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COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES FOR THE  
HEALTH SCIENCES

Sub-Committee for Clinical Medicine and Hospital

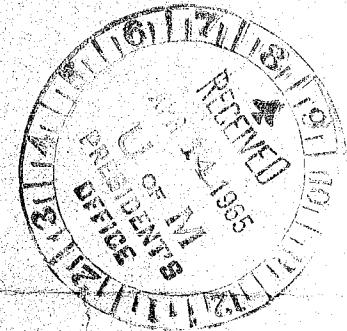
M E E T I N G   N O T I C E

Dr. N. L. Gault, Chairman, has called the first meeting of the  
Clinical Medicine and Hospital sub-committee for Monday, April 19  
at 4 p.m. in the O'Brien Room, 13th floor, Mayo.

Dr. Gault will discuss the charge to the parent committee, the  
responsibilities of the sub-committee, and plans for organization  
of the sub-committee.

Sincerely,

John H. Westerman



The Clinical Medicine and Hospital Planning  
Sub-Committee minutes of April 19, 1965, are to  
replace the minutes of that meeting previously  
sent out.

CLINICAL MEDICINE AND HOSPITAL PLANNING SUB-COMMITTEE

Minutes of meeting April 19, 1968

Attending: W. L. Gault, Jr., Chairman Richard Anderson, Nancy Cook,  
Lyle French Gertrude Gilman, Robert Gorlin Florence Julian,  
Robert Laur, Paul Oule, Wesley Spink, James Stephan John  
Westerman, Robert Douglas, Judith Parker

Absent: Donald Cowan, Gerard Frawley, Norman Holte, Richard Lillehei,  
Richard Magraw, Dennis Watson

Dr. Gault stated the purpose of the Subcommittee and reviewed the purpose of the Learn Committee. The Clinical Medicine and Hospital planning sub-committee will be broken down into two task force groups. Dr. Lyle French will chair the clinical medicine task force. Mr. James Stephan will chair the hospital task force. The organization is:

Clinical Medicine and Hospital Planning Sub-Committee

W. L. Gault, Jr., Chairman

Clinical Medicine Task Force

Lyle French Chairman  
Richard Anderson  
Nancy Cook  
Robert Gorlin  
Richard Lillehei  
Richard Magraw  
Paul Oule  
Wesley Spink  
Dennis Watson

Hospital-Task Force

James Stephan, Chairman  
James Carey  
Donald Cowan  
Gerard Frawley  
Gertrude Gilman  
Norman Holte  
Florence Julian  
Robert Laur

The space now being used by health science facilities was outlined and Dr. Gault pointed out the remaining available land. It is evident that more land would have to be obtained and all future building should be carefully planned to achieve maximum utilization of the limited land in close proximity to existing facilities. The legislature is now considering a request for funds to purchase more land in the Union/Washington Street area. It is also considering funds for planning of a Dental/Outpatient facility. Preliminary studies are now being carried out by the Outpatient Clinic Directors.

Suggestions were made as to the numerous and complex possibilities which should be considered before specific recommendations can be given to the parent committee next Fall:

1. Needs of Clinical Medicine
2. Needs for Clinical Research
3. Married Student Quarters
4. Parking Facilities
5. Specialty Development
6. Hospital Bed Needs
7. Role of Community and Surrounding Hospitals
8. Care of the Indigent Patient
9. Direction of Medical Education and Services

Dr. Gault suggested that first the goals of clinical medicine and the hospital must be defined and then an architectural firm hired to study these goals. The firm can make recommendations as to how these goals can best be achieved.

Mr. Stephan suggested the development of broad perimeters within which basic decisions can be made;

1. Size and anticipated growth of Medical School
2. Size of faculty
3. Research development
4. Outpatient demands
5. Services to be provided

It was pointed out that Dr. Osler Petersen has been appointed by the Hill Family Foundation to make a study of the region to determine the need for:

- a. an enlarged medical school class
- b. a second medical school
- c. no further expansion of the medical education at this time

The center concept as published in the Debakey Report was discussed as the growing trend of the Health Sciences. Although the school has historically rejected the idea of disease institutes, it was felt that a national trend was developing and could not be ignored. The fact that federal funds were being made available for specialty centers would have to be evaluated before any recommendations could be made.

Other considerations that would effect planning were suggested as: the proposed Children's Hospital of Minneapolis, location and plan for Hennepin County General Hospital, the opening of Anker and use of the old facility, the Saint Paul Group that supports a second medical school.

Mr. Westerman's office will be available to help the committee and its members in any way it can.

\*Note: At the request of Mr. Stephan and Dr. Gault, Dr. Learu has appointed Dr. Carey to the Hospital Task Force group. Dr. Carey has accepted the appointment.

Judith A. Furber  
Research Assistant

**CLINICAL MEDICINE AND HOSPITAL PLANNING SUB-COMMITTEE**

**N.L. Gault, Jr., Chairman**

**Hosp 2771**

**Mayo Box 293**

**CLINICAL MEDICINE TASK FORCE**

**Lyle A. French, Chairman, Professor and Director, Neurosurgery**

**Hosp 2517**

**Mayo Box 281**

**Richard W. Anderson, Professor of Psychiatry**

**Hosp 2753**

**Mayo Box 393**

**Nancy Cook, Assistant Professor of Nursing**

**373-3118**

**125 Owre**

**Robert J. Gorlin, Professor of Dentistry**

**373-3248**

**242 Owre**

**Richard C. Lillehei, Assistant Professor of Surgery**

**Hosp 2521**

**Mayo Box 433**

**Richard M. Magraw, Associate Professor of Medicine and Psychiatry**

**Director, Comprehensive Clinic Program**

**Hosp 2841**

**Mayo Box 381**

**Paul G. Quie, Assistant Professor of Pediatrics**

**373-5032**

**Mayo Box 389**

**Wesley Spink, Professor of Medicine**

**Hosp 2492**

**Mayo Box 196**

**HOSPITAL TASK FORCE**

**James W. Stephan, Chairman, Professor and Associate Director, Program  
on Hospital Administration, School of Public Health**

**Hosp 2456**

**Mayo Box 87**

**James B. Carey, Associate Professor of Medicine**

**Hosp 2785**

**Mayo Box 290**

**Donald W. Cowan, Professor and Director Student Health Service**

**373-3950**

**Mayo Box 188**

**Gerard W. Frawley, Associate Director, University Hospitals**

**Hosp 2604**

**Mayo Box 97**

**Gertrude M. Gilman, Director, University Hospitals**

**Hosp 2271**

**Mayo Box 94**

**Norman O. Holte, Professor of Oral Surgery, Dental School**

**373-3253**

**216 Owre**

**Florence J. Julian, Director, Nursing Service, University Hospital**

**Hosp 2600**

**Mayo Box 490**

**Robert J. Laur, Instructor, Program in Hospital Administration, School of  
Public Health**

**Hosp 2456**

**Mayo Box 87**

COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES FOR THE HEALTH SCIENCES

Clinical Medicine - Hospital Subcommittee (#2)

Minutes of Joint Meeting December 6, 1965 (will serve as minutes of Clinical Medicine T.F. Meeting #11 and Hospital T.F. Meeting #10)

Present: N. L. Gault, Jr., Chairman; James Carey, Nancy Cook, Donald Cowan, Gerard Frawley, Lyle French, Gertrude Gilman, Norman Holte, Florence Julian, Robert Laur, Richard Lillehei, Richard Magraw, Paul Quie, Wesley Spink, James Stephan, Kathryn Ritzen, John Westerman

Absent: Richard Anderson, Robert Gorlin, Dennis Watson

Guest: Edmund Nelson of Hamilton Associates

NEXT MEETING AT THE CALL OF THE CHAIRMAN

The following correction to the Learn Committee Minutes of November 22, 1965 (~~#11~~), the Clinical Medicine Task Force Minutes of November 29, 1965 (#10), and the Hospital Task Force Minutes of November 30, 1965 (#9) should be made: change all references about M<sub>r</sub>. Edward Nelson of Hamilton Associates to Mr. Edmund Nelson.

Dr. Gault called the meeting to order and announced that this was the second meeting of the Joint Committee. He commented that the Draft of the Learn Committee Preliminary Report is not as specific as it should be to be of the most help to the Administration, but he believes that the Subcommittees have worked in the right direction and in time will be able to come up with more detailed specifications to support the programs.

Then, Dr. Gault tackled the first item on the agenda - a description of the negotiations for a Wangenstein-Phillips Research Building, money for which has been donated by the J. Phillips Foundation. This money, \$1,500,000, will provide a nucleus for matching funds, the total of which will build a structure of approximately 60,000 square feet, i.e., six floors of 10,000 square feet each. The only commitment of space in this proposed building at this time is for facilities for Dr. Wangenstein to work in after his retirement. The University Administration has not allowed a pictorial representation or a commitment for any specific use of the building to be made.

Originally it was thought that a new building might house facilities for a data processing center, but that idea has been abandoned since data processing facilities have been set up elsewhere. Actually, the proposed new building has not been programmed in a manner approaching anywhere near the extensive planning that has been done for a new Ambulatory Care Building. The hard and fast recommendations, with facts and figures contained in the Clinic Directors' Report for a new ambulatory patient building, will be included as part of the final Learn Committee Report to President Wilson. Consequently, many questions need to be answered in planning such a building. First, what will the building be designated for? Animals, bed patients, ambulatory patients research? Who will be assigned space in the structure? Surgery? Just surgery? Or will surgery have first priority? Will space be allotted on the basis of clinical departments, or on the basis of clinical research projects? In brief, it appears that the basic relationships with the rest of the health sciences have yet to be worked out.

What sites are being considered? The Frankfurter site was pointed out in the discussion as the least desirable from the clinician's point of view, because of the distance from hospital beds. The Noble Apartments, on the other hand, would be an excellent site. Another suggestion was that it would be desirable

to have this building in the Outpatient-Dental complex, with adequate provision for retaining its own identity.

Another important question was whether there are any restrictions on the gift of funds for this building? There appear to be no restrictions, but a separate building is what the donor has in mind. It was decided that the Clinical Medicine Task Force should address itself to all of these questions and make recommendations about them to the Dean and the Learn Committee.

There were further questions and comments from committee members on the proposed building. It was suggested that the new building might be a place where the animal hospital could be moved, from its present site in Mayo where patients on one of the wards are disturbed by animal noises.

Dr. French questioned exactly what was meant by designating this as a clinical research building, since in current parlance this term implies inclusion of patient beds. Dr. Gault said that he understood by this that the building was not to be used for basic sciences per se but would be assigned to clinical medicine departments.

Some of the committee wondered whether there is an inventory and critical analysis of the present use of clinical research space. We do have an inventory of medical school space and hospital space used by the Medical School, but we have no critical analysis of how the space is being used. There are recognized space disparities among the departments. The general feeling was that it might be useful to have copies of the space inventory available for discussion at committee meetings. Mr. Westerman was asked to confer with Mr. Stephan and Mr. Nelson on compiling an appropriate summary of space.

The possibility that the donor might put pressure on the University Administration to begin a new building now, before the health sciences study is completed, was raised. Dr. Gault reported that there is no definite plan of payment of the promised funds, although the money will probably be received over a five to ten year period. From the time of receipt of the money, Dr. Gault estimated that it would take at least a year and a half before ground could be broken on the building and therefore felt that there was ample time for making recommendations on the ultimate status of the building within the health sciences complex.

The role of beds in the new building was discussed. Clinical research could well be carried on with ambulatory patients. It was pointed out, however, that clinical research center grants are for beds, and beds mean additional support for the operation of our programs. The Clinical Research Centers under NIH require designated beds; they may be multi-discipline beds which provides flexibility. In this connection, there could be real limitations in having a disease-oriented research center which would restrict bed use. Once again, however, in thinking ahead for this building, if we want to move the animal hospital out of the Mayo, we have to be careful about putting patients and animals together in the same unit. It was suggested that we are unnecessarily limiting ourselves if we think only in terms of beds. In ambulatory patient care and areas such as physiological hygiene, we can do much needed clinical research if we have the proper facilities.

Dr. Gault concluded this section of the agenda by promising to ask Dean Howard to pose a framework within which the Clinical Medicine Subcommittee can make recommendations in planning the new building.

Next, he reviewed for the committee the planning that has been done so far by local and regional institutions in Minnesota to implement the Cancer, Heart, and Stroke legislation.

Among the first steps taken regarding the DeBakey legislation was the formation of an association of the State Department of Health, the Minnesota State Medical Association, the Mayo Graduate School of Medicine, the Minnesota Hospital Association, and the University of Minnesota. This group has met twice. This organization will be the party which will apply for a planning grant as proposed by the funding for this legislation. To date, HEW has not extended applications to any area or group. Probably MSMA will be the applying unit for the grant.

For local exploration of ways to fit our Medical Center into the program or the program into our Medical Center, the Dean has asked Dr. Ivan Frantz to chair a committee of this faculty. Members chosen are those who have had interests in cancer, heart, or strokes. This committee was asked to contact others on our faculty, especially Dr. L. French, chairman of Clinical Medicine Subcommittee Task Force, to gather ideas from all.

It was pointed out, that in addition to Dr. French's Clinical Medicine group, it might be a good idea for the Hospital Task Force and the Clinical Directors group to be represented on Dr. Frantz's committee.

Dean Howard can visualize our role in regard to continuing education in implementing the DeBakey legislation, and beyond that he is anxious for the advice of the faculty. We can expect that implementation of this legislation will be somewhat slow, given the need to coordinate with other medical units in the state and because the funding is limited.

Someone asked, what does the Mayo Clinic want out of this legislation? It's important to find out how they're going to dovetail into this. Have they applied for a grant? Dr. Gault said that only enough money for planning support has been appropriated up to now. Dr. Lillehei said North Central Medical Education Association would probably want to be involved. It seems wise to include local groups in the preliminary planning so that they'll have some voice in this program. It would seem appropriate for Dr. Frantz's group to meet with the Clinical Medicine-Hospital Committee to share information and discussion of how this legislation is going to be carried out at the University.

At the end of the meeting Dr. Spink asked whether the School of Public Health received the environmental health grant it had applied for. Dr. Gault later reported that the first year planning funds were granted to Dean Crawford of the Graduate School who is the principal coordinator of the proposal.

Respectfully submitted,

Kathryn Ritzgen  
Research Assistant



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

## Clinical Medicine - Hospital Subcommittee

Minutes of Meeting December 31, 1965 (#3)

Present: N. L. Gault, Jr., Chairman; Richard Anderson, James Carey, Nancy Cook, Donald Cowan, Florence Julian, Robert Laur, Richard Magraw, Robert Top for Paul Quie, Wesley Spink, James Stephan, Dennis Watson, Kathryn Ritzen, John Westerman, Edmund Nelson.

Absent: Gerard Frawley, Lyle French, Gertrude Gilman, Robert Gorlin, Norman Holte

Guest: Robert B. Howard, Dean, College of Medical Sciences

### NEXT MEETING AT THE CALL OF THE CHAIRMAN

Dr. Gault welcomed Dean Howard to the meeting and announced the following agenda of topics which the Dean would be asked to discuss:

1. The proposed Wangensteen-Phillips Research Building
2. Expansion of the VFW Cancer Detection Center Building
3. The Cancer-Heart-Stroke legislation and the University's role in relation to this program.

