensure that not only the professional but also the educational rights of the various groups are maintained the organization of the teaching hospital will perforce be much more complex. Instead of direct line relationships between the service departments such as pharmacy, nursing, etc. and the hospital administrator, there must be complex committees developed to ensure that the proper relationships, both professional and educational, are maintained.

One other characteristic of teaching hospitals in the past will be drastically changed. I refer to the insular and sometimes regretfully almost snobbish relationship frequently presented by the staff of the university teaching and research hospital to the remainder of the profession. The small number of usually full-time physicians and surgeons who operate the hospital and their carefully selected interns and residents tended to look with disfavor on the man in general prac-

tice whose learning was less profound than theirs. This luxury of isolationism cannot be maintained. Pressure by physicians and by their parents will demand that continuing medical education become an increasing phenomenon in order to ensure that the inadequate numbers of physicians are kept as efficient as possible. There can be no other place in which continuing medical education can be located than in the medical school and the teaching hospital. Very large sums of money have been poured into our teaching and research hospitals by governments and it is inevitable that as pressures for continuing medical education become more severe these facilities will be put into use to a much greater degree than they ever have in the past. And so I would expect that the university teaching and research hospital of the future will continue to have its small permanent staff and its carefully chosen interns and residents but it will have a large, constantly rotating group of doctors in attendance attempting to maintain themselves up to date in this academic environment.

These vastly changing roles of the university based teaching and research hospital will have an impact on the university as well. The provision of services to patients in a campus based hospital has represented in the past the closest association which that university has had to the community which supports it. However, in the traditional university hospital the association was relatively diffuse and restricted to the problem patients referred from other hospitals. When, in the future, the university based teaching and research hospital becomes the foundation stone for widespread group practices throughout the area, becomes the central facility providing a veritable torrent of service to a local community and beyond, it will change in a very significant way the relationships between the university and the community, the

state, or the province which it serves. To many who have been brought up with the thought that the university and the Faculty of Medicine must be withdrawn and austere and present a dignified and proper picture of academic excellence to be viewed at a distance, these changes may seem threatening, however, they are changes which one can clearly foresee are likely to be forced upon us in the immediate future as a result of social pressures and changing values. That they will present problems is an absolute certainty and yet I believe that the teaching hospital, the medical school and the parent university will all fulfill a more meaningful and beneficial role to the community under these circumstances than it has in the past. I believe, too, that once we realize that we can function in such an environment we will be more appreciative and more aware of the rewards which will come from more intimate participation with other health professions in the provision of health care.

COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES FOR THE HEALTH SCIENCES

September 25, 1967

TO: Gaylord W. Anderson
Winston A. Close
Lyle A. French
Edna L. Fritz
Sterling B. Garrison
Eugene D. Grim
Mellor R. Holland
Robert B. Howard
Robert J. Isaacson
James R. Jensen
Frederic J. Kottke
Robert O. Mulhausen
Peter H. Sammond
Erwin M. Schaffer
William G. Shepherd
James W. Stephan
William T.S. Thorp
Lawrence C. Weaver
John H. Westerman

FROM: Elmer W. Learn

The next meeting of the Committee for the Study of Physical Facilities for the Health Sciences has been scheduled for Thursday, October 5, 1967, 1:30 p.m. in 555 Diehl Hall.

The architectural arrangements for the Health Sciences Programs are scheduled as an agenda item for the October 6 Board of Regents meeting. The purpose of this meeting is to share this information with you and to discuss how we might proceed in the months ahead.

COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES
FOR THE HEALTH SCIENCES

Minutes of Meeting November 28, 1966 (#23)

Present: Elmer Learn, Chairman; Gaylord Anderson, Lyle French, Edna Fritz, Sterling Garrison, Eugene Grim, Mellor Holland, Robert Howard, Robert Isaacson, Frederic Kottke, James Stephan, Lawrence Weaver, John Westerman, McCollum Brasfield, Edmund Nelson, Hugh Peacock, Kathryn Ritzen.

