

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
WASHINGTON, D.C.

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APPLICATION FOR FEDERAL ASSISTANCE
FOR CONSTRUCTION OF HEALTH
AND EDUCATIONAL FACILITIES

STATE	DHEW
Date Rec'd.	
Project Number	

GENERAL INFORMATION

1. LEGAL NAME OF APPLICANT Regents of the University of Minnesota	2. ADDRESS OF APPLICANT (<i>street, city, country, congressional district, state, zip code, and telephone number</i>) 202 Morrill Hall University of Minnesota Minneapolis, Minnesota 55455 Hennepin County - 5th Congressional District (612) 373-2025
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3. APPLICANT APPLIES FOR FEDERAL FUNDS FOR CONSTRUCTION UNDER THE FOLLOWING PROGRAM(S):

(A) CODE NO. <i>(See Program Instructions)</i>	SHORT TITLE	(B) GRANT AMOUNT	OTHER (IDENTIFY)
(1) 41	Health Professions	\$ 102,834	\$ _____
(2)	_____	\$ _____	\$ _____
(3)	_____	\$ _____	\$ _____
(4)	_____	\$ _____	\$ _____

4. PROPOSED FACILITY AND PROJECT (A) Name and Type Health Sciences - Medical School University of Minnesota Primary Care Clinic	(C) Type of construction (<i>Check all that apply</i>) <input type="checkbox"/> New facility <input type="checkbox"/> Expansion of existing facility <input type="checkbox"/> Remodeling <input type="checkbox"/> Acquisition <input type="checkbox"/> Equipment only <input type="checkbox"/> Other (<i>specify</i>) _____
(B) Address (<i>street, city, county, congressional district, state, zip code</i>)	(D) Type of Ownership <input checked="" type="checkbox"/> Public <input type="checkbox"/> Other Nonprofit
	(E) Type of operational control in other than the owner <input checked="" type="checkbox"/> Public <input type="checkbox"/> Other Nonprofit

5. APPLICANT'S REPRESENTATIVE (<i>Name, title, address, telephone number</i>) C.T. Johnson, Assistant Vice President, Business Administration and Treasurer 302 Morrill Hall University of Minnesota Minneapolis, Minnesota 55455 (612) 373-2058	6. PROJECT ARCHITECT (<i>Name, address, telephone number</i>) Architect not selected yet. Design control by: University of Minnesota Planning Office 340 Morrill Hall (612) 373-2250
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PROGRAM INFORMATION

7. APPLICANT ELIGIBILITY AND NEED FOR FACILITY See pages 29
 (See program instructions for detailed requirements for this item)
8. OCCUPANCY DATA See pages 31
 (See program instructions for detailed requirements for this item)
9. DESCRIPTION OF PROGRAMS TO BE CONDUCTED IN FACILITY See pages 37 - 40
 (See program instructions for detailed requirements for this item)
10. DESCRIPTION OF FACILITY See pages 112 - 114
 (See program instructions for detailed requirements for this item)

FACILITY INFORMATION

11. APPLICANT'S FINANCIAL RESOURCES APPLICABLE TO THIS FACILITY

- A. Cash and negotiable and non-negotiable securities \$ _____
- B. Pledges: Face value: \$ _____
 Discounted Value \$ _____
- C. Contingent gifts and bequests \$ _____
- D. Bonds authorized but not yet sold \$ _____
- E. Mortgage \$ _____
- F. Appropriations:
- | | Available (specify date) | Anticipated (specify date) |
|-------|--------------------------|----------------------------|
| State | \$ _____ | \$ _____ |
| Local | \$ _____ | \$ _____ |
- TOTAL \$ _____
- Foundations
- G. Other (Specify) \$ 328,703
- H. TOTAL \$ _____

12. OTHER FEDERAL ASSISTANCE FOR THIS PROPOSED FACILITY

	PROGRAM	FED. AGENCY	STATUS	AMOUNT	PROJECT NUMBER
A.					
B.	NONE	NONE	NONE	NONE	NONE
C.					

HEALTH PROFESSIONS
EDUCATIONAL FACILITIES CONSTRUCTION

University of Minnesota
Health Sciences - Medical School

Primary Care Clinic

March 17, 1975

13. TOTAL DEVELOPMENT COST

(Sum of items 3, 11, and 12) \$ 431,537

14. SITE AND IMPROVEMENTS

A. Title or Other Interest in Site is or will be Vested in:

Applicant _____ Agency or institution which is to operate the facility

_____ Other (specify)

B. Indicate whether applicant/operator has/ will have

Fee simple title _____ Leaschold interest _____ Other (specify)

C. If applicant/operator has leasehold interest, give following information:

(1) Length of lease or other estate interest: _____

(2) Number of years to run: _____

(3) Is lease renewable? ___ Yes ___ No

(4) Current appraised value of land: \$ _____

(5) Annual rental: \$ _____

D. Attach an opinion from acceptable title counsel describing the interest applicant operator has in the site and certifying that the estate or interest is legal and valid.