Dean Howard began by citing the two building projects on the agenda as examples of the hazards involved in any kind of long-range planning for the health sciences. In other words, things can't be kept static while planning is being carried out. Therefore, our planning has to be flexible enough to encompass developments that crop up before our planning is completed, and the planning group will have to take into account such developments as the proposed Wangensteen Research Building.

About a year and a half ago, the Dean was approached by a representative of the J. Phillips Foundation with a proposal to honor Dr. Wangensteen and Mr. Phillips by erecting a clinical research building bearing their names. Such a building would meet, at least in part, the need for more research space by the Clinical Science departments. The possibility of using the Frankfurter site for the building was mentioned, but there is no firm commitment to it. The sum offered by the Phillips Foundation is \$1.5 million, which would hopefully be matched by federal funds for construction of a building containing approximately 40,000 square feet of assignable space. The Dean has outlined a tentative proposal for use of the space, and it is expected that a legal commitment by the Phillips Foundation will soon be made. No commitments were made beyond those necessary to obtain the money.

Dr. Howard assessed the effect of the proposed building on the Learn Committee's planning efforts. This clinical research building does not necessarily

include beds, although beds can be included if desired. The Department of Surgery will be assigned a disproportionately large amount of space. However, that space will include replacement of 5,000 square feet of present laboratory space which Surgery will lose in Mayo. About 2,000 square feet will be designated for an office and laboratory for Dr. Wangenstein after his retirement. Beyond these requirements, other space assignments can be made as the planners see fit. Dean Howard had suggested that about 5,000 square feet be assigned to an animal laboratory facility, but we are not bound to this. The Dean made it very clear to the Phillips Foundation that this building must be constructed in such a way that it can be added to. It must be a building, however, not just space within a larger building. Further, although we are not bound to the Frankfurter site, we are bound to a site that's centrally located.

If the building were located on the Frankfurter site, it would be important to consider alternative uses for the Powell Hall site. One possibility is that Powell Hall could be converted to an Outpatient facility, tying in with the Hospitals and Research. The disadvantage is the possible loss of a close connection with Dentistry. The Gould property is also an attractive site for a research building. Another possible site would be the Union Street property across from Millard Hall. The suggestion would be to tie in the Research building with the Outpatient facility, which might bridge across Millard Hall. The Research building would retain its own identity by distinctive architectural design.

The question was raised about the housing of nurses if Powell Hall were taken over for other uses. It was agreed that there would be no problem in this regard, since nursing students can live in any of the women's residences and graduate nurses could be provided subsidized housing in other quarters.

The earlier planning is done for this building, the better, because as soon as the University receives the money, there will be pressure to begin construction right away. In this regard, recommendations from Dr. French's group would be most helpful. We have to select the site before we get the final legal commitment of money from Phillips. Then, architectural plans will have to be drawn up to get federal matching funds.

QUESTION: If the planning committee said the Research Building should be complementary to the Outpatient Building, could the architectural concepts be integrated? Yes, but the architectural funds for the Research Building can't be used to pursue an overall architectural design for a Research-Outpatient Building. There is a legislative request in for \$70,000 for planning the Outpatient-Dental Building, and about \$40-50,000 would be needed for outpatient architectural planning.

Some felt that plans for the Wangenstein Research Building seem to set back the priority for an Outpatient Building. Dr. Howard said that the need for additional clinical research space seems to be clearly established by the Learn Committee deliberations thus far, so that he was not in a position to turn down funds for a research building on the grounds that it isn't the first priority need of the health sciences. He pointed out that he tried to interest the Phillips people in an Outpatient building, or a residence hall, but they weren't interested. However,

this building will be built with heavy enough foundations so that it can be added to, and it is estimated that only about 5% of the cost will be required for these heavier foundations. The plan for a research building will not be ready to present to the Board of Regents until we present a specific proposal and have a legal financial commitment and receive formal approval from the Honors Committee.

The next topic that Dean Howard discussed with the committee was the expansion of the VFW building. It does not appear likely that the V. F. W. organization will again be able to provide capital construction funds, although annual gifts from them continue to help support the Center. Since it was appropriate and possible to add to the VFW building, the Dean proposed that the University construct two more floors of about 4,500 square feet of space each without relying on VFW funds. The Department of Medicine needs more research area, so one of these floors could be designated for that purpose. This could be financed in part from 2/3 of a gift of \$250,000 from the George Chase Christian family. Although Biomedical Data Processing facilities have been developed in the basement of the Masonic Hospital, this unit will require more space, so that one floor of the VFW might be appropriate for this expansion. The financing on this is not yet clear-cut, but there are many bequests for research, so it might be well to add them together for this floor.

A number of questions are raised in connection with expansion of the VFW which the planning committee might give thought to. To what extent are we committed to cancer research in view of the fact that we can't expect more money from the VFW for this, although the Cancer Detection Center is their building? Might we not move cancer-related research into the VFW and free up space elsewhere?

QUESTION: What is the time-table on constructing the computer center? The Public Health Service grant for the computer center went into effect September 1 and there is great pressure to provide space for a staff of eleven. They are temporarily using space in Diehl Hall now, but we must return that space by January 1, 1967.

QUESTION: What is the Computer Center? This is a group which Dr. Cavert has helped develop. It is proposed that the computer center be self-supporting in three or four years by servicing the entire medical center on a job basis. Twenty percent of the activity will relate to the Hospital, for example, in regard to Hospital records, laboratory data reporting, cancer patient and cardiac patient data. Since this will be primarily a research tool, the Clinical and Basic Sciences will be serviced by it. It will really not be used for service functions in connection with the Hospital, but rather for academic functions, for example, case histories. This unit will be an integral part of the University Analysis Center and it is not actually for library purposes.

Dr. Spink suggested that one use which could be made of a new floor of the VFW would be to put Microbiology in there. This cross-fertilization would be good.

Finally, Dr. Howard presented information on the Cancer-Heart-Stroke Planning groups. Before this legislation was enacted, the Administrative Com-

mittee discussed it and sent memos to our congressional delegation about its views. When the bill was enacted, the Administrative Committee reviewed it again and decided that the University's action ought to be in concert with other agencies in the state. The University met with representatives of the State Medical Association, the Mayo Clinic, the State Board of Health and the Minnesota Hospital Association, and they all agreed to form an informal association to act as the planning agency on Cancer-Heart-Stroke for Minnesota. It was felt that we might want to invite the Dakotas and Montana to participate, if they want to. Dr. Stickney, President of the State Medical Association, is chairman of this planning group.

Internally, a committee headed by Dr. Frantz is exploring the faculty's view of the role the University should play in this program. So far, the only clear idea which has emerged is to improve post-graduate education in Cancer, Heart and Stroke via television networks and relationships with community hospitals. We haven't yet begun to deal with regional integrated programs. The committee is meant to be broadly representative and to consult widely throughout the College for all the faculty's views. Initial grants are for planning and only a small amount of about \$25 million have been appropriated for this purpose thus far.

Dr. Gault thanked Dean Howard for taking the time to share this vital information with the committee and answer their questions about these matters, so that they might plan more knowledgeably. In that regard, Dr. Gault asked the Hospital Task Force to think about possible uses of Powell Hall and prepare a report for the committee.

It was agreed that the summary of the space survey made by the College of Medical Sciences, which has been compiled by Mr. Edmund Nelson of Hamilton Associates, should be included in these minutes. This list includes hospital bed space and special rooms, such as operating room space. Hospital service space is not included, nor is Clinic space. However, some space figures are thought likely to include clinic space, for example, Otolaryngology, ENT. The Dean's Office space total includes an additum of space. It was suggested that the space summary be sent to each department, and that space for the School of Public Health and the School of Nursing be broken down as well.

Dr. Gault asked Mr. Westerman to look up a report on construction costs and sources of funds for University Hospitals, and include the report in these minutes. Mr. Brasfield, Assistant to the Director, originally prepared this report for the hospital task force.

A last announcement pertained to the Second Space Report which the Clinic Directors are issuing. This report needs to be in the thinking of people, in terms of square feet for structures, monies, etc. The Clinical Medicine-Hospital Subcommittee would like to hear about these plans and so Dr. Carey will be asked to present the Space Report at a joint meeting sometime about the end of January.

Respectfully submitted,

Kathryn Ritzen  
Research Assistant

Summary of Space Survey by  
College of Medical Sciences (April 1964 - March 1965)

<u>Department</u>	<u>Total Assigned Space (Sq. Ft. )</u>	<u>Non-Assigned Space Used (Sq. Ft. )</u>	<u>Total Assigned and Used (Sq. Ft. )</u>
Anatomy	35,848		
Anesthesiology	2,052	3,110	5,162
Animal Hospital Committee	9,542		
Biochemistry	23,647		
Comprehensive Clinic		444	
Computer Committee	1,563		
Continuation Medical Education	1,165		
Laboratory Medicine	21,775	515	22,290
Department of Medicine	20,878	22,090	42,968
Microbiology	20,678		
Minnesota Medical Foundation	256		
Obstetrics - Gynecology	3,030	3,118	6,148
Office of the Dean	6,794		
Ophthalmology	4,155	3,607	
Otolaryngology	3,839	4,905	
Pathology	26,019	1,155	27,174
Pediatrics	26,064	10,451	36,515
Pharmacology	18,849		
Physical Medicine and Rehabilitation	43,277	5,906	49,183
Physiology	31,533		
Psychiatry-Neurology	27,842	19,575	47,417
Radiology	22,105	3,761	25,866
Surgery	32,813	46,817	79,630
Space at Rosemount	8,982	10,400	19,382
Special Education Services and Basic Science Examination Board	799		
Medical School Total	393,005	135,854	528,859
School of Nursing	12,403		12,403
School of Public Health	31,265	9,073	40,338
College Total	436,673	144,927	581,600

## SOURCES OF BUILDING FUNDS FOR UNIVERSITY OF MINNESOTA HOSPITALS

McCollum Brasfield

June 22, 1965

A gift was responsible for the erection, in 1912, of the Elliot Memorial, the first Hospital in the present complex of University of Minnesota Hospitals, and continuing from the Elliot Memorial, gifts and endowments have been a major source of building funds for the University of Minnesota Hospitals.

In 1912, Dr. and Mrs. Adolphus F. Elliot gave \$113,000 toward the construction of the Elliot Memorial. The legislature accepted the Elliot gift, \$42,000 from a group of citizens for acquiring the site, and appropriated \$140,000 for the Elliot Memorial. A service Wing, costing \$65,000, enlarged the facility in 1915. The legislature appropriated \$50,000 for the Service Wing and the Hospital provided an additional fifteen thousand dollars.

Through the Citizens Aid Society of Minneapolis, Mrs. George Chase Christian offered \$250,000 for a Cancer Institute. This gift was accepted and the Cancer Institute was built with the Todd Memorial in 1924.

The Todd Memorial grew from Dr. Frank C. Todd's desire to found a hospital for eye, ear, nose and throat diseases. Toward the realization of Dr. Todd's plans, Mrs. Todd offered \$20,000 and Mrs. Edward C. Gale offered a similar gift. A short time later, Mrs. L. W. Mapes gave \$5,000. The University made available \$117,500 to erect the Todd Memorial, making the Memorial, of all Hospitals, the chief beneficiary of University funds.

In 1924 the University also accepted forty-four acres of land and other property to a total of \$1,000,000 from Mr. William Henry Eustis. Mr. Eustis wanted the gift to be used for the medical care and treatment of crippled children, and \$230,000 from the trust was used to build the Eustis Memorial. Mr. Eustis indicated to some members of the Board of Regents and friends connected with the University that he desired anonymity in the gift and building. However, the name Eustis Memorial was put on the building, and the Board of Regents allowed this to remain, for all practical purposes ending the indecision. The Eustis Memorial was built in 1928 with the Out-Patient Department, the funds, \$175,000, received from the legislature.

The Student Health Service, which changed in function to the present North Clinic, was built in 1933. State funds of \$245,000 were used for the building. Built in the same year, the roof house addition to the Student Health Service served as the vehicle for the first federal funds for the Hospitals. The University Services was the source of the major portion of \$44,000 for the addition, the federal government the source of \$9,000, from the Works Progress Administration.

A residence for nurses, Powell Hall, was also built in 1933 from funds of \$325,000 appropriated by the legislature. An addition for cadet nurses was built

in 1944 with funds through the Bolton Bill and Federal Works Agency of \$385,000.

The sixth floor Psychopathic Hospital, built in 1936 on the roof of the Todd Memorial and Cancer Institute was funded by a legislature appropriation of \$71,000 and Works Progress Administration grant of \$58,000.

In 1949 the Variety Club of the Northwest began contributions toward the establishment of a Heart Hospital. The Variety Club funds were supplemented by a Hill-Burton grant of \$406,000 and Hospitals repair, maintenance and modernization funds of \$203,000. A fifth floor was added to the Variety Club Heart Hospital from \$229,000 of Hill-Burton funds and further gifts from the Variety Club. For the Heart Hospital and the fifth floor addition, the Variety Club contributed \$915,300. The Club continues its building fund support, since an addition is now under construction.

In 1940, Governor Stassen appointed a Mayo Memorial Commission---a group of citizens who were to decide upon a suitable memorial for the Mayo brothers. Fourteen years of work later, the Mayo Memorial opened. The sources of funds were:

Gifts:

Individuals and Corporations	\$ 1,320,000.
School of Public Health	350,000.
Minnesota Cancer Society	300,000.
Interest on Gifts	40,000.
	<hr/>
	\$ 2,010,000.00

Federal Funds:

National Heart Institute	\$ 243,000.
National Cancer Institute	879,443.
Hospital Construction Act	2,000,000.
	<hr/>
	3,122,443.00

State Appropriations:

1945	\$ 750,000.
1947	750,000.
1949	5,000,000.
Earnings	18,640.10
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	6,518,640.10

University Funds:

University Support Funds	\$ 4,427.48
University Garage Funds	140,000.
University Bookstore Funds	13,320.
	<hr/>
	157,747.48

\$11,808,830.58

The Masonic Memorial was built in 1957. The Masons of Minnesota raised over \$1,000,000. to erect an eighty bed hospital facility to be used for patients suffering from chronic diseases.