Absent: Winston Close, N.L. Gault, Jr., Gertrude Gilman, Ione Jackson, James Jensen, Richard Magraw, Irwin Schaffer, William Shepherd, James Stephan, William Thorp

Guest: Mr. John Stockwell, Administrator, Children's Hospital & future Administrator, new University Hospital, U of Massachusetts Medical School

NEXT MEETING: AT THE CALL OF THE CHAIRMAN

a. Report Due December 7.

1. Dr. Learn told committee members that, in agreement with the decision at an earlier meeting of the Deans and Consultants that day, a written report from each subcommittee would be due no later than December 7.

b. Editing Committee.

An editing committee, composed of Dean Howard, Dean Schaffer, Vice-President Shepherd, Dr. Learn and Mr. Westerman, which will draw on the help of Mr. Stephan, Mr. Nelson and Mr. Brasfield, will compose the total report from the subcommittee reports, and will report back to the parent committee for its approval sometime early in January.

2. Oral Subcommittee Reports.

Before the subcommittee chairmen reported on the progress of their subcommittees, Dr. Learn called attention to the fact that space projections in excess of the $54 million package will necessitate cutbacks and reinforce the need to rank programs by priority.

a. Nursing.

Miss Fritz reported that her subcommittee was making progress on its report and had no significant problems.

b. Basic Sciences.

Dr. Grim stated that his subcommittee report was essentially in final form. He anticipated that the major problem would be whether enough space would be available for the basic sciences' requests, which are actually minimal requests. Curriculum review will probably result in major programmatic changes, which are likely to require more space and staff than projected. The present projections are merely extensions of the present programs.

Dr. Learn advised that subcommittee reports should not exclude important program items for the sake of economizing, but rather should indicate low priorities where appropriate.

c. Public Health.

Dr. Anderson reported that the School of Public Health division directors and the Public Health Subcommittee had met to consider the Public Health Report, and they found the space estimates in the Part II Report unrealisitically conservative, particularly in terms of being able to recruit and retain staff. Dr. Anderson said that the 34,000 additional square feet for Public Health projected in the Regents' Report to the Legislative Building Commission was entirely inadequate. The Public Health Report, Dr. Anderson said, would use the strongest possible language to support its unreduced space estimates.

Dr. Learn pointed out that no one should construe the figures used in June 1965 in the Regents' Report as necessarily binding. However, the subcommittee reports should explain subcommittee projections.

d. Clinical Medicine.

Dr. French described how his subcommittee has proceeded to compile its report, including conceptual programs, space and personnel estimates, and justifications. Priorities have been set, subject to final subcommittee approval. Dr. French asked Dean Howard to Anticize or Amend priorities as he saw fit.

One important problem is how to include the Clinic Directors; Report in the Clinical Medicine Report. Mr. Westerman explained the background of the Clinic Directors planning efforts, and noted that the Clinic Directors Building Subcommittee was made a task force of the Clinical Medicine-Hospital Subcommittee. Although the Clinic Directors Out patient Planning Report called for more space, the Clinic Directors have agreed that the 100,000 square feet of space estimated in the Regents Report is sufficient for the ambulatory needs of all the clinical departments exclusive of the education program needs of the Comprehensive Clinic. That figure was based on the number of exam rooms and class rooms listed in the Outpatient Planning Report. The 100,000 square feet of space has not yet been assigned, however.

These space estimates are yet to be incorporated in the Clinical Medicine Report, as the staff needs have already been projected by department. Care will be taken to eliminate any office space overlap from incorporating clinic space into the report.