E. Attach site survey, soil investigation reports and where applicable copies of land appraisals.

F. Where applicable attach certification from architect on the feasibility of improving existing structures.

G. Attach plot plan.

15. CONSTRUCTION SCHEDULE ESTIMATES:

A. Target dates for completion of drawings:

Schematics March, 1976 Preliminary January, 1976 Final April, 1976

B. Target dates for: Bid advertising July, 1976; Contract award August, 1976;

Construction completed January, 1977; Occupancy March, 1977;

16. BUDGET INFORMATION
ESTIMATED FACILITY BUDGET

A. Building identification: Primary Care Clinic
(if more than one structure)

B. Budget Line	C. New construction	D. Other (identify)	E. Total
1. Building work	\$250,000		\$250,00
a. General construction	\$	\$	\$
b. Plumbing			
c. Heating, air cond., ventilation			
d. Electrical work			
e. Elevators			
f. Other building work (attach list and itemization of costs)			
g. TOTAL FOR BUILDING WORK	\$250,000		\$250,000
2. Site work	20,000		20,000
a. Site preparation			
b. Site development and parking facilities			
c. Utility connecting lines			
d. Special use items			
e. TOTAL FOR SITE WORK	20,000		20,000

ESTIMATED FACILITY BUDGET (Cont'd.)

B. Budget Line	C. New construction	D. Other (<i>identify</i>)	E. Total
3. Off-site work	\$200		\$200
a. Connecting lines to central utility plant	\$	\$	\$
b. Other items (<i>list and itemize costs</i>)			
c. TOTAL FOR OFF-SITE WORK	\$200		\$200
4. Central utility plant (<i>prorata share for this structure</i>)			
5. TOTAL-CONSTRUCTION COSTS	\$270,200		\$270,200
6. Built-in equipment	25,000		25,000
7. Architectural and engineering costs	20,224		20,224
a. Architect's basic fee			
b. Supervision and inspection (<i>project representative</i>)			
c. Surveys, tests, and borings			
d. Other items (<i>list and itemize costs</i>)			
e. TOTAL-ARCHITECTURAL AND ENGINEERING COST	20,224		20,224

ESTIMATED FACILITY BUDGET (Cont'd.)

B. Budget Line	C. New construction	D. Other (<i>identify</i>)	E. Total
8. Movable equipment	\$ 88,613	\$	\$ 88,613
9. TOTAL COST FOR CONSTRUCTION FIXED EQUIP. A/E FEES AND MOVABLE EQUIPMENT	404,037		404,037
10. Contingency	7,500		7,500
11. Purchase of Land	20,000		20,000
12. Purchase of Buildings			
13. Other (<i>list and itemize</i>)			
14. Subtotal-Lines 9 to 13 incl.	431,537		431,537
15. Works of Art			
16. TOTAL DEVELOPMENT COST	\$ 431,537	\$	\$ 431,537

17. SPACE ALLOCATION BY GRANT PROGRAM

A. Building identification (if more than one structure) <u>Primary Care Clinic</u>					
B. Gross area in facility <u>12,000</u> (est. design effic gr/ets.S.F. <u>80%</u>)			C. Net area in facility <u>9,600</u> S.F.		
Alternate I	GRANT PROGRAMS				APPLICANT SPACE
	1) 41 PROGRAM CODE	2) PROGRAM CODE	3) PROGRAM CODE	4) PROGRAM CODE	
D. Net area by program(s)	9,600 SF	SF	SF	SF	SF
E. Cost allocation ratio by programs (D/C X 100—to two decimals)	100 25 %	%	%	%	%
Alternate II					
F. Gross area by program(s)	SF	SF	SF	SF	SF
G. Cost allocation ratio by programs (F/B X 100—to two decimals)	%	%	%	%	%

**18. COSTS ELIGIBLE FOR FEDERAL PARTICIPATION
(BY PROGRAMS)**

A. Budget line	B. Total cost (col. E, item 16)	C. Total eligible cost	D. Amounts eligible for Federal participation (for each grant program)			
			1) Program code 41, 100 % from item 17E or 17G	2) Program code ____, ____ % from item 17E or 17G	3) Program code ____, ____ % from item 17E or 17G	4) Program code ____, ____ % from item 17E or 17G
1g. Building work	\$ 250,000	\$ 250,000	\$ 250,000	\$	\$	\$
2e. Site work	20,000	20,000	20,000			
3c. Off-site work	200	---	---			
4. Central utility plant	---	---	---			
6. Fixed equipment	25,000	25,000	25,000			
7e. A/E costs	20,224	20,224	20,224			
8. Movable equipment	88,613	88,613	88,613			
10. Contingency	7,500	7,500	7,500			
11. Purchase of Land	20,000	---	---			
12. Purchases of Building(s)						
13. Other						
15. Works of Art						
16. TOTALS (1g. through 15)	\$ 431,537	\$ 411,337	\$ 411,337	\$	\$	\$
17. Amount of Fed. Assist Requested			\$ 102,834	\$	\$	\$
18. Fed. Share Request— Percentage			25 %	%	%	%