For the second time within thirty-five years, the trust of William Henry Eustis was a major source of funds for an addition to the University of Minnesota Hospitals. In a letter from Mr. Eustis to the Honorable Fred B. Snyder, dated June 13, 1923, Mr. Eustis stated that he wanted his gift to be used "...largely for the medical care and treatment of crippled children, giving them in their tender years the best service that medical science and skill can provide in restoring them to health, happiness, and usefulness." Continuing the purpose of the trust of Mr. Eustis, the source of funds for the Childrens Rehabilitation Center, dedicated in 1964:

Eustis Funds	\$800, 000.	
University Hospitals	192, 000.	
College of Medical Sciences	84, 750.	
Interest on Invested Funds	114, 000.	
		\$1, 190, 750. 00
Hill-Burton	869, 000.	
		\$2, 059, 750. 00

Through the history of the University of Minnesota Hospitals, gifts and endowments have served as the impetus for construction of the bricks and mortar of University Hospitals. Without considering the Mayo Memorial, over \$3, 000, 000 was donated, supported by \$1, 000, 000 of state appropriations, \$1, 885, 000 of federal funds and \$650, 000 of University and Hospital funds. Considering the Mayo Memorial and the strong support of the legislature in the Mayo Memorial venture forward, \$5, 300, 000 was donated, \$8, 000, 000 of state funds appropriated, \$4, 600, 000 of federal funds used and \$800, 000 of University funds used.

Although increased federal assistance in the past fifteen years and great state support for the Mayo Memorial has a definite impact on the sources of building funds, gifts and endowments continue to serve as the impetus for building.



UNIVERSITY OF MINNESOTA  
 Summary of Building Valuations  
 Hospital Group  
 As of June 30, 1965

	<u>Total</u>	<u>Special State Appropriations</u>	<u>Federal Grants</u>	<u>Endowments and Gifts</u>	<u>University Services</u>	<u>Other</u>	<u>Date of Election</u>
Elliot Memorial Hospital	\$ 684,501.14	\$ 502,705.59		\$ 114,000.00	\$ 40,361.78	\$ 27,433.77	1911
Todd Memorial Hospital	165,517.64	41.79		45,000.00		120,475.85	1924
George Chase Christian Memorial Cancer Hospital	188,144.33			177,866.33		10,278.00	1925
Minnesota Hospital and Home for Crippled Children	250,471.66			235,191.24		15,280.42	1928
Health Service - North Clinic	300,044.27		8,390.45		47,638.83	244,014.99	1929
Outpatient Department	174,432.58	174,732.58					1928
Powell Hall	326,741.77	326,115.55				626.22	1933
Psychopathic Hospital	146,684.52	71,135.66	57,831.00			17,717.86	1936
Variety Club Heart Hospital	1,872,333.68	16,344.73	820,559.47	1,027,917.06		7,512.42	1951
Child Psychiatry	* 200,000.00						
Mayo Memorial Building	12,830,179.90	7,705,026.84	2,659,680.96	2,012,079.99	224,271.68	229,120.43	1954
Heart Hospital Addition - 4th and 5th Floor	* 250,000.00			* 250,000.00			
Masonic Memorial Hospital	976,781.02		202,379.00	774,402.02			1958
Sources of Funds for Additions Since 1958							
Childrens Rehabilitation Center	2,059,750.00		869,000.00	800,000.00		390,750.00	1964
Heart Hospital Addition	1,150,000.00						1965
Masonic Hospital Addition	1,100,000.00			1,100,000.00			1965

\* Approximation

COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES FOR THE HEALTH SCIENCES

Clinical Medicine - Hospital Subcommittee

Minutes of Joint Meeting February 16, 1966 (#4)

Present: N. L. Gault, Jr., Chairman; Richard Anderson, Charles Branthaver, James Carey, Nancy Cook, Donald Cowan, Giulio D'Angio, Gerard Frawley, Lyle French, Eugenijus Gedgaudas, Gertrude Gilman, Robert Gorlin, Norman Holte, Florence Julian, Robert Laur, Richard Magraw, Paul Quie, James Stephan, Paul Strandjord, Albert Sullivan, Frederick Van Bergen, Dennis Watson, McCollum Brasfield, Edmund Nelson, Glenn Mitchell, Kathryn Ritzen, John Westerman

Absent: Richard Lillehei, Konald Prem, Wesley Spink, Richard Varco

NEXT MEETING: Clinical Medicine Task Force, Tuesday, March 1, 1966, 4:00 p.m.  
O'Brien Room

1. Dr. Gault announced that the purpose of this meeting was Dr. Carey's presentation of the Clinic Directors Outpatient Planning Report to the Clinical Medicine - Hospital Subcommittee. Before Dr. Carey's presentation, however, Dr. Gault took up a few other items of business.
2. Dr. French introduced new members of the Clinical Medicine Task Force (Dr. Branthaver, Dr. D'Angio, Dr. Gedgaudas, Dr. Strandjord, Dr. Sullivan, Dr. Van Bergen) who were present, and announced the next meeting of the Clinical Medicine Task Force (Tuesday, March 1, 4:00 p.m., O'Brien Room). At that meeting the Task Force will hear a report from Mr. Stephan and Mr. Nelson on the amount and a survey of use of space in the Medical Center. This is invaluable information for further planning and refining needs.
3. Dr. Gault called attention to the article, "Medical Schools and Hospitals - Interdependence for Education and Service" in the September 1965 issue of The Journal of Medical Education. He stated that this article is of significance to planners in the health sciences and suggested that a joint meeting of the Subcommittee be held to go over the basic points of this article. Dr. Gault asked Mr. Laur if he would review the article for the group in time for the meeting.
4. Another announcement was that Mr. Brasfield, Assistant to the Director of University Hospitals, will be devoting a large portion of his time from now on to working with the space consultants on the study of hospital space. Dr. Gault expressed the pleasure of the Subcommittee in having Mr. Brasfield's help on this important facet of planning.
5. Dr. Carey began by expressing his appreciation for the opportunity to present the work of the Clinic Directors group to this subcommittee. Long before the formation of the Learn Committee, the Clinic Directors had begun to make plans for a new Outpatient teaching facility. Planning for this facility necessarily involved relationships with the entire medical center complex. A more comprehensive title for the Clinic Directors report might be, "Plan for an Ambulatory Care Teaching Facility."

The Clinic Directors early planning began with a change in curriculum, which was approved by the faculty, that some teaching would center around the patient. The Comprehensive Clinic Program was instituted to provide

balance in the medical student's orientation which, up to the senior year, is primarily focused on disease systems. It is appropriate, therefore, that the cover design of this report reflects the concept of the patient being central to the new teaching facility.

It's important to recognize that a medical instruction program centered around the patient differs importantly from other kinds of teaching because it involves service. Accordingly, the demands on this program for patient care impose an additional set of requirements for the type of building needed. The design will have to suit the needs of the patient as fully as those of the faculty and students.

The most important single matter which the Clinic Directors had to carefully define in planning an ambulatory care teaching facility was the function of the building, or rather, the role of the clinics. Our attempts at answering that question are set forth beginning on page 3, the Clinic Directors Role, Objectives and Program Report to the Learn Committee (July 12, 1965). It should be noted that these statements reflect the thinking of a group of physicians vitally involved in clinic operations. (A list of those clinic directors appears on pages 2 and 11 of the report)

The goals of the clinic programs as we have defined them in this report are seriously undermined by the inadequacies of the present facility. Beginning on page 22, the report relates history of the efforts made by the clinic directors to secure a new building. Back in 1960 the Administration recognized the new ambulatory care facility as a priority requirement. Remodeling the old facility was given careful consideration, but that alternative was found to be an inadequate solution. The Clinic Directors concluded that they would need the help of professional personnel and funds to assist in planning and eventually getting their building constructed. The Hill Family Foundation provided a grant which enabled the Clinic Directors to hire John Westerman to work on this project.

Another important step in this planning has been to gather preliminary estimates of clinic space needs from each department. A report of these estimates was first published in January, 1965. A more complete, revised estimate of departmental space needs in the new ambulatory care structure is included in this report, beginning on page 35.

Some design concepts showing possible geographic relationships between teaching, patient care and research functions in the ambulatory care unit were drawn up by Robert Douglass and are also included in this report (pages 28-34). These diagrams are intended to help people conceptualize space but they do not represent a commitment by the Clinic Directors to any particular shape of facility. There are many factors which will ultimately determine the facility's design, and one of those factors is geographic location. Geographic location of the unit will be partly determined by what it includes. The clinics could become part of a new hospital on the site across from Millard Hall or the clinics could be joined with a new School of Dentistry facility on the same site.

Following the individual departmental space requests, beginning on page 85 are some tables of figures with pertinent information about clinic operations over the years. For those who are worried that new legislation might mean that we eventually won't have any patients to care for and use

for teaching, the figures on page 88 showing a 42 year record of Out-patient visits ought to be reassuring. By and large, the growth of Out-patient visits has been remarkably steady. Looking at these past trends also emphasizes the need for future planning. I think it is safe to say that no other facility here has been so broadly and thoroughly planned as the Ambulatory Care Teaching Unit.

In the past year the Clinic Directors have integrated their planning with that of the Learn Committee and therefore are particularly interested to know the response of the Committee to this report. We hope the Clinical Medicine - Hospital Subcommittee, in turn, will convey back to the Clinic Directors the disposition of the parent committee in regard to this report.

After Dr. Carey concluded his presentation, he entertained comments and questions on the Clinic Director Report. Question: Has any of this information been presented before? While a small part of this has been printed and circulated before, most of it is new. Question: I wonder whether any of the space requests were overlapping in nature, representing the possibility of shared space? Some of the space needed certainly can be shared space, but much of it will have to be for unique functions. We want to avoid things like having exam room space gradually taken over for office space simply because not enough office space is provided. We've seen that happen too many times in the present facility. A big problem in this regard is seeing to it that students have proper office space. However, this is really a question which the professional planners and architects can best answer. Some committee members questioned the number of offices which the various departments had requested. Dr. Carey pointed out that this report is meant to be a working document of data gathered from individual departments and by no means represents final, integrated space requests. Thus the request for offices represent a variety of programs, including moving entire departments into the clinic area and providing an office for each medical student.

Another question which provoked discussion was whether North Clinic has been considered in this planning. The Clinic Directors feel that if they have the proper well-designed, well-equipped, attractive facility in which to see patients used in the teaching program, then a separate clinic for patients who now come to North Clinic would no longer be needed. So this building is really being planned for all types of ambulatory patients. This question came up because there is only one table in the report showing a record of North Clinic visits, and it was suggested that if these figures were integrated with other break-downs of Outpatient visits, it might dramatically increase OP Clinic utilization figures on page 93. On the other hand, future space needs can't be determined merely by expanding on the basis of past performance. Dentistry ought to be included in the planning of a new Clinic building, but has not been involved thus far because the Clinic Directors are admittedly still in the formative stage of planning.

A related concern which came up was the University Health Service. Several people felt disturbed that the Health Service was not included in the over-all health sciences planning, particularly because it affects hospital beds and services. However, Dr. Learn's letter to President Wilson in the Preliminary Report does point out the interrelationship of the Health Service with other units of the health sciences and raises the

possibility of ultimately including representatives of the Health Service directly in the planning. A motion was made and carried that the Clinical Medicine - Hospital Subcommittee recommend to the Learn Committee that the University Health Service be included in planning for the health sciences.

It was also recognized that the Health Service itself has been carrying on planning efforts for the past two years and is ready to proceed with detailed planning, especially relative to hospital beds.

The meeting concluded with a motion that the Clinical Medicine - Hospital Subcommittee accept and endorse the Clinic Directors preliminary outpatient planning report and present it to the Learn Committee. The motion also commended the Clinic Directors for their work and philosophy of planning.

Respectfully submitted,

Kathryn Ritzen  
Research Assistant

KR:j

COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES FOR THE HEALTH SCIENCES

Clinical Medicine - Hospital Subcommittee

Minutes of Meeting March 16, 1966 (#5)

Present: N. L. Gault, Jr., Chairman; Richard Anderson, Charles Branthaver, McCollum Brasfield, Nancy Cook, Philip Kernan for Donald Cowan, Gerard Frawley, Lyle French, Eugenijus Gedgaudas, Gertrude Gilman, Robert Gorlin, Florence Julian, Robert Laur, Richard Magraw, Edmund Nelson, James Stephan, Paul Strandjord, Albert Sullivan, Frederick Van Bergen, Richard Varco, Kathryn Ritzen, John Westerman

Absent: James Carey, Giulio D'Angio, Norman Holte, Richard Lillehei, Konald Prem, Paul Quie, Wesley Spink, Dennis Watson

Guests: Dr. Elmer Learn and Mr. John Rollins

NEXT MEETING: AT THE CALL OF THE CHAIRMAN

Agenda: MR. ROBERT LAUR'S REVIEW of the article, "MEDICAL SCHOOLS AND HOSPITALS - INTERDEPENDENCE FOR EDUCATION AND SERVICE" by Cecil G. Sheps, Dean A. Clark, John W. Gerdes, Ethelmarie Halpern, and Nathan Hershey, in The Journal of Medical Education, Vol. 40, No.9, September, 1965,

Mr. Laur began by describing the background of the study. The study was intended "to identify the fundamental common factors that characterize any effective affiliation between a medical school and a teaching hospital, and to set them forth in a manner that will be helpful to medical schools and hospitals in strengthening their existing affiliations and in developing new ones." The study focuses on the issues that have to be resolved in order to establish and maintain an effective affiliation between a medical school and a teaching hospital. Medical education in this study concerns only education of medical students, interns and residents.

The authors first searched the literature for criteria for effective affiliations, but found numerous inconsistencies. Then they mailed a questionnaire to all medical schools and known affiliated hospitals. All the medical schools responded (85) and 95% of the 266 voluntary and 289 governmental hospitals. Field visits were made to 14 medical schools (7 private and 7 publicly owned) and their affiliated hospitals. There was also considerable consultation with A.A.M.C., A.M.A., and A.H.A. officials, as well as medical school and teaching hospital representatives.

The value of the study to the Clinical Medicine - Hospital Subcommittee lies in the clarification of problems and issues involved in the relationship between school and hospital as well as in the identification of goals for the medical school and teaching hospital.

The study group has enunciated eight essential elements or criteria involved in an affiliation between a medical school and a teaching hospital. They are as follows:

1. Shared goals: the common goals of education, research, patient care and community service.

2. Faculty and hospital staff appointments: the power of faculty appointment lies with the school; the staff appointment lies with the hospital; for both there should be a joint selection effort.
3. Patients and teaching: all patients admitted by faculty members should understand that they will participate in the teaching program, unless the patient's welfare contra-indicates.
4. Medical students and patients: students are responsibly involved in the whole spectrum of patient care.
5. Interns and residents: their selection and appointment is a joint undertaking of medical school and hospital. They should be given appropriate faculty status.
6. Patient care: of highest standard for all patients. The medical school is obligated to help the hospital achieve high standards, and medical students will participate in patient care.
7. Research: is essential, but the hospital has primary legal and moral responsibility to safeguard its patients.
8. Affiliation agreement: should contain provisions for settling problems and should be a written, signed document reviewed periodically.

Naturally, there has been no universal acceptance of these criteria. Two fundamental questions are:

- 1) Do the elements foster undue domination by either the medical school or the hospital?
- 2) Is too little or too much emphasis placed upon service to patients as opposed to medical education?

Both of these questions illustrate that, what are ends for the medical school are usually means for the teaching hospital, and vice versa.

The authors suggested that one way to resolve conflicts over medical school-teaching hospital goals is more involvement in community service for both, that is, taking their place among the health service agencies in the community and serving as a center for the identification of health needs not met by existing community agencies.