Dr. Learn asked Dr. French, and Mr. Westerman and Mr. Stephan to work out the best way to present information on both the Clinical Medicine and ambulatory needs. Dr. French said the best was to do this would be to present information in terms of priorities, in which case the ambulatory projections would constitute an identificable unit. Dr. Learn approved of this, but requested that space projections be shown by department as well, to illustrate how the ambulatory figures were arrived at.

e. Hospital Report. At present there is no clearly defined Hospital Report. Dr. Howard suggested a joint meeting of the Clinical Medicine and Hospital committees to coordinate their respective reports, Dr. Learn acknowledged that the Hospital Report, to a certain extent, must await completion of the other reports, in order to coordinate needs and priorities.

f. Dentistry Report. Dr. Holland told the committee that his subcommittee had been re-examining and revising the Dentistry Report, particularly by strangthening the arguments for increased space and personnel to permit programmatic changes. Areas of duplication are being eliminated, and faculty-space projection guidelines will be explained. The subcommittee is in the process of establishing priorities.

g. Ancillary Report. Dr. Kottke said that the Ancillary Subcommittee had revised its report and slightly increased the space requirements. Dr. Kottke asked several questions in regard to the report:

QUESTIONS:

1) How concise should the report be, in terms of documentation? As complete as necessary to explain the work and conclusions of the subcommittee. Dr. Learn cautioned that important information should not be excluded for the sake of brevity. It will be the job of the Editing Committee to condense the report.

2) What should the relative size of the Ancillary programs be vis-a-vis the other health science programs? In terms of meeting regional health manpower needs? Dr. Learn commended the Ancillary statement in the Preliminary Report regarding the University's role, as a guide to program size projections. As this report is reviewed, program size relationships and health manpower needs will be called to the attention of the Administration.

Dean Howard emphasized his objection to tying needs to the size of the undergraduate medical class, since this is a totally inadequate guide in a comprehensive health sciences complex.

3) Is there any comment on the Ancillary Subcommittee's not continuing in its final report several programs, such as Clinical Psychology, Speech and Audiology, and Medical Social Service, which were originally mentioned in Ancillary section of the Preliminary Report? These programs are reporting to other subcommittees. Social Service training programs and service needs relate to the Hospital; the College of Medical Sciences is not charged with the responsibility for training Social Workers. The problem is that Social Service is an educational program, but CMS is not the degree-granting agancy. The progessional master's degree is granted through CLA. Social Service as we refer to it here is an undergraduate program, however, and has to be clearly indicated as ushe, and liaison needs to be established with the program in CLA.

4) What should be done about Bioengineering? The Ancillary subcommittee has no information whether CMA, I.T. or the University wants such a program, or where. Dr. Learn suggested that the report note that attention should be paid to the development of this program in the future. Dr. Grim said that the Basic Sciences subcommittee has included 4,000 square feet of new space for this program, since Physiology would be involved.

3. Written Reports. The subcommittees do not need to submit copies of their preliminary reports again unless detail is lacking, or unless they wish to indicate corrections or omissions. The Editing Committee will try to incorporate enough information into one report which will stand on its own for legislative use. All members of the parent committee will receive copies of the subcommittee reports.

4. Minutes Distributed Since the Last Meeting

a.	Learn Committee	November 7, 1966 (#22)
b.	Public Health Subcommittee	October 3, 1966 (#11)
c.	Dentistry Planning & Building Subcommittee	October 28, 1966 (#8)
d.	Ancillary Subcommittee	November 14, 1966 (#10)

Meetings Held for Which Minutes Not Yet Available

a.	Basic Sciences Subcommittee	November 10, 1966 (#10)
b.	Clinical Medicine Task Force	November 15, 1966 (#18)
c.	Ancillary Subcommittee	November 21, 1966 (#11)
d.	Dentistry Building Subcommittee	November 23, 1966 (#9)
e.	Basic Sciences Subcommittee	November 23, 1966 (#11)
f.	Public Health Subcommittee	November 25, 1966 (#12)
g.	Ancillary Subcommittee	November 28, 1966 (#12)
h.	Clinical Medicine Task Force	November 29, 1966 (#19)
i.	Dentistry Subcommittee	December 2, 1966 (#10)
j.	Ancillary Subcommittee	December 8, 1966 (#13)

Respectfully submitted,

John H. Westerman,
Executive Secretary

Minnesota University.

COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES FOR THE HEALTH SCIENCES

Minutes of meeting February 27, 1967 (#24)

Present: Elmer Learn, Chairman; Gaylord Anderson, Winston Close, Lyle French, Edna Fritz, Sterling Garrison, Eugene Grim, Mellor Holland, Robert Howard, Robert Isaacson, James Jensen, Richard Magraw, Hugh Peacock, Erwin Schaffer, William Shepherd, James Stephan, Lawrence Weaver, John Westerman, McCollum Brasfield, Edmund Nelson

Guest: Robert Laur, Instructor, Program in Hospital Administration
School of Public Health

NEXT MEETING: MONDAY MARCH 13, 1967, 3:30 p.m., 510 DIEHL HALL

Dr. Learn noted that the group had received copies of a first report from the Editing Committee and copies of each of the subcommittee reports. These reports were combined in a book entitled Future Planning for the Health Sciences, Part III Subcommittee Program and Space Reports, dated February, 1967.

Dr. Learn stated that committee members should understand what the Editing Committee report is and what it is not. It is not a first draft of a final report. It is merely a first step toward the integration of the subcommittee reports. After the full committee has approved the revisions made by the subcommittees, an effort will be made to reduce the Part III report to a summary report of not more than fifty pages. This summary report would have widespread distribution among the health sciences faculty, central administration and interested public bodies.

The Editing Committee consisted of William G. Shepherd, Erwin M. Schaffer, Robert B. Howard, Elmer Learn, John Westerman, McCollum Brasfield, and consultants Edmund Nelson and James Stephan. The Editing Committee audited subcommittee reports to identify areas for potential sharing of space, areas in which space was duplicated in one or more reports, and converted projections to common comparative ratios such as square feet per faculty and faculty/student ratios. Considerable savings were made through the audit method. For example, the Hospital, Dentistry and Outpatient projections could be reduced because of a potential sharing of space in new construction. An example of duplication of space areas in the various reports was the projection of a cafeteria by the School of Dentistry which could be provided by the Hospital.

The second step taken by the Editing Committee to keep within the July presentation figure of $54 million was to eliminate certain items that had been designated as low priority by the subcommittees. There are some examples of this in the Ancillary Report.

The third step taken was to review the program statements and staff projections and adjust these to totals believed to be realistic in terms of future funding. It is important to note that projection of future positions

takes into account both state and federal funding. This is to say that a private or federal grant in the future is not over and above that which has been projected here, but is an integral part. It does not mean that projections are inflexible, but it does imply a judgment within the framework established in the planning report.

The fourth step taken by the Editing Committee was to adjust space per faculty member in each subcommittee. This is probably the least scientific of the judgments of the Editing Committee. The Editing Committee attempted to use whatever information was provided in subcommittee reports, such as criteria employed in arriving at subcommittee estimates, but in the final analysis subcommittee projections were balanced against Editing Committee judgments.

The Editing Committee adjusted faculty and space requests only in totals in subcommittee areas. Distribution of these totals within the subcommittee is a responsibility of the subcommittee working with the deans and department heads. Here is another opportunity for subcommittees to stress priorities. Which areas are most inadequately staffed now, or which new program areas are most important claimants for new staff positions?

What needs to be done? (1) Each subcommittee should now proceed to adjust the totals within its area of responsibility to coincide with the totals recommended by the Editing Committee. Although the subcommittees cannot change the totals, they can adjust the use of the total within their areas of responsibility.

The Editing Committee totals need not be interpreted by the subcommittees as an endorsement of the totals, but as a request from the Editing Committee of how it is best to arrange these resources within the subcommittee area responsibility.

(2) Present the revised tables to the full committee in a tabular form that is as consistent as possible for all subcommittees, with whatever additional commentary seems appropriate. Mr. Brasfield and Mr. Nelson will be available to help the subcommittees take the adjustments and put them in tabular form. This should be completed by the next Learn Committee.

(3) The consultants, James A. Hamilton Associates, will be working simultaneously on relationships between the units of the health sciences, and will prepare a report outlining these functional relationships.

The Editing Committee will work on a final report of no more than 50 pages that will serve as the basis of a Regents' seminar, hopefully at the April 14 Board meeting.