19. ASSURANCES

The following assurances are divided into two parts. Part A assurances are required for all applicants applying for construction program support including the acquisition of facilities where applicable, from the Department of Health, Education, and Welfare. Part B assurances are ones which relate only to individual construction grant or loan programs. Signature by the applicant's representative will indicate that the institution agrees to all Part A assurances and to the Part B assurances required by the program or programs to which it is applying for support.

The applicant gives assurance that:

Part A.

1. It possesses legal authority to apply for and receive the grant or loan, and to finance and construct the proposed facilities; that a resolution, motion or similar action has been duly adopted or passed as an official act of the applicant's governing board, authorizing the filing of the application, including all understandings and assurances contained therein, and directing and authorizing the person identified as the official representative of the applicant to act in connection with the application and to provide such additional information as may be required.
2. It will comply with the provisions of the National Environmental Policy Act, PL 91-190; Executive Order 11296, relating to flood-plain elevation and necessary controls; and Executive Order 11268 relating to the prevention, control, and abatement of water pollution.
3. Sufficient funds will be available to meet the non-Federal share of the cost of constructing the facility, and that sufficient funds will be available when construction is completed to assure effective operation and maintenance of the facility for the purposes for which constructed.
4. Approval by the HEW Secretary or his designee* of the final working drawings and specifications will be obtained before the project is advertised or placed on the market for bidding; that it will construct the project, or cause it to be constructed, to final completion in accordance with the application and approved drawings and specifications; that it will submit to the Secretary or his designee for prior approval changes that materially alter the scope or costs of the project, use of space, or functional layout; that it will not enter into a construction contract(s) for the project or a part thereof until the conditions of the construction grant or loan programs have been met.
5. Except as otherwise provided by State/local law, all contracting for construction (including the purchase and installation of built-in equipment) shall be on a lump sum fixed-price basis, and contracts will be awarded on the basis of competitive bidding with award of the contract to the lowest re-

sponsive and responsible bidder. The provision for exceptions based on State and local law will not be invoked to give local contractors or suppliers a percentage preference over non-local contractors bidding for the same contract. Such practices are precluded by this assurance.

6. Except as otherwise provided by law, all laborers and mechanics employed by contractors and subcontractors on all construction and minor remodeling projects will be paid wages at rates not less than those prevailing as determined by the Secretary of Labor in accordance with the Davis-Bacon Act, as amended (40 U.S.C. 276a-276a-5) and 29 CFR Part 1, and shall receive overtime compensation in accordance with and subject to the provisions of the Contract Work Hours Standards Act (40 U.S.C. 327-332); that such contractors and subcontractors shall comply with the provisions of 29 CFR Part 3; and that all construction contracts and subcontracts shall incorporate the contract clauses required by 29 CFR 5.5(a) and (c). Such contracts shall also include the applicable provisions of Executive Order 11246, as amended (Nondiscrimination in Construction Contract Employment), and the applicant shall otherwise comply with the requirements of section 301 of said Executive Order. The contractor shall furnish performance and payment bonds, each in the amount of the full contract price; and provide, during the life of the contract, for adequate fire, public liability, property damage, and workmen's compensation insurance.
7. It will provide and maintain competent and adequate architectural engineering supervision and inspection at the construction site to insure that the completed work conforms with the approved drawings and specifications; that it will furnish progress reports and such other information as the Secretary or his designee may require.
8. An assurance of compliance with Title VI of the Civil Rights Act of 1964 (Form HEW 441) applying to the facility described in this application was filed or is attached to this application.
9. It will maintain grant or loan accounting records (identifiable by grant or loan number), including all records relating to the receipt and expenditure of Federal grant or loan funds and to the expenditure of the non-Federal share of the cost of a project, for three years after the completion of the project if an audit is conducted by or on behalf of the Department within that period, or in the case where no audit is performed, for five years; except that should audit questions arise with respect to the grant or loan, the records will be maintained until all such questions are resolved. Representatives of the Federal Government shall have access at all reasonable times to the grantee's records and to work whenever it is in preparation or progress, and the contractor shall provide proper facilities for such access and inspection.
10. The facility will be operated and maintained in accordance with the requirements of

*The term Secretary or his designee shall mean Commissioner of Education with respect to Office of Education programs.

applicable Federal, State and local agencies for the maintenance and operation of such facilities.