Dr. Gault expressed the group's appreciation to Mr. Laur for reviewing this article so pertinent to resolving roles and goals in our own planning effort. QUESTION: Has our role in community service as a medical center, as we now exist, been defined anywhere in our preliminary report? We don't seem to have actually spelled this out. QUESTION: In defining our role in community service, aren't we really limited by the legislative requirement that we serve the medically indigent? Today, we are not necessarily restricted by that requirement because only a third of our patients are in that category. The Clinical Medicine Report noted this change in the community that we serve. Right now we have a grant pending, under Medicare, to handle a specific section of the population for total patient care. To accomplish this, some staff will be working outside of the medical center itself, right in the given community.

In the center itself, however, we perform community service everyday by receiving referrals from community physicians. Post-graduate training through the Continuation Medical Education program is another concrete form of community service which we offer. Many physicians here devote a good deal of time to working with various health associations, such as the Heart and Cancer Associations.

Of course there are other forms of community service which we could take on, such as running pilot programs to study the economics of certain kinds of care, for example, outpatient psychiatric care, home care, or preventive services.

Another important example of community service is the research carried on at the medical center. That, along with patient care and education of medical students, is a very substantial service to the community at large. On the other hand, the article which Mr. Laur reviewed somehow defines community service as something other than all the examples we've mentioned, principally as the identification of health care needs that are not being met. In this sense, one might say the faculty here has not been directly involved in community needs.

Some members of the committee disagreed that patient care and teaching necessarily meet community needs. Patient care doesn't always provide education for the referring physician through the quality of letters written to those physicians. And teaching is not always undertaken with the concept of meeting specific community needs, witness the need for the Minnesota Health Manpower Commission. Others felt that although all three objectives of the health sciences - teaching, service and research - could be improved, they cannot be distinguished from community service.

The multi-faceted role of the department chairman was discussed. Since the demands on the department head's time and talents have increased, it is almost impossible to expect that one person can be equally outstanding as an educator, researcher and administrator. One suggested solution to this problem was to have an oligarchy containing a top professional administrator fill the position of department or division head. However, medicine has been traditionally opposed to placing a professional administrator in a position requiring medical judgment. The point is that a good chief will see to it that he has the administrative help he needs.

Another interesting question which arose was whether a university hospital ought to be considered another department of the medical school, or as a separate institution. The problem seems to be in regard to the primary concerns of each unit, since both institutions can't have identical primary concerns. In the case of the University of Minnesota, however, the new faculty constitution attempts to bridge this and other problems pointed out by Sheps and Clark. In approving the constitution, the Board of Regents discussed the possibility of setting up an advisory group to the College of Medical Sciences primarily to attend to the problem of community service, or our extramural concerns.

The discussion ended with Dr. Gault once again thanking Mr. Laur for reviewing the Sheps and Clark article and acknowledging the importance of the article in our planning efforts.

Respectfully submitted,

Kathryn Ritzen  
Research Assistant



COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES FOR THE HEALTH SCIENCES

Clinical Medicine & Hospital Subcommittee

Clinic Directors Building Task Force

Minutes of Meeting August 11, 1966 (#5)

Present: John Westerman, Chairman; Leon Adcock for Edgar Makowski, Richard Anderson, Charles Branthaver, McCollum Brasfield, Eugenijus Gedgaudas, William Kane, Richard Magraw, Glenn Mitchell, Edmund Nelson, Severn Olsen, Paul Strandjord, Kathryn Ritzen

NEXT MEETING AT THE CALL OF THE CHAIRMAN

1. REVIEW AND STATUS OF COMMITTEE'S WORK - Mr. Westerman

Mr. Westerman reviewed some of the committee's past work. Although the plan to use Powell Hall as an interim outpatient clinic facility did not work out, approximately 50 rooms have been designated for College of Medical Sciences use. Further, partial use of Powell Hall by the clinics has not been ruled out.

Work has been proceeding on plans to remodel the existing outpatient clinics, and consideration has been given to the idea of a multiphasic screening laboratory. One of the main items on the agenda for this meeting will be Dr. Strandjord's report on the options available for a possible screening laboratory in the outpatient clinic.

It is expected that Pediatrics will receive a federal grant for metabolic research, thus increasing its need for more space. It may be possible to give Pediatrics more space by transferring Social Service to coffee-shop space, or by decentralizing it. However, no final plan has yet been worked out.

2. OTHER HEALTH SCIENCES PLANNING DEVELOPMENTS SINCE THE LAST MEETING - Mr. Westerman

Next, Mr. Westerman briefly described other pertinent developments since the last meeting. President Wilson has presented the University health sciences expansion plan to the Board of Regents and they have given it their warm approval. He has also presented the plan (now known as the Regents Report to the Minnesota Legislative Building Commission) to a legislative building committee. The committee reacted favorably to the presentation, but naturally there is still a long way to go before appropriations are made to carry it out.

Right now the health sciences planning committees are working to complete a final report to the President, including space and faculty projections, for presentation to the legislature in January 1967. Already there are reactions to the building proposal, as well as to the Health Manpower Study for the Upper Midwest, which may ultimately cause the plan to be somewhat modified. It's possible the Mayo Clinic will wish to start an undergraduate medical school. Spokesmen for a new medical school in St. Paul have recently appeared before the House Appropriations Special Subcommittee on Medical Education, to request subsidization of \$5,000 per medical student in such a new facility. Other hospitals such as Gillette, Ancker and Children's, are making overtures to become more directly involved in medical education. The University Administration itself is not unanimously in favor of a high density building plan such as that proposed for health sciences expansion. So these factors may turn out to have a significant effect on the plan which has been presented to the legislative building committee.

3. CLINIC DIRECTORS REPORT TO CLINICAL MEDICINE TASK FORCE - Mr. Westerman

The Clinic Directors will have to modify their original outpatient planning report for presentation to the Learn Committee by October 1. While goals and programs, and square footages may remain largely the same, staff projections submitted to the Clinical Medicine Task Force will have to be scrutinized to assure coordination and avoid duplication. In other words, outpatient department staff must be included in the staff projections given to Dr. French's committee. Faculty at affiliated institutions should also be included in staff projections, but should be clearly labeled as such.

The next step is to gain approval from Vice President Shepherd for proposed faculty increases, especially in the medical school, since Dean Schaffer has already met with Dr. Shepherd about dentistry increases. This has to be done before October 1.

January 1967 is the next item on the timetable, when the expansion plan will go before the legislature, and we hope to have funds for planning and land purchase by July 1, 1967. Since we hope to have hired an architect by then, it would be wise for faculty to make known their wishes about choice of architect.

4. MULTIPHASIC SCREENING LABORATORY - Dr. Strandjord

Dr. Strandjord had written a report (which is now being circulated to the Building Subcommittee, and, in summary form, to all the Clinic Directors and members of the planning committees) which covers this topic in greater detail than the oral report he gave at the meeting. He explained that the report was divided into three sections: 1) the rationale or objectives for a multiphasic screening laboratory, to supplement the history and physical exam of a new patient; 2) a review of what's been done in University hospitals elsewhere in the U.S.; and 3) the outline of a possible approach to setting up a multiphasic screening laboratory here at the University.

Dr. Strandjord emphasized that his proposal of what could be done here is only one possible approach, not a definitive example of what should be done. The far more determining factor is what the faculty would want included in such a battery of laboratory tests.

Dr. Strandjord estimated that it would cost about \$75,000 a year, given present equipment and the type of tests he proposed, to screen approximately 25,000 patients, or a cost of about \$3 per patients. He estimated that, including overhead charges, each patient might be charged about \$15 for the battery, which is about what such a screening costs elsewhere in the country.

The time required for furnishing physicians with results was worked out with laboratory workers, and it seems possible that results could be available in the afternoon for tests given in the morning, and likewise, the results ready the next morning for tests given the previous afternoon. Use of a computer would be required for data processing.

Dr. Strandjord's proposal met with preliminary favor among the subcommittee. Dr. Olsen suggested that dental screening ought to be included in the battery, if it is to be truly comprehensive. Besides, these tests would be invaluable in relating oral disease to other body functions. Dr. Branthaver said that pediatric patients might require a different type of screening, and other members agreed that different age groups would require screening tests appropriate for their age groups. Dr. Strandjord agreed, and noted that his proposal illustrated how selective tests might be administered. And he reminded the group that the total gamut of regular lab tests would still be available/on order in the main laboratory.

**QUESTION:** Wouldn't the concept of multiphasic screening be equally applicable to in-patients, especially to those not already seen in the outpatient department? Dr. Strandjord said he thought so, particularly in view of the practice at Duke University.

**ACTION TAKEN:** The subcommittee agreed to report the concept of a multiphasic screening laboratory for clinic patients to the entire Clinic Directors group, and recommend their consideration of it for their support.

Respectfully submitted,

Kathryn Ritzen  
Research Assistant

Heath Quinn  
File

9.

MEMORANDUM

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<sup>1</sup>

"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:<sup>2</sup>

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. Undiscovered 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

<u>Test</u>	<u>I</u> All Patients*	<u>II</u> Tests Selected on Basis of Findings in I	<u>III</u> 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	---	---
<b>Blood</b>			
VDRL	X	---	---
Glucose (after carbo. load)	X	---	---
Urea	X	---	---
Calcium	X	---	---
Sodium and Potassium	X	(Bicarbonate & chloride if Na or K is abnormal)	---
Potassium	X		---
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
<b>Urine</b>			
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

<u>Determination</u>	<u>Instrumentation</u>	<u>Man Hours/Day Based on 100 Patients/Day</u>
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)	<u>\$77,710</u>	<u>74 Hours</u>
Additional man hours to cover unforeseen problems, reagent preparation, etc., 25%		18 Hours
SUBTOTAL (Man Hours)		<u>92 Hours</u>

\* 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.

COMMITTEE FOR THE STUDY OF PHYSICAL FACILITIES FOR THE HEALTH SCIENCES

Clinical Medicine and Hospital Subcommittee

Clinic Directors Building Task Force

Minutes of Meeting Friday, September 16, 1966 (#6)

Present: John Westerman, Chairman; Leon Adcock, Richard Anderson, Robert Brantingham, McCollum Brasfield, Shelley Chou, Benjamin Fuller, Mellor Holland, Thomas Jones, William Kane, Richard Magraw, Glenn Mitchell, Edmund Nelson, Irmagene Stark, Kathryn Ritzen

NEXT MEETING AT THE CALL OF THE CHAIRMAN

1. Mr. Westerman introduced Mr. Brantingham, representing Mr. Peacock, and Mr. Thomas Jones, the Hospital Administrative Resident.
2. The main purpose of the meeting was to consider a request to Hospital Administration for cost estimates and a planning study of ways to improve the existing clinics within the present space of 25,000 square feet. In brief, the two major improvements would be the addition of a Multiphasic Screening Laboratory and the construction of a model, multi-use large clinic. The idea is to situate the Multiphasic Laboratory on the second floor, in the area where New Medicine now is, and to set up the multi-use clinic on the third, in the North Clinic and OB/GYN areas.
3. Dr. Magraw was asked to share his view of the proposed improvements with the rest of the committee. He stated that the proposed innovations were a valid and valuable investment in planning for the new outpatient clinic facility. This would be particularly true of the model clinic, where different space, equipment and module arrangements could be experimented with. Further, space for the Multiphasic Screening Laboratory would not be for entirely new usage, since the Lab would absorb some existing functions, possibly serving as an Admissions Clinic for New Medicine, North Clinic and some Pediatrics.
4. Mr. Westerman distributed copies of background information on the past few years' planning to improve the clinics. He reported that Mr. Mitchell and Mr. Brasfield had indicated that Miss Gilman would be willing to entertain a request from the Clinic Directors for the proposed study and cost estimates.
5. Mr. Brantingham expressed the concerns of the University Planning Office in the proposed remodeling:
  - a) That the \$54 million health sciences expansion plan not be jeopardized;
  - b) That the courtyard not be used for even a temporary structure;
  - c) That no remodeling already completed (eg. that in the second floor admissions area) be disturbed;
  - d) That remodeling plans take account of the certain disruption which will result from constructing the large, new health sciences complex.
6. Dr. Strandjord said it was conceivable the present New Medicine area would be adequate for the site of the Multiphasic Screening Laboratory, provided both sides of that hall and the end laboratory were used. However, it's up to the Clinic Directors to specify what they want in the Screen, before the required amount of space

can be exactly computed. Dr. Strandjord thought that some demolition of present walls would be required to provide the necessary room sizes.

Dr. Chou felt there was a contradiction in starting a new program requiring more space, while such an acute space shortage exists for present programs.

Mr. Mitchell thought the vital determinant was whether it would be urgent to have a Multiphasic Screening Laboratory within five years and there seems to be no doubt of that. At the same time, it does seem that the Multiphasic Lab will require more space than we can easily afford. To a certain extent, however, the amount of space required would be flexible, provided that it not be too limited to accomplish the basic objective of experimenting with the use of the Multiphasic Screen. Physical exam rooms would not be included in the proposed space. Therefore, it's important to study present exam room scheduling to see whether there is any leeway space to manipulate.

7. Dr. Fuller expressed the views of the Department of Medicine:

- a) The Multiphasic Screen in general is a good idea, but its real worth would depend on studies built around it. The object should be to experiment with selectivity, based on those tests shown to be valid and worthwhile. Initially, at least, the examining physician should decide which patients are to be screened. For a control study, half the patients should be screened and the other half worked up in the present manner.
- b) Since New Patient Medicine operates five days a week now, it would be necessary to replace with comparable space that which would go for the Screen.
- c) On the whole the idea of experimenting now to plan for the new facility is endorsed.

Dr. Holland, on behalf of Dr. Olsen for Hospital Dentistry supported the inclusion of an oral screen in the proposed Multiphasic Laboratory tests. Not much space would be required for this, but some rooms for oral exams should also be included.

Mr. Mitchell apprised the committee of what information Miss Gilman would need in order to act on a Clinic Directors' request for assistance with this project. The important thing to know is the extent of the Clinic Directors endorsement of the proposed improvements and the priorities involved, since it might not be possible for the Hospital to finance both the Multiphasic Screen and the model experimental clinic.

Dr. Kane suggested that the model clinic be a general specialty clinic, where comprehensive consultation could take place, without the present geographical hindrances. With the exceptions of Audiology, ENT, Ophthalmology and Psychiatry it's conceivable that patients now going to other individual specialty clinics could all be accommodated in such a general specialty clinic. A study of present patient and room scheduling and the help of an architect could probably answer whether such a multipurpose clinic would be possible within the present site. Mrs. Stark noted that nurses and clerical help could be much better utilized in one large clinic. It would also be easier to supply such a clinic.

Another suggestion, put forth by Mr. Mitchell, was that North Clinic become an admitting clinic, with return visits to specialty clinics. The question is whether the faculty would accept this change while the present facility must be used.

Dr. Chou pointed out the possibility for confusion during the transition to use of a multipurpose clinic. Obviously, to make a multi-use clinic work efficiently, it will be important for the Clinic Directors to study new patterns of staffing in terms of the proposed change.