QUESTIONS

(1) Where in the hospital report is the indication of space provision for Dentistry Programs? Nine thousand (9000) square feet are going to be provided in the hospital cafeteria which will serve all of the health sciences. Twenty to twenty-five thousand square feet in waiting space, x-ray, laboratory, pharmacy and specialized hospital dental clinic space will be provided out of hospital space.

(2) Two areas in this Editing Committee summary sheet of square footage and staff projections that have not been cut are the Hospital/Medical School and Outpatient Clinics. What is the explanation for this?

In part, your question has been answered by the answer given to the dental question, i.e., we could have reduced space from the clinics hospital area and added it back into dental, but because the basic diagnostic units are more appropriately housed under hospital space, we have considered that hospital space is expanded to provide supporting services for dentistry. The same is true with the cafeteria. The diagnostic units themselves were reduced by some 56,000 square feet in the clinical medicine report because this space was already provided in the hospital report. In addition, the Hospital/Medical School area will be the last to be revised because the service it provides is dependent upon the programs in the other subcommittee reports. There is a natural lag factor in adjustments in this area. It is also true that certain standards relating to beds and supporting services in a hospital have been better developed than those in other areas. Therefore, it is somewhat easier for the Editing Committee to work with planning criteria in the hospital area than it is in other areas. However, this does not imply that any particular set of planning criteria has been accepted.

* * * * *

Since the Clinical Medicine Subcommittee Report, developments in the cardiovascular and respiratory programs have centered in three areas:

1. Program planning for a cardiovascular research center;
2. Continuing discussion of an addition to the West Wing of the Variety Club Heart Hospital;
3. Planning toward a coronary care unit.

A faculty committee met with Dr. Elmer Learn prior to the submission of an application for a research grant to plan for a cardiovascular research center, primarily to discuss a physical site for the center. No specific physical site was determined since this should also be considered during the planning period, although there are several possibilities for a site.

The program of the Center will follow that of the present Cardiovascular Research Program Project and thus constitute a broad, multi-disciplinary inquiry into mechanisms of cardiovascular function and disease. Programs which may become part of the Center are:

1. Present projects receiving support from the Cardiovascular Research Program Project Grant which are now a part of the medical center and have been described earlier;

2. A biomedical data processing and computer facility for analysis of electrocardiogram and vectorcardiograms, analysis of problems of differential diagnosis, monitoring critically ill patients, and programming the study of patients;

3. A biomedical engineering program to provide training opportunities for physicians in the principles of engineering applicable to cardiovascular research, training for engineers in biology, combined research from the Departments of Surgery, Mechanical Engineering and Chemical Engineering in fluid dynamics, heat and mass transfer, circulatory support systems and prostetic devices.

* * * * *

The Pharmacy planning report had been distributed to committee members prior to this meeting. Dean Weaver asked for the Committee's feeling as to whether or not Pharmacy should be included in this long range planning. The Committee members felt Pharmacy should be in part physically near the medical school and should be programmatically integrated with the medical school. Committee members expressed the opinion that the Pharmacy report is logical, and Mr. Westerman stated the University Hospitals heartily endorses the report. Dean Weaver has agreed to work on a more detailed Pharmacy report.

Minutes Distributed Since the Last Meeting:

a. Basic Sciences Subcommittee	November 10, 1966 #10
b. Clinical Medicine Task Force	November 15, 1966 #18
c. Ancillary Subcommittee	November 21, 1966 #11
d. Basic Sciences Subcommittee	November 23, 1966 #11
e. Public Health Subcommittee	November 25, 1966 #12
f. Ancillary Subcommittee	November 28, 1966 #12
g. Clinical Medicine Task Force	November 29, 1966 #19
h. Dentistry Subcommittee	December 2, 1966 #10
i. Ancillary Subcommittee	December 8, 1966 #13

Meetings Held for which Minutes are not yet Available:

a. Nursing Subcommittee	February 16, 1967
b. Dentistry Subcommittee	March 2, 1967 #11

Respectfully submitted,

John H. Westerman
Executive Secretary