- 11. The applicant will require the facility to be designed to comply with the "American Standard Specifications for Making Buildings and Facilities Accessible to, and Usable by, the Physically Handicapped," Number A117.1-1961, as modified by other standards prescribed by the Secretary of HEW or the Administrator of General Services. The applicant will be responsible for conducting inspections to insure compliance with these specifications by the contractor.
- 12. The applicant will cause work on the project to be commenced within a reasonable time after receipt of notification from the Secretary or his designee that funds have been awarded, and that the project will be prosecuted to completion with reasonable diligence.
- 13. Any Federal funds received pursuant to a grant or loan will be used solely for defraying the development cost of the proposed project.

Part B.

1. Hill-Burton Community Mental Health Centers, and Mental Retardation Facilities.

- a. That it will conform to all the applicable requirements of the appropriate State plan and the regulations pertaining thereto.
- b. That all portions and services of the entire facility for the construction of which, or in connection with which, aid is sought, will be made available without discrimination on account of creed, and no professionally qualified person will be discriminated against on account of creed with respect to the privilege of professional practice in the facility.
- c. That the facility will furnish a community service and:
 - (1) will furnish below cost or without charge a reasonable volume of services to persons unable to pay therefore; or
 - (2) will NOT furnish below cost or without charge a reasonable volume of services to persons unable to pay therefore, because of the justification which is attached.
- d. The facility will be used for the purposes for which it is constructed for not less than 20 years after the completion of the construction.

2. Community Mental Health Centers:

That the services to be provided by the facility, alone or in conjunction with other facilities owned or operated by the applicant, will be made available for a program providing principally for persons residing in a particular community or communities in or near which

such facility is to be situated, at least the essential elements of comprehensive mental health services-i.e., inpatient services, outpatient services, partial hospitalization services (including at least day care services), emergency services provided 24 hours per day, and consultation and education services available to community agencies and professional personnel.

3. Health Professions and Allied Health Professions Teaching Facilities, Nurse Training Facilities, Medical Library Facilities, and Health Research Facilities.

- a. The facility will not be used for sectarian instruction or as a place for religious worship.
- b. The Health Professions Teaching facility is intended to be used for the purpose set forth in this application.
- c. The Allied Health Professions Teaching facility or Health Research facility will be used for the purpose for which it is constructed for not less than 10 years after the completion of construction.
- d. The Nurse Training facility or Medical Library facility will be used for the purpose for which it is constructed for not less than 20 years after the completion of construction.
- e. The Health or Allied Health Professions Training facility or Nurse Training facility will provide for increased enrollment as set forth in the program instructions and in this application.

4. School Construction under P.L. 81-815:

- a. It is a local educational agency having administrative control and direction of free public elementary or secondary education in the applicant school district, or a State agency which has the responsibility for providing school facilities.
- b. It is a local educational agency created and authorized to construct and maintain school buildings under constitutional, statutory, or charter provisions; and that it may accept and disburse Federal funds to aid in financing the cost of constructing school buildings in accordance with constitutional, statutory, or charter provisions cited:

Legal Classification:

Citation:

- c. The applicant has or will have title to the site or the right to build the school facilities on the site and to maintain them on the site for at least twenty years.
- d. The applicant's school facilities will be available to the children for whose education contributions are provided with funds under Public Law 81-815, as amended, on the same terms, in accordance with the laws of the State in which applicant is situated, as they are available to other children in applicant's school district.

- e. The applicant will cause due consideration to be given to excellence of architecture and design of project and to the inclusion of works of art the cost of which does not exceed one percent of the Federal share of the cost of the project.
5. Higher Education Facilities under Titles I, II, III of the Higher Education Facilities Act.
- a. No part of the eligible areas included in the proposed project: (1) is intended primarily for events for which admission is to be charged to the general public; (2) is especially designed for athletic or recreational activities other than for an academic course in physical education; (3) will be used for sectarian instruction or as a place for religious worship or primarily in connection with any part of the program of a school or department of divinity (as defined in P.L. 88-204); or (4) will be used by a "school of medicine," "school of dentistry," "school of osteopathy," "school of pharmacy," "school of optometry," "school of podiatry," or "school of public health" as these terms are defined in section 724 of the Public Health Service Act, or by a "school of nursing" as defined in that Act under section 843.
- b. The applicant is fully cognizant of the requirements regarding economical methods of purchase of movable equipment in accordance with sound business practice, as set forth in the applicable regulations, (15 CFR 170.4), and all movable equipment, the cost of which is to be charged to the project, will be procured in accordance with such regulations. It is understood and agreed by

the applicant that the eligible project development cost and the Federal grant or loan amount may be reduced at settlement by the Commissioner of Education based on the amount of any costs claimed under the project which are for elaborate or extravagant equipment items.