After the discussion concluded, the Clinic Directors Building Subcommittee endorsed a recommendation to the parent group to request the assistance of Hospital Administration in planning and cost studies to bring about the proposed improvements.

Mr. Westerman announced that this subcommittee will probably be inactive at least until the outcome of the above proposal is known.

Respectfully submitted,

Kathryn E. Ritzen

#### QUESTIONS FOR THE HOSPITAL REPORT

1. What kind of information do you need from the other groups?
2. Did the committee feel any one project had priority or what is your greatest sense of urgency?
3. Perhaps the program section could be reviewed so that it is in better harmony with the roles & objectives section. What do you think?
4. Specifically, it looks like some mixup in the appendices as the nursing section has just listed some objectives. As this is such an important department, I would wonder if a brief statement about future trends would be helpful?

#### QUESTIONS FOR THE CLINICAL MEDICINE REPORT

1. This report suggests several areas where followup action are needed. Would it be correct to assume that the exploration of a dental-outpatient facility is a priority item?
2. To what extent are the criteria you mention as being requisite for a good affiliation, in effect at the Henn. County and Ancker Hospitals?

*Sterling Garrison*

REPORT TO CLINIC DIRECTORS

UNIVERSITY OF MINNESOTA MEDICAL CENTER

A VISIT TO:

THE UNIVERSITY OF FLORIDA MEDICAL CENTER, GAINESVILLE,  
FLORIDA

OCHSNER CLINIC, NEW ORLEANS, LOUISIANA

THE TEXAS MEDICAL CENTER, HOUSTON, TEXAS

THE UNIVERSITY OF TEXAS, SOUTHWESTERN MEDICAL SCHOOL,  
DALLAS, TEXAS

MARCH 29 - APRIL 2, 1965

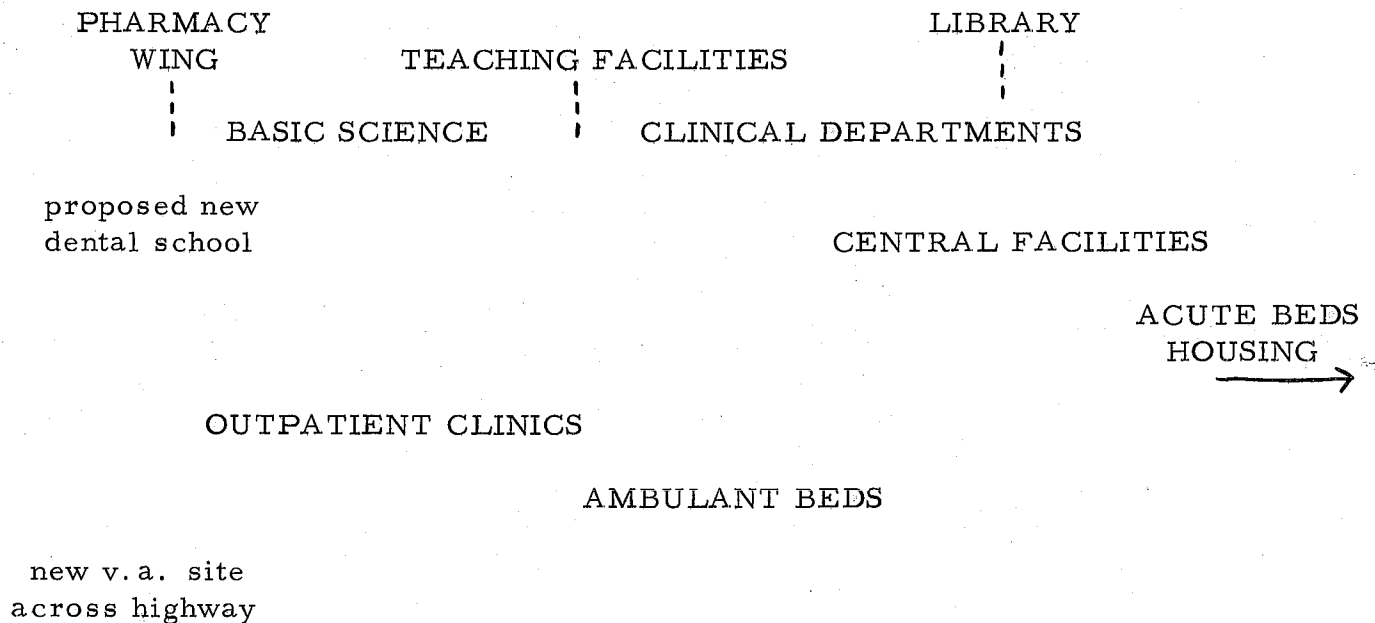
ARNDT J. DUVALL, M. D.  
REYNOLD JENSEN, M. D.  
JOHN H. WESTERMAN

THE UNIVERSITY OF FLORIDA MEDICAL CENTER, GAINESVILLE, FLORIDA

BACKGROUND

The J. Hillis Miller Health Center is largely the product of Dr. George T. Harrell, who came as Dean in 1954 and left after 10 years to found another new medical school in Hershey, Pa. A young, vigorous faculty was recruited, almost 400 medical students and a sound working relationship between the state's practicing physicians and the medical school was developed. The center bears the imprint of Mr. Harrell and with the advantage of one man's unified thought and disadvantage of lack of consultation.

Because the complex is new, it has benefited from experiences of other medical schools. It was felt at the outset that the primary role of the center was education. The school and hospital were planned as one functional unit and as an integral part of the main campus. The center and a housing development occupy a 50 acre site. A rough outline of the overall functional relationships is shown.



There is parking around the entire site - and they mention parking as one of their critical problems today. The University Hospital and Clinics have grown rapidly, particularly in the past two years. More than 1000 students are pursuing their training in the center. In 1963-64 there were:

FLORIDA		MINNESOTA	
9,312	admissions	16,685	
67,595	clinic visits	131,107	
96,190	patient days	227,155	
\$47.13	per diem cost	\$51.25	

Two pioneering features of this school are the student study cubicles (of which Dr. Harrell writes, "Study cubicles for students have proved to be an exceedingly



useful device in medical education. Experience over a period of seven years indicates the average weekly hours of use justify the allocation of space. Their inclusion should be considered in the design of new medical schools and teaching hospitals. Though the central placement uses prime space which in many designs would be devoted to administration, it is felt the allocation for an educational purpose at the center of activity and movement has been justified." JME, Vol. 39, No. 1, January 1964).

And a multidiscipline student teaching laboratory (JME, Vol. 39, No. 9, September 1964, part one in which it is stated, "Laboratories for the teaching of a single scientific discipline have been used for years. These designs emphasize specialized equipment and the convenience of the faculty. Several different designs for multipurpose of interdisciplinary use have been proposed or built. These designs incorporate the study function with the sit-down laboratory bench or desk and a stand-up bench in a single room. The proposed design separates the sit-down bench in a quiet side, suitable for seminar or discussion, from a noisy side with a stand-up bench. The study function is provided for by student study cubicles which are located apart from the laboratory. The advantages for improvement in teaching permit emphasis on the student and his learning process, encourage integration of knowledge from many scientific disciplines, and permit more freedom of the individual student to work at his own pace without concern for problems of scheduling. This design can be incorporated in a simple design for a building to serve as the nucleus of a medical sciences building for a two or four-year medical school."

### THE OUTPATIENT CLINICS

The clinics consist of 74 examining rooms, utilized as follows:

General	40
2nd floor private diagnostic clinic	12
Peds	9
ER	5
Eye	8
Total	<u>74</u>

These rooms are standardized with dimensions of 9' x 11.6'. They occupy a total space of approximately 28,000 square feet. The clinics are staffed by 13 registered nurses, 8 LPN's, 6 nursing assistants. Billing and bookkeeping are handled by a separate staff which takes in over \$1,700,000 a year (10% goes to the deans office to supplement department chairmen salaries and the basic science salaries, 20% stays with the hospital for overhead, 70% reverts to the earning department to be used as an academic enrichment fund - which supplements salaries and supports activities not ordinarily provided for in the budget). There is a central appointment desk and the staff spends little time arranging appointments and none billing patients. There is also a clinic coordinator who handles the clerical work for the nursing staff. She is one of six such unit managers in the hospital. They report to a member of the administrative staff and work closely with the nursing, medical, and supporting staff. This development was widely praised by all we came in contact with.

Another popular feature was the 12 room 22 bed ambulatory patient unit. The occupancy of this unit is high, in spite of the fact that the \$16.00 and \$18.00 daily

charges are not covered by Blue Cross. A washer and dryer are available along with a small area to cook snacks. Although there was no data about the effect of this unit, the staff thought it speeded up the clinic workup considerably and administration pointed out the demand could support another 22 beds without difficulty, although they would recommend all single rooms for this purpose. Originally, an LPN was available during the day shift, but this coverage has been extended around the clock.

However, the general consensus was that the clinics are the weakest unit in the medical center. The reason is that they were planned on a concept that failed, and one that indeed was born without adequate faculty consultation, especially of the surgical specialties.

The idea was that there would be a small 12 exam room diagnostic unit on the second floor and all other exam rooms would be general. The faculty in turn, would see patients on an undifferentiated basis. The plan never really caught on with the departments, except for the internists and the pediatricians. After the latter two groups proved to themselves they could render good general care, they became restless at the prospect of seeing general medical problems. The general clinic program has evolved into a small comprehensive clinic program with 9 students for a 9 week period and a supporting faculty representatives from internal medicine, psychiatry, pediatrics, preventive medicine and others on call.

A second problem was that the 2nd floor diagnostic clinic was not workable, and abandon after two weeks. It is adjacent to x-ray and a minor surgical suite and has been taken over by surgical specialties. The staff men wanted to see all their patients in one place, rather than make the artificial distinction of diagnostic and therapeutic problems.

A third problem was resolved when pediatrics was given their own area on first floor and the patients were taken out of the general waiting area. The children disturbed the clinic staff and other patients under the lumping arrangement. On financial considerations, the eye department was given its own space and this is the acknowledged goal for all the specialties.

The base unit of 40 rooms had no call system. Corridors were narrow causing congestion especially in the x-ray unit. The area between the double corridors was taken up in part with six cubicles, to be used by the house staff and for small consultation gatherings. These cubicles have not worked out for the purpose intended and will be converted to conference rooms. Heretofore, there had been only one conference room.

In summary, it would appear that inadequate attention had been given to the manner in which the faculty would teach in the outpatient area. Thus when the original concept had to be modified, the space also had to be re-arranged. But there appears to be no way to overcome the lack of teaching space, and in a few years they predict real scheduling problems will ensue if the rate of increase continues.

Because each of the clinics have had to consider their space needs, attention has been given to the design of individual clinics. The following suggestions, which

are applicable to most areas, have been extracted from a paper prepared by Dr. Jack C. Evans, Medical Director Children's Clinic.

"The following problems should be considered in the physical design.."

- |                |                   |                     |
|----------------|-------------------|---------------------|
| 1. Function    | 5. Communication  | 9. Space            |
| 2. Population  | 6. Administration | 10. Diagnostic Aids |
| 3. Location    | 7. Obsolescence   | 11. Offices         |
| 4. Utilization | 8. Traffic        | 12. Money           |
|                |                   | 13. Growth          |

He suggests a formula for the calculation of the number of exam rooms needed.

$$\frac{(\text{No. patients/month}) (\text{time/patient})}{(\text{hrs./day}) (\text{days/month})} (\text{factor}) = \text{rooms needed}$$

He states, "There are several problems in such a formula and the factor should take these into consideration. For example doctor delay (due to other duties), consultation, teaching, unexpected findings, and housekeeping between patients is often overlooked in calculating patient visit time and the number of exam rooms needed by such a formula. Other considerations to be given in designing the exam room would be to have the wall extended to the building ceiling, not the false ceiling, to decrease noise transmission. The walls should likewise be absorptive with some wall break or curtains to further decrease reverberation. Outside windows help to decrease the feeling of claustrophobia. Air conditioning ducts should have interior insulation to decrease noise transmission and the air return should not be through the door. Lighting should be adjustable-soft for interviewing and bright for examination and color adjusted to daylight. Paint should be a satin finish, non-attention getting background color. In order of preference these might be beige, light green, light blue, off white, grey, and light yellow. Some means of separating the exam area from the interview area is desirable and can help to create a living room effect for the interview. The curtain separating such an area will also absorb sound.

A wall cabinet with access to the hall and the exam room will save interruption and nursing and housekeeping time. If these are grouped a person can replenish four rooms at one time. The sink for hand-washing should be located at the door so that it is easily accessible on entering and exiting. Other than the exam table, table and chair for the physician and couch or several chairs grouped for parent and child are all the furniture that is needed. Some means of communication with the desk is very desirable.

'Special use rooms' should be placed in locations in which they will be most convenient. For example the treatment room should be near the nurses area, the observation room adjoining the conference room, and the playroom close to the lobby and exam area. The laboratory should be near or within the clinic with material available in the clinic for laboratory work should it be desired.

The clinic should also be designed to take advantage of the many teaching aids now available. These are, for example, teaching machines, communication with the national medical library, one way screens, conference room, audio-visual

aids and photography. Closed circuit television and taping facilities both for T. V. and for sound could be valuable teaching aids.."

## OCHSNER CLINIC, NEW ORLEANS, LOUISIANA

### BACKGROUND

The reason for visiting this clinic is that it is a model of the approximate size Minnesota will need and is oriented to patient care. Known as the Mayo Clinic of the south, this building was opened about four years ago and is in a complex with a hospital and motel facility. The relationship between these units can best be explained by the following chart.

#### ALTON OCHSNER MEDICAL FOUNDATION

a tax exempt corporation

7 trustees-

EDUCATION PROGRAM	CHARITY SUPPORT	RESEARCH STUDIES	OCHSNER FOUNDATION HOSPITAL	BRENT HOUSE CORP
			25 lay bd. of governors hospital administrator	the 7 trustees act as bd. of dir.

#### OCHSNER CLINIC

58 man partnership

7 man bd-3 original trustees, 4 other m. d.

medical director

administrative director

The hospital and clinic are relatively independent organizations administratively. The labs and x-ray are located where the buildings are joined. The clinic operates x-ray and keeps all the income and the hospital operates the lab and keeps all the income. The medical staff is the same, and so the lack of administrative coordination has not hampered operations to any great extent.

Of interest was the fact that the clinic had just gone through a new building program and the staff was able to share some of their experiences, mistakes, and strong features. The clinic was built after the hospital. The staff made a point of the fact that all parties in the clinic must become involved in the planning and one person needs to check very closely with the architects to make sure the ideas are incorporated in the plan. When the hospital was built, the staff assumed that the hospital experts would plan the best of all facilities. Instead they ended up with a good standard hospital that didn't fit the peculiarities of the Ochsner situation. They were determined not to make this mistake in the clinic building.

Their evaluation of the facility is that it is not an architecturally exciting structure, but the functional relationships are good, and in general things are in place where they ought to be. Again it was emphasized this came about because one man rode herd on the architects. The mistakes in the building were largely mechanical, and peculiar to the climate. The building cost \$4,000,000.

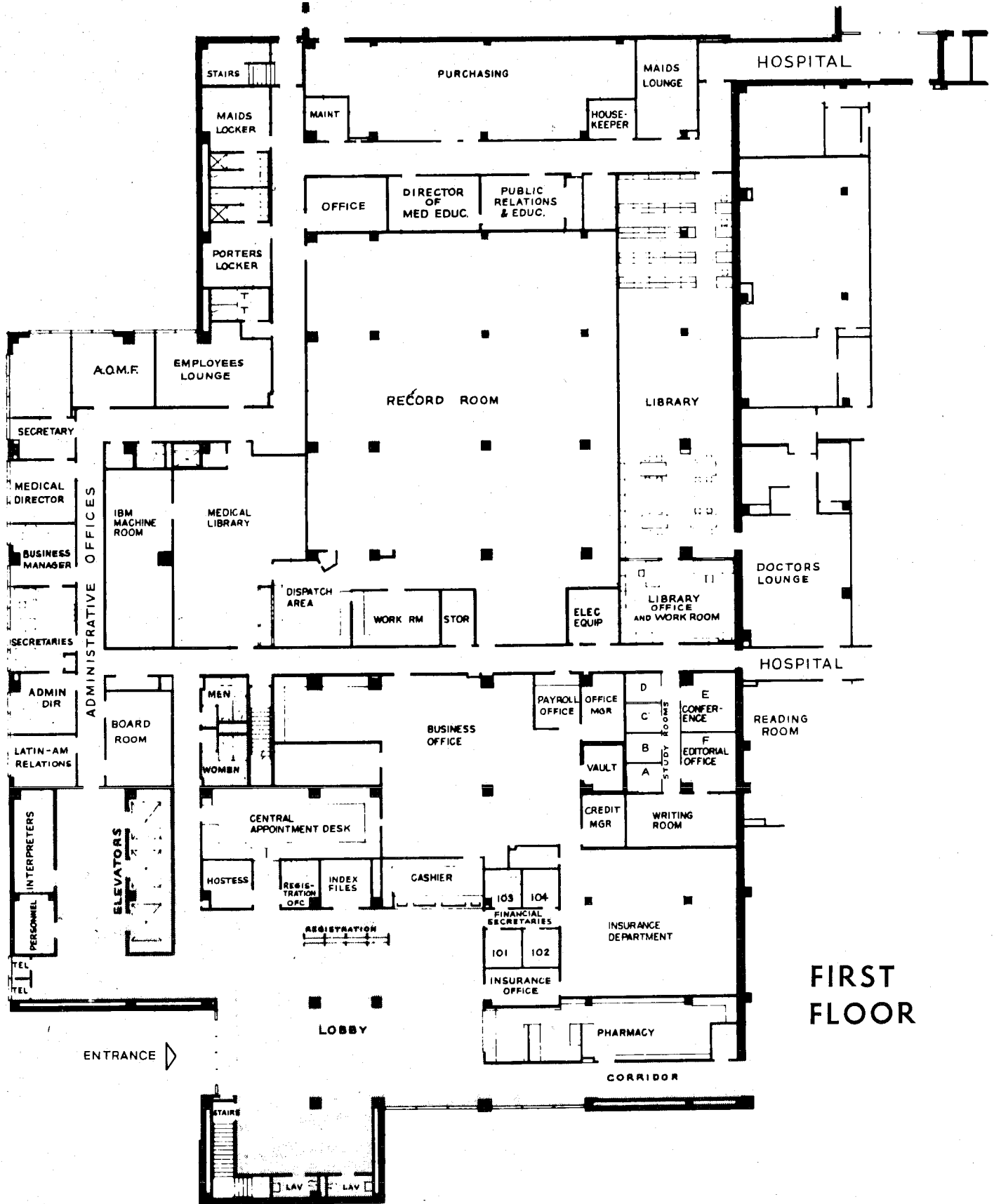
The new clinic building represented a change in procedures as well as a new physical environment. The clinics had been operating as independent units. The shortcomings of this system were apparent as the patient load increased. Certain functions were centralized. A central appointment system was put into effect. Nursing stations were centralized so there was one for each floor (see enclosed clinic plan). Systems were changed. Their criteria for relationships was determined, in part, on the most appropriate tie in to the hospital.

#### CONCLUSIONS AFTER FOUR YEARS OF OPERATION

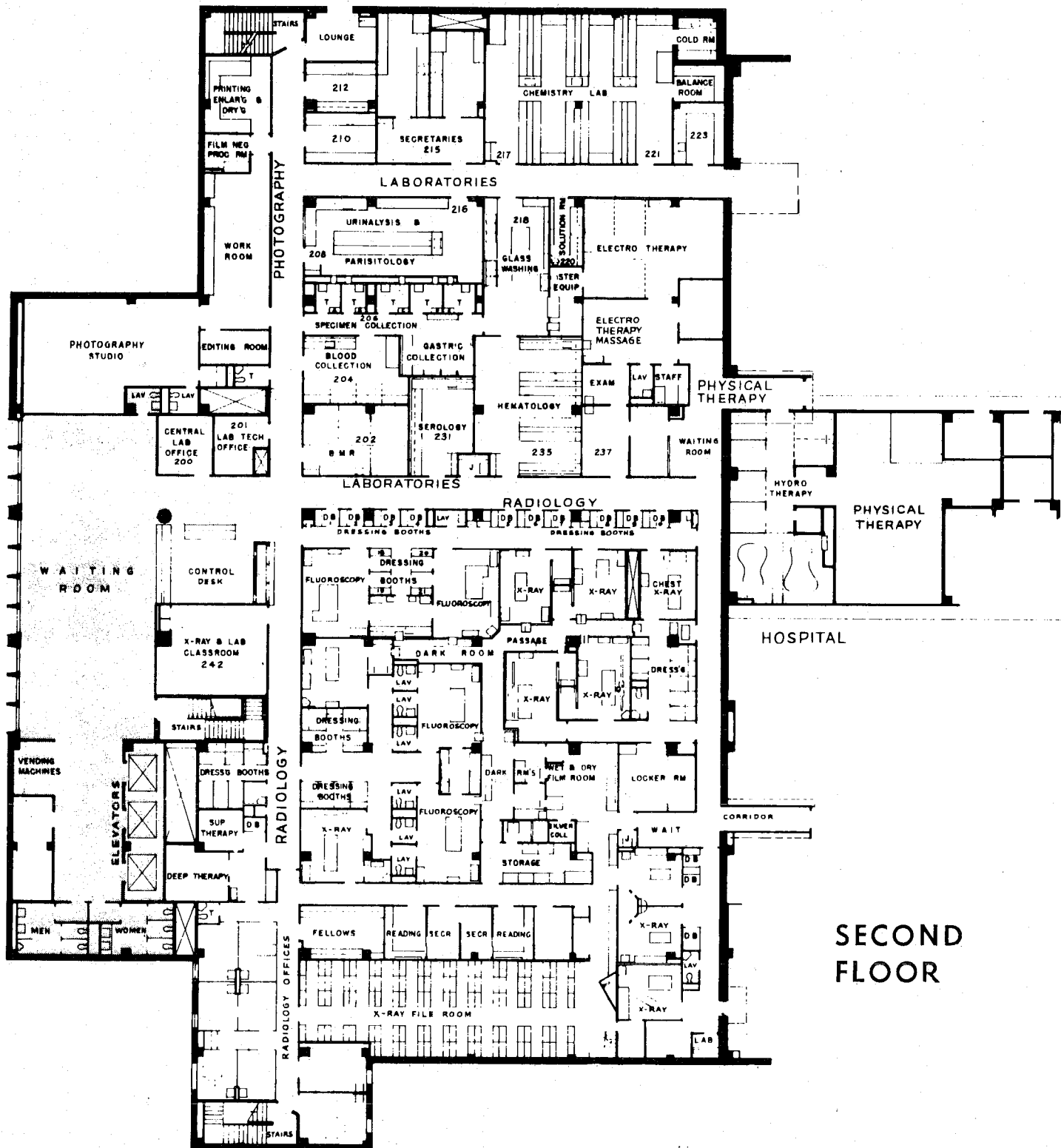
1. There have been few apparent advantages from the centralization of the nursing stations. They would now prefer to have a nurse in each of the 3 wings. They average three RN's per floor. The nurses spend little time at the central area.
2. The control desk on each floor has been successful. They are able to keep check on the patients in the waiting area and provide a personal service to the patient.
3. The planning figure of 2 1/2 exam rooms per staff man (total 250) has been reasonably sound. They have combination offices, examination rooms, except the chiefs.
4. The staff did not believe the architects when it was pointed out that a new facility and improved operating conditions would bring an increase of approximately 25% in patient load the first year. The increase was actually 33%, or higher than the national average. The national average figure included referral teaching hospitals along with private clinics. A 25% increase at Minnesota would mean an increase of 33,000 patient visits.
5. Even though the entire center was moved 10 years ago, not enough attention was given to long range planning. The site of 21 acres is too small. The clinic and hospital are now faced with the question of how large should they attempt to be. One solution is to let the patient demand determine size, but this may involve moving to a new site within another 10 years.
6. New systems should be tried in the old setting before moving to a new facility. The adjustment of a new environment plus a new way of doing things proved to be too much for many employees.
7. Total number of employees is about 420 or 4 to 1 physician. (58 partners plus 42 associates). The collection system is centralized and the rate is 96 1/4%. Ambulatory care provides a problem in that you must have a rapid billing system to present people when the workup is completed. Ochsner was unable to do this and bills 10 to 30 days after the visit. However, rapid billing is more important when dealing with non-private patients.

It should be noted these facilities are not geared for undergraduate teaching, research, or post graduate programs. The plan is a modified Mayo clinic design.

The same architects did both jobs. The patient load is just under 3 times the Minnesota load. However, projecting the additional functions we would need in our clinic facility, the space is comparable to our needs. The design is a workable solid one, and given the University's past record of architectural achievements, we are likely looking at a facility that approximates what we will get, not what we desire. In summary, a solid undistinguished building, unmarred by excessive imagination or beauty.