- c. It is understood and agreed by the applicant that the Commissioner of Education may, from time to time, after execution of a grant or loan agreement for the project, and prior to final settlement under the grant or loan agreement, make downward amendments in the grant or loan amount to adjust to a reduction in the cost of the facilities, the identification of ineligible costs, or a reduction in the size of the project.
- d. The applicant has reviewed the academic and financial requirements for operation of the facilities upon completion, and considers the plans for operation of the facilities to be practical and within the financial capabilities of the institution.
- e. The facility will be used as an academic facility for not less than twenty (20) years after completion of construction (unless otherwise approved by the U.S. Commissioner of Education), or for so long as the Government holds any of the bonds pursuant to a loan from the Government, whichever is longer.

20. CERTIFICATION BY APPLICANT

The applicant hereby certifies that the foregoing information in this application (including all assurances and all attachments) are correct to the best of its knowledge and belief.

University of Minnesota

(Legal Name of Applicant)

J. Brinkerhoff, Jr.

(Signature of Authorized Officer)
Clinton T. Johnson, Assistant Vice
President, Business Administration &
Treasurer

(Typed Name and Title of Authorized
Officer)

James F. Brinkerhoff, Vice President for
Finance, Planning and Operations

Minneapolis, Minnesota 55455

(Address)

(Address if different than above)

March 17, 1975

(Date of Application)

Special Funding Consideration

The project for which space is being requested is specifically designed for location in or near the community from which the patients to be served will come. The intention of the planners is to provide a teaching environment proximate to the family and community locations which form the context for primary need and thus for primary care. Throughout this application, the point will be stressed that such a locationally specific facility is indispensable for the demonstration of the practice of primary care. This is because of the opportunity it affords the student and other members of the interdisciplinary team to encounter the variables which go to make up the "life space" in which the patients experience health and illness and in which they implement the process of health maintenance and illness prevention. This drawing together of the critical elements of receipt and delivery of care is expected to maximize the participation of the community in the preservation of its own health and the enhancement of the learning experience for the medical students. It is clear that the facility which this grant affords is an indispensable factor in the implementation of this phase of the educational program.

Abstract of Proposal

Background Information

In 1964, the Health Sciences units at the University of Minnesota began a comprehensive study of long-range development of programs and facilities. The Master Plan developed for facilities in response to the integrated relationships of the programs includes long and short term expansion providing physical and curricular integration among Health Science units and other elements of the Minneapolis Campus.

Unit A of the Health Sciences expansion was completed in the Fall of 1973. Sixty percent of Unit A is devoted to facilities for the School of Dentistry. The remaining forty percent provides space for clinical medical departmental offices, seminar space for expanded Health Sciences student enrollment, portions of the educational systems facilities, Health Sciences shared classrooms and lecture rooms, teaching space for selected undergraduate Basic Health Sciences.

Unit B/C eligibility was established in 1969 when the Master Plan for Health Sciences expansion was reviewed by the National Advisory Council on Education for Health Professions. Medical School enrollment has increased from 163 to a present enrollment of 239 in response to the Federal Government's initiatives for immediate expansion of medical schools.

The Certificate of Need application for Unit B/C proposed a facility to 1) accommodate increased enrollment, 2) develop new programs and 3) replace inadequate facilities. The out-patient facilities to be replaced and expanded were built in the 1920s to accommodate 50,000 annual patient visits and a medical student enrollment of 86 per class at a time when educational emphasis was oriented toward in-patient care. Existing facilities were cited by the Joint Commission on Accreditation of Hospitals as inadequate for the patient population served by the University Hospitals. The Liaison Committee on Medical Education also cited the Medical School's space inadequate.

The rationale for the proposal of 229 examining rooms was figured on the basis that in 1969-70 there were 99,304 out-patient visits. By 1972-73 the corresponding number had risen to 124,134. Based upon a conservative rate of increase it was estimated that by 1980 there would be 275,000 out-patient visits. The present clinic facility is being constructed with 156 finished examining rooms.

This decision to cut back on examining rooms within the University B/C Clinics came about during the review of the Certificate of Need application by the Metropolitan Health Board, the advisory board for the Metropolitan Council, the B-agency. The consumer representatives on this Board expressed their concern over what they perceived as inadequate community-based primary care clinics offering a learning experience for the medical student.

This concern was shared by members of the local health care community involved in serving the underserved in their own neighborhoods. This concern was also shared by members of the University Health Sciences who saw an added commitment of teaching institutions to set up new models and curriculum for a changing health scene.

The remote site primary care clinic that this grant speaks to is a direct response to a shared concern. It calls for taking examining room space used for education of the medical student out of the University walls and putting it in the community setting where it will be more relevant. Other clinic space replacement will be in the development of the adult component of the Community-University Health Care Clinic and other primary care sites removed from the University.

Current Status

With the granting of a Certificate of Need by the State Board of Health, the University became involved in working with the Metropolitan Health Board.