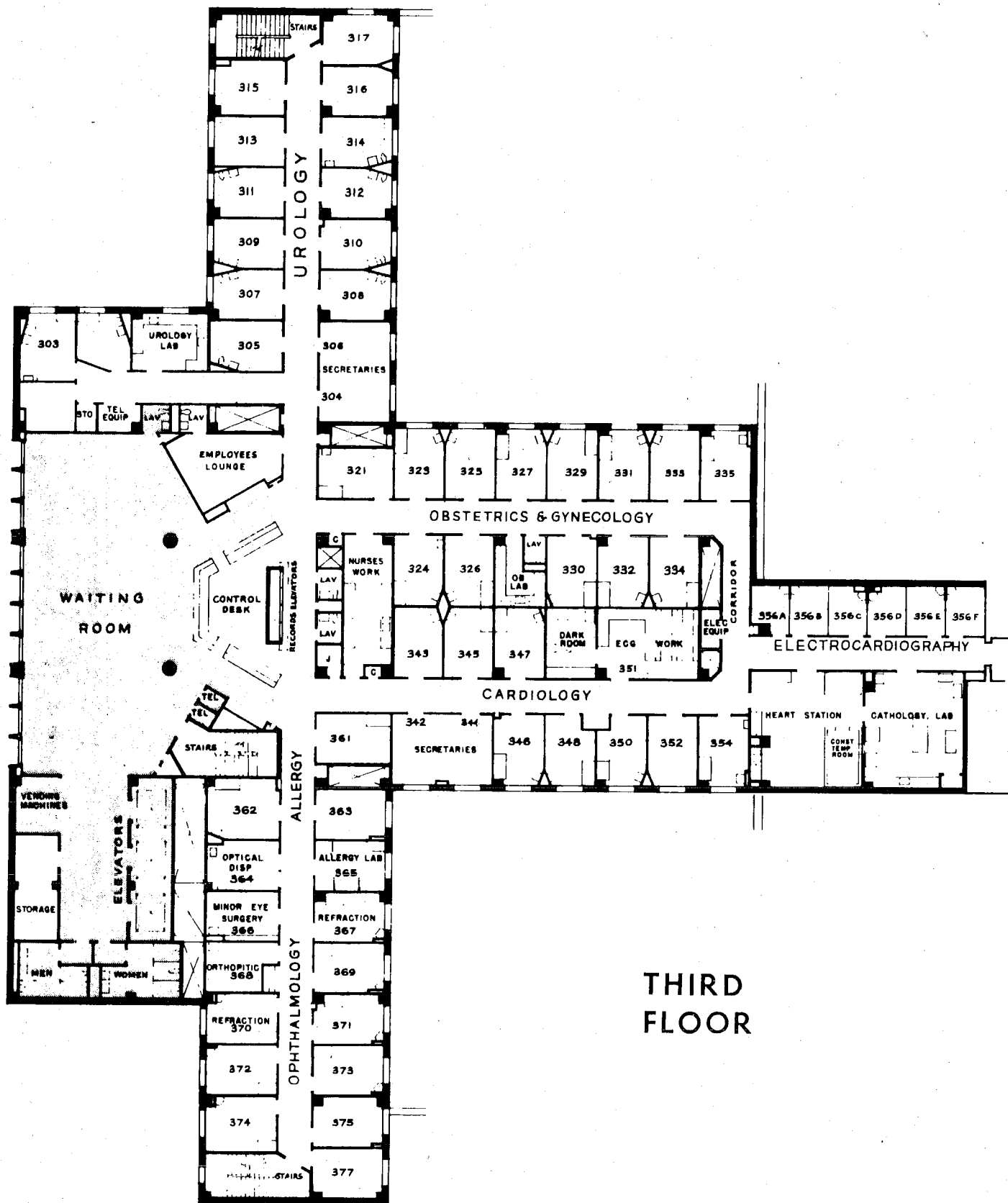


FIRST FLOOR

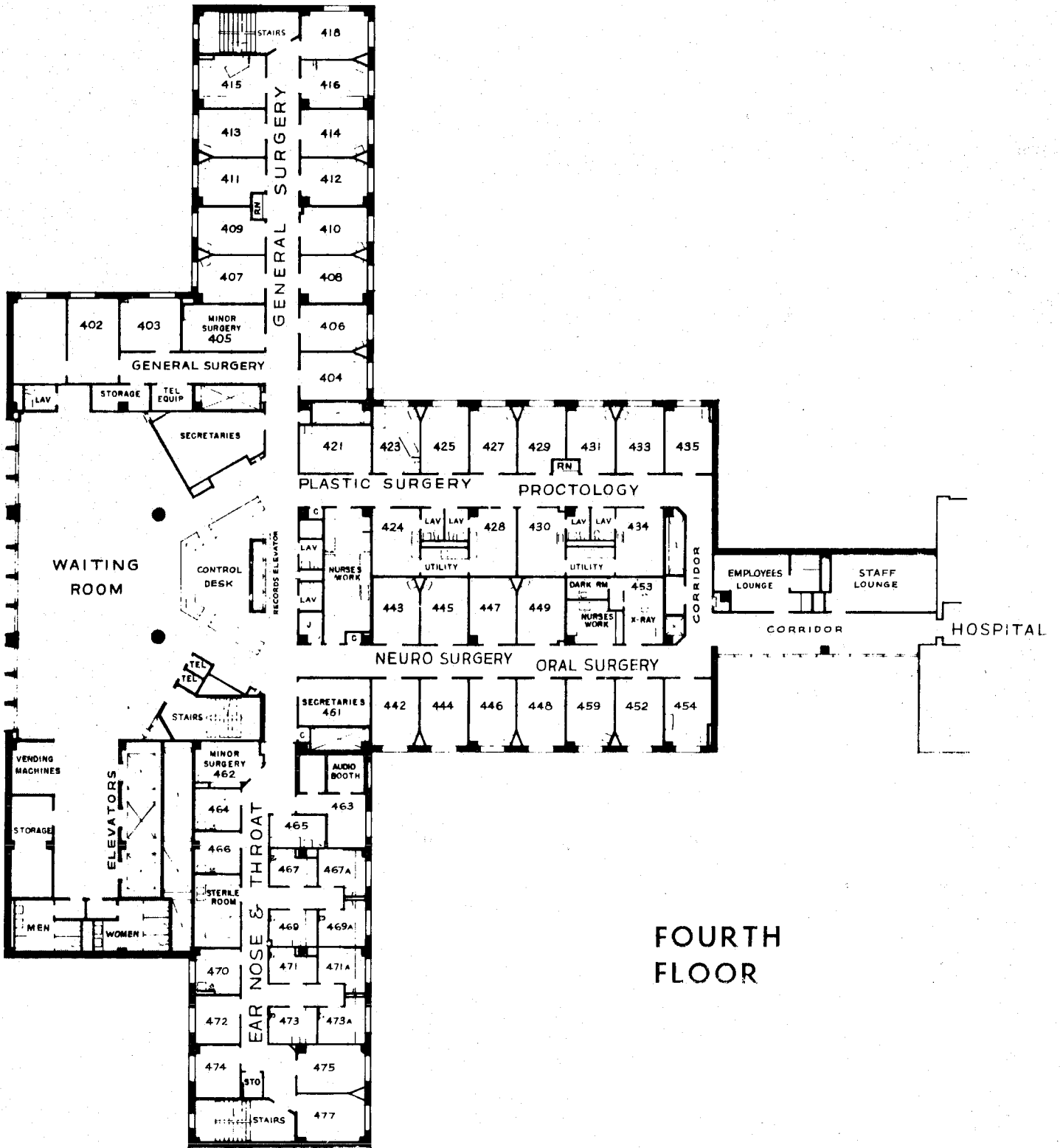


SECOND FLOOR

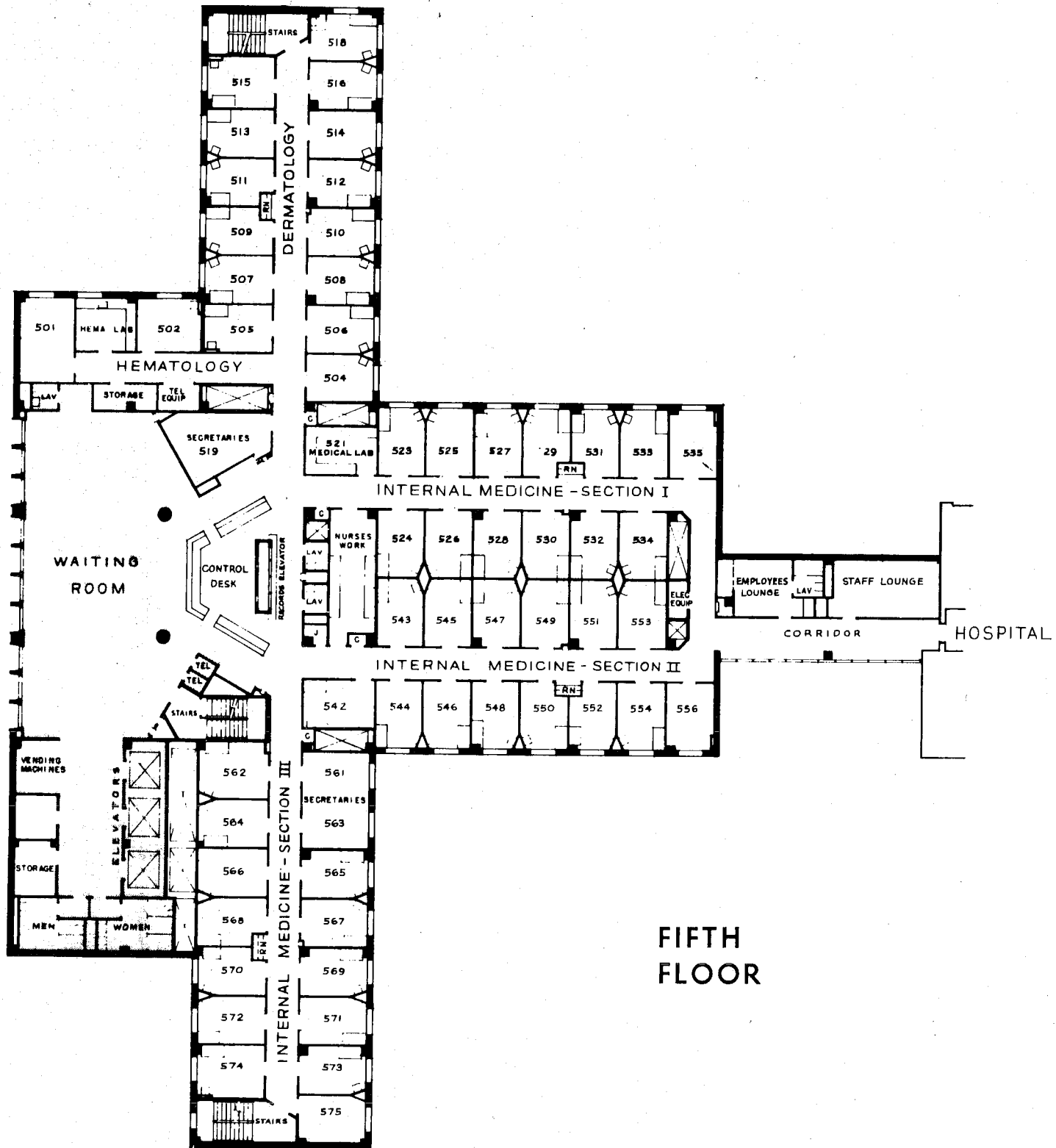


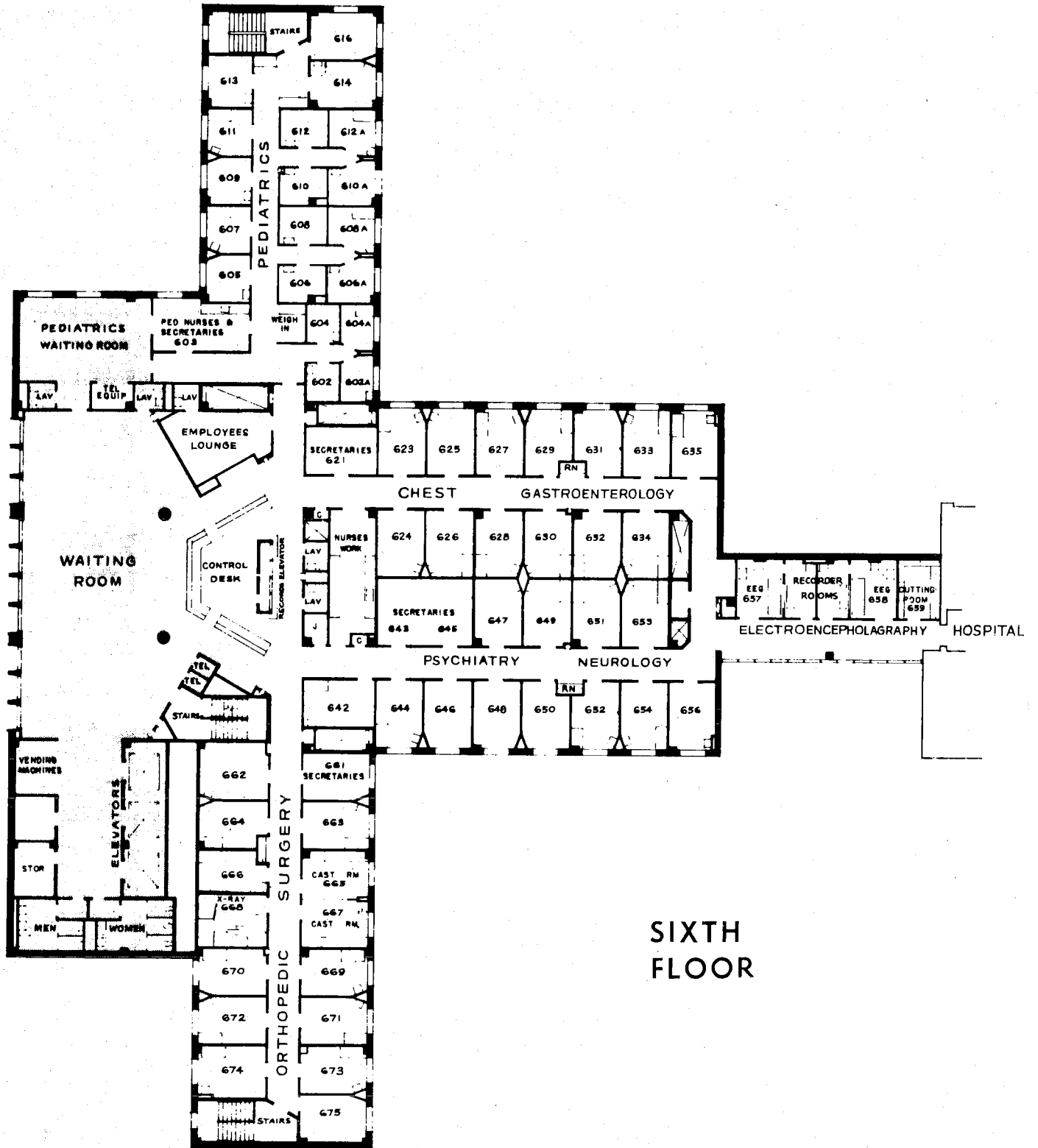


THIRD FLOOR



FOURTH FLOOR





SIXTH  
FLOOR

## THE TEXAS MEDICAL CENTER, HOUSTON, TEXAS

### BACKGROUND

The Texas Medical Center is a grouping of sixteen major institutions with ten substantial medical programs associated with them. These buildings are located on a 132 acre site, and have a capital plant value (construction cost) of \$97,000,000. In 1963, the operating budgets for the institutions exceeded \$60,000,000 (Minnesota would be approximately \$33,000,000). They admitted 181,000 patients (Minnesota 17,000), 717,000 outpatients (Minnesota 131,000), have 2011 students in various educational and training programs (Minnesota 2,500), total research budgets of 12 1/2 million (Minnesota 15 1/2 million), employees 9,000 (Minnesota 5,000), parking (no comparison).

The medical center was designed to attract those institutions related to health education, research, and patient care, and which would assemble staffs, provide the facilities, and develop the programs necessary to assure the highest standards of attainment in those fields. The center was formed in the early 1940's. In order to maximize the available and potential resources, it was decided that various programs would be carried on under the direction of independent institutions but with the understanding that they would work closely together in such a way that each would add strength to the other and to the development of the Center as a whole. To some observers the Center represents the curious paradox of a centrally planned and financed physical collection of unrelated buildings. Perhaps this observation tells more about the behavior of Texans than the value of planning concepts. The close location of facilities does not change individual behavior, but even the sharpest critics acknowledge the potential is ever present for more closely integrated programs.

Of special interest to the clinic directors was the scheduling procedure in the M. D. Anderson out-patient department. This department had approximately 144,000 visits last year. Enclosed is a paper outlining a plan to develop a system of improved record keeping. This excellent report contains much that would be useful in our approach to evaluating and improving the existing system at Minnesota.

### DEVELOPING A SYSTEM TO IMPROVE OUTPATIENT RECORD KEEPING (Suggested equipment for M. D. Anderson Medical Center - IBM 1230 machine)

### INTRODUCTION

For some time, it has been felt that the existing procedure for the scheduling of patient appointments and the recording of necessary appointment data are outmoded. The amount of manual posting has been the primary area of concern. Various approaches have been used in attempting to bring increased automation to this area. There have been two continuing reasons for lack of change, 1) the expense of automation, or 2) the extent of automation (which could be justified by saving in personnel time or improved patient services).

It is a well-established fact that the clinic facilities are operating at maximum utilization for their intended design. There is nothing to indicate that the patient

load will be reduced. This increasing demand can be overcome in one of two ways, 1) increase the number of clerical personnel, or 2) improve procedures to provide more efficient utilization of existing personnel. The limited space provisions do not permit a practical approach to the addition of personnel. Therefore, it is felt every effort should be made to improve and refine existing procedures. Automation is certainly the most feasible place to look first. The amount of manual posting required by existing procedures is tremendous. Much of this posting is repetitious, in content, the only change being the form or ledger to which it is posted. For example, the following items represent posting locations which require entries for every clinic visit (four of them requiring the same entry):

- A. Addressograph Plate
- B. Scandex (Central file containing appointment data in alphabetical order for all clinic patients)
- C. Face of Medical Record
- D. Outpatient Services Requisition
- E. Return Appointment Card
- F. Appointment Kardex for Quota Control

A familiarization with the IBM 1230 machine indicates that the capabilities of this machine would permit a significant forward step in automating the clinic clerical procedures, at a reasonable cost. Essentially, this machine provides a means for automatic conversion of manually recorded data to punch cards. This eliminates the need for the key punch operator and reduces the time required to enter information into the 1401 computer. Data is fed to the IBM 1230 on 8 1/2" x 11" sheets on which machine sensitive marks have been made by clinic clerks. Sheets can be processed at the rate of 850-1200 per hour. The estimated cost of the machine is \$410.00 per month, less 20%. Delivery time for this machine is estimated at twelve to sixteen months. It should be noted that the potential application of this machine is made possible by the presence of the 1401 system.

### OBJECTIVES

The objectives of new clinic procedures (using this machine) are detailed below. The order in which they appear does not necessarily indicate the order in which they would be realized.

1. Elimination of manual posting to:
  - A. Scandex
  - B. Addressograph Plate
  - C. Face of Medical Record
  - D. Appointment Kardex for Quota Control
2. Improve control of clinic scheduling by having a more accurate system of recording future appointments in a more accessible form.
3. Eliminate preparation of clinic lists on addressograph equipment.
4. Eventually, all outpatient billing to be accomplished from cards, prepared from 1230 machine through the use of the 1401 system.

5. Complete automation of requisitioning for tests, procedures, and services.
6. Machine preparation of all monthly reports relating to clinic activities.
7. Automation of the preparation of correspondence sent to patients who have failed to appear for appointments.
8. Free the time of two full-time equivalent positions now within the appointments department. This available personnel time could be redirected to provide better service in the management of patients within the four decentralized clinic areas.
9. Preparation of medical record summary sheets containing results of laboratory tests.

### IMPLEMENTATION

It is intended that the application of procedures using this machine be initiated in phases. During the first phase, the following objectives would be realized:

#### Phase 1

1. Elimination of manual posting to:
  - A. Scandex (Central file of information to be printed daily by 1401)
  - B. Addressograph Plate
  - C. Appointment Kardex for Quota Control
2. Elimination of clinic lists prepared on Addressograph equipment. (to be produced with 1401)
3. Monthly statistical reports of clinic activities.
4. Provide a list of patients who did not report for scheduled appointments.

The other objectives noted above would be accomplished in later phases.

It was previously stated that the application of the 1230 machine is made possible through the availability of the 1401 system. It is estimated that the required 1401 machine time for phase 1 implementation would be approximately 1 1/2 to 2 hours per day, five days per week.

### PROBLEMS

Automation through the use of the IBM 1230 machine will not be completely free of problems. Initially, the following areas are recognized as problems in the implementation of this equipment.

1. Although previously listed procedures requiring manual posting will be eliminated, there will be the addition of posting to the form that is fed to the 1230 machine. This must be thought of in terms of net results.

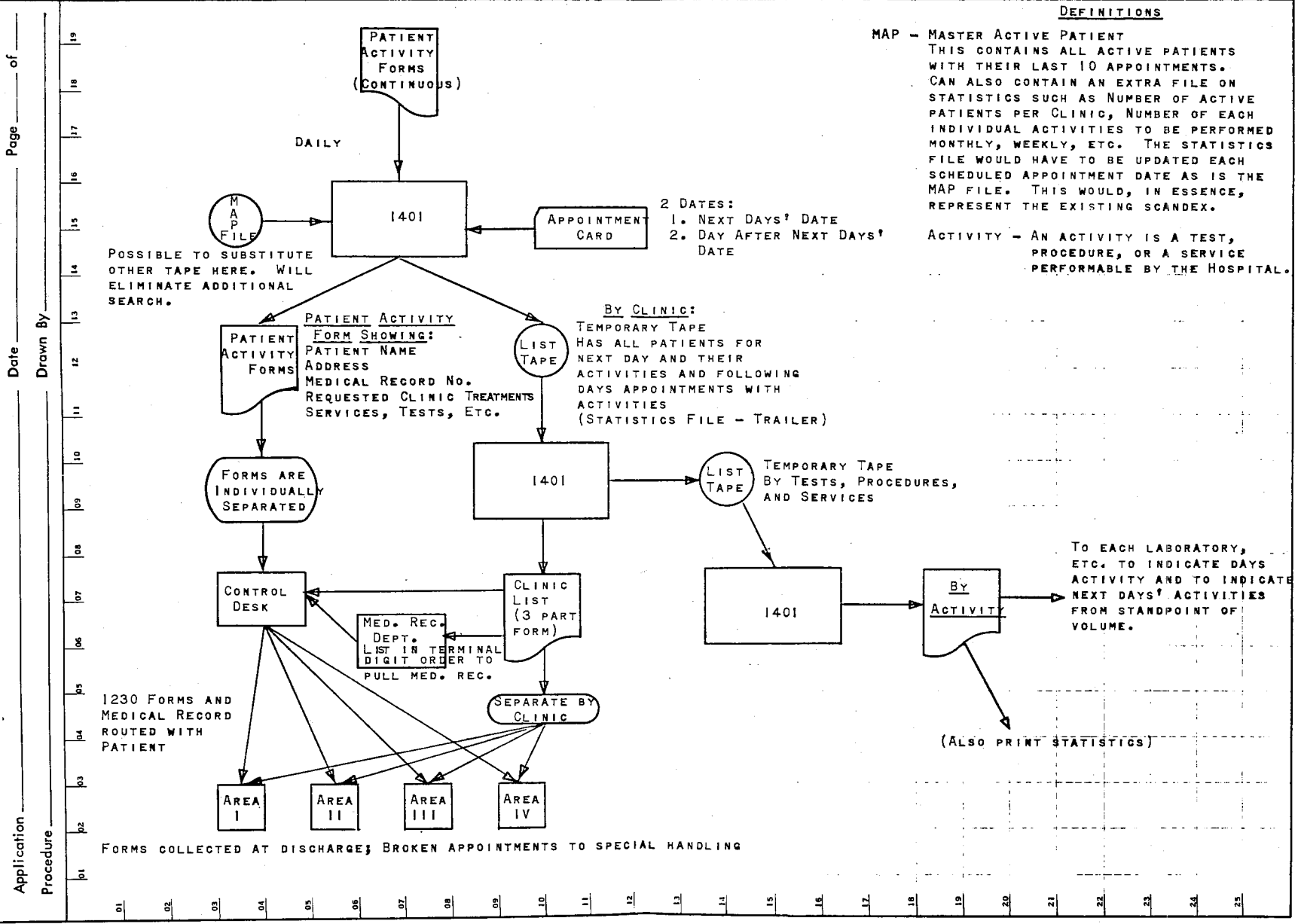
2. There is concern over the accuracy that will be required in placing marks on the coding sheet. One of the most significant hurdles that must be overcome in adopting this system is the assignment of code numbers to all tests, procedures, services, and clinics. For the most part, this problem has already been overcome. However, the task of translating these code numbers to marks in the correct location on the coding sheet could present problems. The machine has been designed to accept erasures. In addition, the machine is capable of rejecting a sheet that for some reason does not conform to prior programming.
3. Just the implementation of Phase 1 of this program represents many significant changes to existing procedures. The adjustment of personnel to this transformation will require a great deal of orientation. This is a fundamental problem that accompanies any significant change such as this.

#### GENERAL REMARKS

In conclusion, it should be noted that the application of the 1230 machine would not be limited to only the appointments department. It possesses potential application in any department that is using IBM equipment or has the future potential of using IBM equipment. Essentially, this application means the elimination of key punch operators required to convert data into punch card form.

Prepared by: Donald R. Olson  
Assistant Administrator  
Patient Care Activities





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**DEFINITIONS**

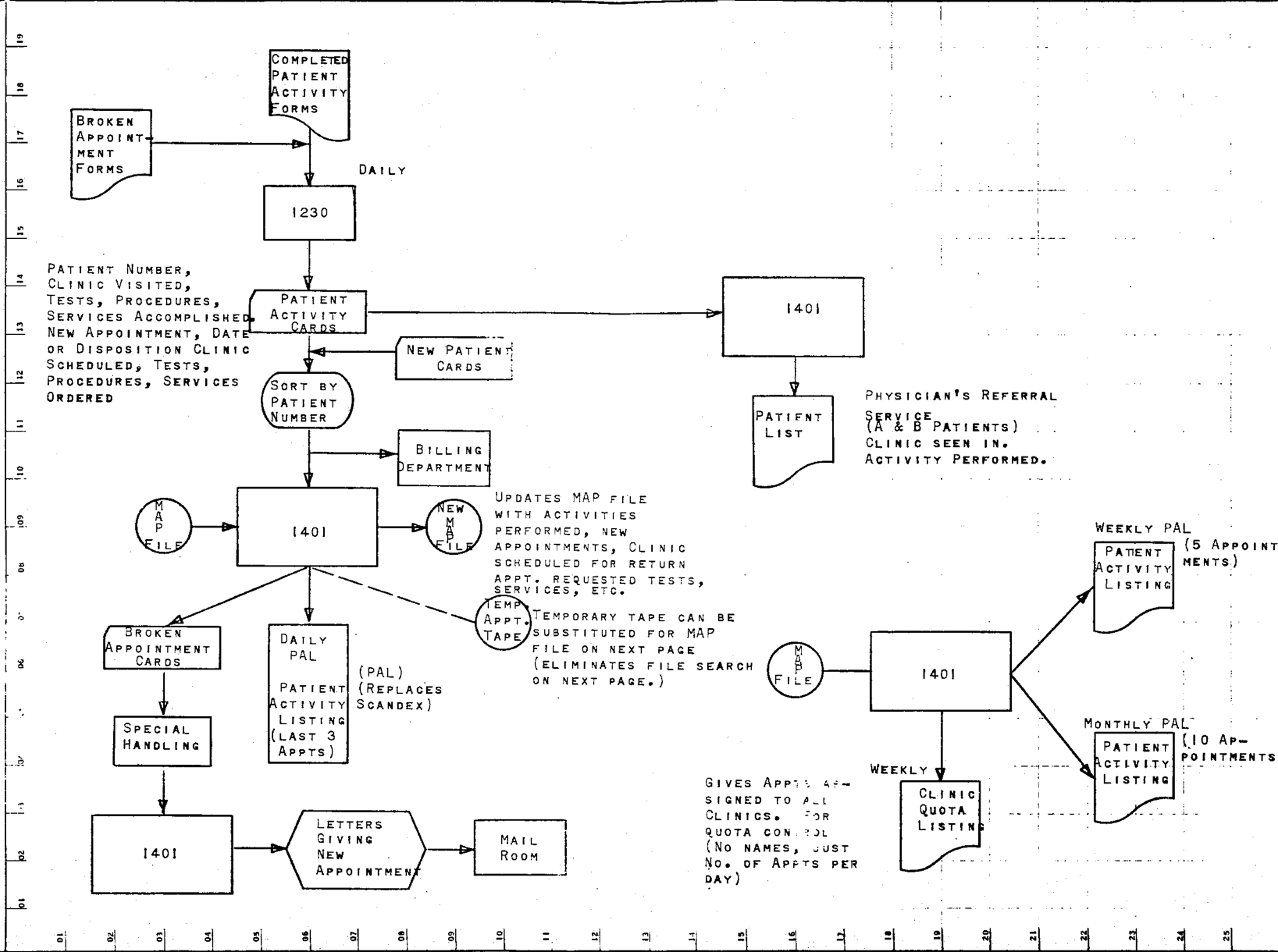
**MAP - MASTER ACTIVE PATIENT**  
 THIS CONTAINS ALL ACTIVE PATIENTS WITH THEIR LAST 10 APPOINTMENTS. CAN ALSO CONTAIN AN EXTRA FILE ON STATISTICS SUCH AS NUMBER OF ACTIVE PATIENTS PER CLINIC, NUMBER OF EACH INDIVIDUAL ACTIVITIES TO BE PERFORMED MONTHLY, WEEKLY, ETC. THE STATISTICS FILE WOULD HAVE TO BE UPDATED EACH SCHEDULED APPOINTMENT DATE AS IS THE MAP FILE. THIS WOULD, IN ESSENCE, REPRESENT THE EXISTING SCANDEX.

**ACTIVITY - AN ACTIVITY IS A TEST, PROCEDURE, OR A SERVICE PERFORMABLE BY THE HOSPITAL.**

TO EACH LABORATORY, ETC. TO INDICATE DAYS ACTIVITY AND TO INDICATE NEXT DAYS' ACTIVITIES FROM STANDPOINT OF VOLUME.

(ALSO PRINT STATISTICS)

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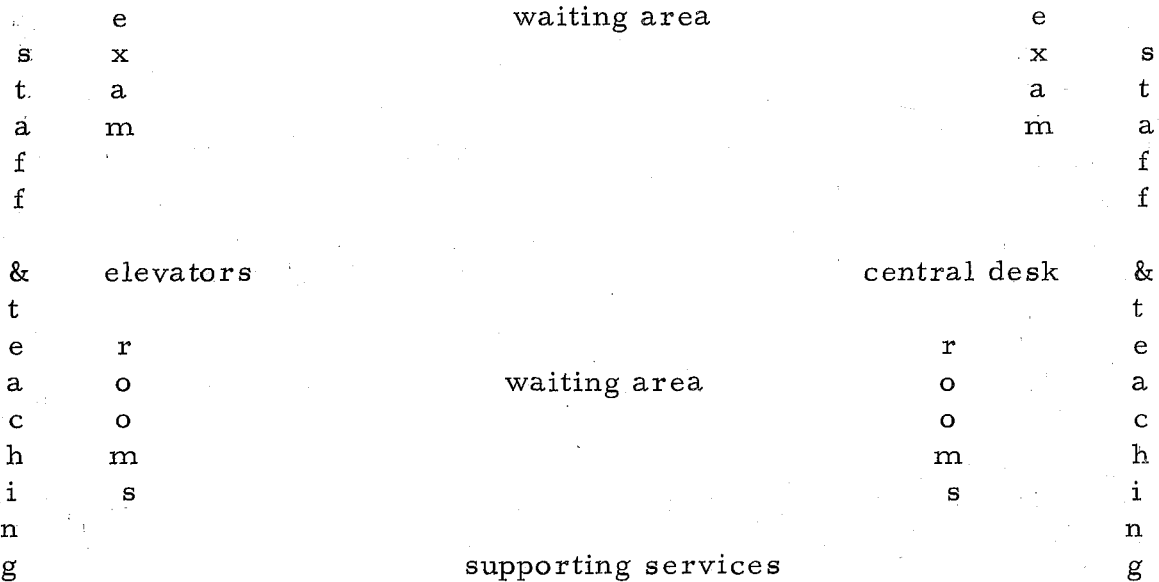


THE UNIVERSITY OF TEXAS, SOUTHWESTERN MEDICAL SCHOOL, DALLAS, TEXAS

Dr. Carlton Chapman was out of town but made arrangements with other former members of the University of Minnesota staff to visit with me about their program of medical education in the out-patient department. Dr. Robin Johnston and Dr. F.A. Bashour provided a tour of the hospital and explained their program.

The medical school Parkland Memorial Hospital of the Dallas County Hospital District. The hospital was completed in 1954 at a cost of \$11,000,000. It has 607 beds and 62 bassinets. The out-patient department was completed in 1958 at a cost of \$1,000,000. The clinics have over 800 visits a day, 16,000 a month, and 195,000 a year (Minnesota 131,000).

The clinic is of spartan design, with three floors of 36 exam rooms, surrounding a large waiting room. The basic functional pattern is:



The rooms have two entrances, with the patient entering from the waiting area, the doctor from the staff area. The consultants have easy access to a number of students and generally like the arrangement. Their suggestions mostly had to do with a more generous expenditure of funds for equipment (the same kind of equipment and additions the Minnesota Clinic Directors have requested). They did suggest that a few of the rooms be designated for special functions or procedures. The area was not air-conditioned and outside light and ventilation was restricted to the staff and teaching area. The staff did not bring many private patients into this area (which was run on a.m. and p.m. appointments) The employee health service area was used for private patients. The number of appointments not kept was high, ranging from 20 to 30%.

There was a large ground floor area for intake and general waiting facilities. One experiment that has been modified was to have a social service worker in an office behind two non-professional social interviewers. The load was too great for the available number of trained social workers but the attention given to training the interviewers was so great that the experiment was dropped.

Dr. Chapman would like to see the facility improved so that all categories of patients could be seen together, on an appointment basis. The basic design would accommodate this change. He would also envision horizontal expansion of the three floors as the Southwestern Medical Center develops. The emphasis is clearly on teaching and the medical faculty is able to reconcile the educational program with a great service to the indigent residents of Dallas County.