In a mutual effort to respond to the Metropolitan Council's Health Chapter of the Metropolitan Development Guide published in September, 1974 the University Health Sciences began joint planning on a remote site primary care clinic. This clinic is to provide service to an underserved community seeking care and provide an educational experience for undergraduate health sciences students, with primary emphasis on medical students.

Some of the policies developed by the community, and providers to help determine the planning and development of health care in the metropolitan (7-county) area and hopefully the state, are listed below.

1. Neighborhood Health Centers providing generalized health services compatible with the life style of the target community.
2. Highest priority given to geographic areas or demographic groups of defined health service scarcity.
3. Physician shortage in primary care has increased in metropolitan area from 81/100,000 in 1950 to 52/100,000 in 1970.
4. Availability of services
 - (a) Transportation
 - (b) Inability to pay
 - (c) Knowing how to get appropriate service
5. Need for non-medical services.
(See Metropolitan Health Chapter in Appendix)

The University Health Sciences sees this opportunity of working with the community to develop a model in primary care outreach that will:

1. Increase training opportunities.
2. Reaffirm the University's commitment to attract students from under-represented segments of the population.
3. Support primary care and interdisciplinary educational programs designated to promote effective health care delivery through use of interdisciplinary team approach methods.
4. Effect the distribution of program output into areas of critical manpower needs.
5. Provide a constant relationship for the University to work with health planning agencies to be responsive to health manpower training as it relates to health care delivery needs.
6. Help promote training of personnel in current shortage skills and disciplines, particularly primary care physicians, clinical, pharmacists, dentists, nurse practitioners.
7. Provide much needed experience for students in primary care delivery in remote site facility.

Present Situation

In October, 1974, the University Health Sciences presented a plan for a primary care outreach clinic to the Metropolitan Health Board. The Health Board has been notifying metropolitan communities regarding the joint effort to identify an underserved community in which a primary care clinic can be developed to serve the needs of the area while providing a site for education for medical students and other health sciences students.

The Metropolitan Health Board is sending a letter of notification to all community clinics, neighborhood action groups, community officials and state legislators. Because of an understaffed Health Board this process has been slow. At this time the University is prepared to negotiate with an interested community filling the qualifications of:

1. underserved by private sector
2. not a high risk area
3. a cross-section in the population, age, race, socio-economic background
4. an interest in working out the health needs and services of the area as consumers.

The University of Minnesota Medical School sees the need to give students early in their training exposure to primary care medicine in a variety of clinical settings. Only with this experience can they fully understand

the satisfaction derived from this work. It is difficult if not impossible, to give this experience in the University setting. It is anticipated that this exposure early in the students' education could influence later career choices.

With the expanded role of the University Medical School to offer experience in a community setting, solely utilizing facilities within the University walls becomes socially obsolete. It is necessary for today's health care training that is attempting to readjust the distribution of health care delivery in this country to enlist the cooperation of the communities it serves. Bringing the training process of the students out of the University for some of their experience will benefit all.

The University is also aware of the changing role of the Health Sciences and segments of the recent amendment to the Health Sciences Mission Statement best explains this concern:

Education of the trained professionals required to fulfill the health care needs. The educational facilities and programs must provide the interdisciplinary training and experience essential for the provision of comprehensive health services throughout the State. It is emphasized that there should be a comprehensive approach to the patient, recognizing the potentialities of the health team concept. The programs must be organized so the student acquires the necessary skills, attitudes and principles of knowledge to enable him to give the best possible care.

Providing health care and health services to the people of the State. This function should be closely correlated with educational and research functions since each is supportive of the other. The University Hospitals and other health science clinic programs should provide the facilities and resources through which exemplary models of health care programs can be tested and the delivery of comprehensive health care services can be used as a teaching laboratory and demonstration model for all the health professions. To obtain the most effective delivery of health care requires that opportunity be widely available for the maintenance of the competence of the practicing health science professionals. Direct patient care is an essential method for maintaining the educational proficiency of the faculty and for establishment of appropriate educational relationships with community health professionals throughout the state.

The mission statement goes on to affirm:

In the Medical School the increased emphasis on the preparation of primary care physicians and its objective of preparing at least fifty percent of the graduating class for primary care practice should be pursued. In response to the changing health care trends, the School should continue to provide its students with clinical training opportunities in a variety of settings, such as the Rural Physicians

Associate Program, Family Practice programs and metropolitan health care institutions, physicians' offices and group practice clinics. A flexible curriculum adaptable to the needs and desires of the students should be continued to assure a more direct pathway toward the students' career objectives.

PUBLIC ANNOUNCEMENT

regarding
Site Selection of an urban, comprehensive,
community-based health clinic for all age groups

In early 1974, as part of the Certificate of Need review of the proposal to construct new facilities to replace and expand the ambulatory care programs, the University committed itself to develop and support, within the parameters of quality education, at least one additional project to demonstrate the feasibility of urban, comprehensive, community-based health clinics for all age groups. Educational programs in the additional clinic will be designed as approved courses with credit for students who select this option from specialty areas other than family practice. These educational experiences will be available for all students.

The University also agreed to locate the new comprehensive health clinic in consultation with the Metropolitan Health Board and with the approval of the Metropolitan Council. The community served will be represented on the board governing such clinics, recognizing that responsibility for maintenance of high quality of service and training must rest with the University.

This announcement is intended to inform potential communities who may desire to work jointly with the Metropolitan Health Board and the University of Minnesota Health Sciences to indicate to the Metropolitan Health Board by April 15, 1975 their desire to work with the parties mentioned to analyze their potential to become the site for the community based clinic. The Metropolitan Health Board has adopted the position that the Board will negotiate only with broad-based community groups. The Metropolitan Health Board will assume the responsibility to select the appropriateness of any community which responds to this announcement and provide a list which will be jointly reviewed by a selection committee comprised of representatives from the Metropolitan Health Board, University Health Sciences and the communities which respond.

To assist community groups to determine their desire to work jointly with the University to develop the proposed primary care clinic, the following conceptual model has been developed by the University of Minnesota Health Sciences. The specific size, services offered, and health promotion as perceived by the community would be negotiated between the University and Community representatives once the site is selected.

General characteristics of the model are:

1. The clinic is intended to provide an innovative team approach to the provision of comprehensive primary health care. The primary health care clinic will include the provision of primary medical care as one component of the services offered, and is intended to provide an opportunity to innovate in the organization of health services and the utilization of health manpower.
2. The clinic will provide two components of care - health promotion- prevention services and health problem services. While an educational program could be developed by any one of the specialities involved in a particular narrow track, the attempt of the comprehensive primary care model is to involve the students in a broad range of program with all units participating. However the educational policy units of the separate Health Sciences units will determine the conditions of student participation in the primary care clinic. It is intended that health promotion - prevention services include assessment of individual health status, screening, health education, normal well-baby, pediatric, adult and geriatric health care, preventative dental health services, nutrition counseling, and management of other normal health care problems. Health problem services include the treatment of pediatric, adult and geriatric illnesses, dental problems, and mental health problems and referral.
3. The consumer will participate in the development of policy for the community-base health clinic through membership on the clinic Board of Directors.
4. Raising funds for the start-up, evaluation and education costs associated with the development of the clinic is the responsibility of the Council of Deans and Directors and the Vice President for Health Sciences.
5. The clinic is expected to be self-supporting once the user population is established. The method of payment of services by the consumer population has not been determined and will have to be made in conjunction with the participating community.
6. The population base should be a mixed income - moderate risk target population rather than a low - income - high risk group. The population base should have a shortage of traditional medical primary care resources and a population which desires to participate with the University to develop an innovative comprehensive primary care program.
7. The community size should generate 60-70 daily patient visits per promotion and problem services. There are no particular limits at this time on the distance the center could be from the University in that it is anticipated that the core staff will be full-time and the students will participate in total blocks of time, rather than partial hour per day.
8. The present thinking is to assign personnel tasks on a functional basis to meet the needs of the people served. There are no particular pre-conceived ideas about jurisdictional lines between participants.
9. The Primary care clinic must develop linkage relationships to existing secondary and tertiary centers in the community. It is expected that the community clinic will use existing nearby resources for referral.

10. The mechanism for evaluation of the programs remains unclear at this time but it is hoped that evaluation will include outcome measurements as well as utilization measurements.

Requests for consideration as a potential site for the community based primary care clinic should be sent to Malcolm Mitchell, Director, Metropolitan Health Board, 300 Metro Square Building, 7th and Robert Streets, St. Paul, Minnesota, 55101. The request should include:

1. A description of the community based group which is applying.
2. A description of the projected service area of the clinic and the population to be served.
3. A description of any primary care resources the community group already operates and how these resources are expected to be integrated with the new center if at all.
4. To the extent known, the community finances available to assist in development of the proposed clinic.
5. A resolution adopted by the Community Organizations Board of Directors indicating their desire to work with the Metropolitan Health Board and University Health Sciences to develop a comprehensive clinic.

The attached timetable has been adopted by the Metropolitan Health Board B-C Committee for selection of the urban-comprehensive community-based health clinic for all age groups.

3.10.75
/es

Health Board - ZI -
of the
METROPOLITAN COUNCIL
300 Metro Square Building, Saint Paul, Minnesota 55101

MEMORANDUM

March 10, 1975

TO: Metropolitan Health Board

FROM: B-C Committee

Re: Revised time sequence for site selection of the Comprehensive
Community Based Clinic

In August of 1974, the B/C Committee adopted a time sequence for site selection of the urban, comprehensive, community based health clinic for all age groups which the University committed itself to develop in consultation with the Health Board during the hearings on the B/C Certificate of Need application. That schedule, of course, no longer applies. Therefore, the following timetable was adopted by the B-C Committee as a revised timetable for the completion of the site selection.

March 15	Complete distribution of a public announcement through all available mechanism to all potential communities who desire to work jointly with the Health Board and University to analyze the community potential.
April 15	Receive all letters of desire to work jointly with the University of Minnesota and Health Board to develop a community clinic.
April 15 - June 15	Take all responding communities which meet criteria developed by the Health Board and jointly analyze the suitability of each site.
July 1	Select a site
July - December	University of Minnesota and the selected community develop and implements the comprehensive community based health care clinic for all age groups.

Actual beginning of operation and provision of patient care services depends on the community selected and the degree of readiness that the community can demonstrate.

/es

Applicants Response to Criteria

Construction Assistance Evaluation Criteria

1. Effectiveness of the project to provide increased training opportunities. The University of Minnesota Medical School curriculum emphasizes the student's early introduction to community medicine and the role of the family in disease prevention and health maintenance. Effective training in many aspects of primary care depends upon context factors. These include the community as the health context for the family, and the family as the source of genetic and environmental influences on the patient's health. The training of student physicians in this natural setting provides them with the opportunity to study the interaction of all of the factors which produce health, illness and healing. Each of the more specialized areas of graduate medical education also integrates these concepts into the teaching of ambulatory care delivery. This grant will enable the University of Minnesota to provide a unique interdisciplinary teaching resource, needed to augment the extensive secondary and tertiary resources which are characteristic of large medical teaching and research centers such as the University of Minnesota Health Sciences Center. See page 13 - 14, 71.

2. Effectiveness of the project in accomplishing the purposes of the programs at the least relative cost to the Federal Government. The significant planning and development of each phase of the project (already accomplished) represents a net saving to the Federal Government in view of its expressed interest in the facilitation of efforts such as this. The regional nature of the innovative programs at the University of Minnesota Health Sciences Center is testified to by programs designed to augment the training efforts of the two year medical sciences program at the University of Minnesota, Duluth and the provision of the third year curriculum for the medical school at the University of North Dakota. The rural orientation of both efforts requires broadened and varied resources of which this primary care project is typical. The further maximizing of benefit from federal dollars already invested represents an additional economy and return on those dollars. It is further noted that the use of current resources in manpower and equipment will enable us to minimize start up and maintenance costs of the project. This project is considered a minimum cost alternative for the expansion of training opportunities in primary care delivery at the Health Sciences Center. See page 123.

3. Extent to which the project may be instrumental in stabilizing institutions who are in precarious circumstances. The provision of space and location for conduct of training in primary care delivery is critical to the implementation of programs demanded by federal state and local government agencies and planning bodies, medical students and community groups which feel they have a stake in the relationships between relevance of training (including familiarly

with familial and community contexts of medical care) and the availability of physicians to care for them. Several of the goals of this project are included in the Health Sciences Development Program, and curricular revisions. Since implementation of the programs designed in concept is considered an obligation on this campus, developing feasibilities is a serious and on-going process. Among the institutions whose resources are currently strained by efforts to provide for demonstrated needs are this University Medical Center, and the community which it serves. This project will help stabilize the community designated as the site of the facility since the location will be related to demonstrated need on the part of the community and involved community planning agencies. See page 15, 72.

4. Availability of resources to operate the program over useful life of the facilities.

The provision of adequate funding for the remodeling of a remote site facility is to the use of transferrable resources sufficient to operate the program and facility. These resources are currently sufficient to implement the program as planned, and assure its continuance at least over the useful life of a remodeled site. Additional operations and maintenance costs will be provided as needed, by the medical center. See page 110, 111.

5. Effectiveness of the planned utilization of the proposed facility.

The optimal use of teaching space in the facility is not expected to pose a difficulty. The number and variety of teaching activities resulting from the coordination of curricular demands with clinical experience in a comprehensive ambulatory care program designed for primary care, assures the necessary training program content. The major teaching context of course will be the clinic space itself. Modular configuration and flexibility in staffing are intended to facilitate efficient interutilization of clinic areas. Utilization of the facility by the community is assured in the process of community site selection (including need and organization) and by community participation in many of the design factors of operation. See page 37 - 40, 117, 118.

6. Effectiveness of the project to achieve a more equitable regional and national geographic distribution of training opportunities for qualified applicants.

The University of Minnesota Health Sciences Center is intimately related to the educational and service needs of North Central region of the country. Relationships with medical education programs at University of Minnesota, Duluth and the University of North Dakota encompass actual training agreements with this medical center. It is expected that the primary care facility which this grant will assist toward implementation will be fully utilized by students from these small-urban and rural areas. The project should directly effect the formation of future practice plans of these student physicians in the direction of primary care in a community setting. See page 76, 82, 98 - 100.

7. The effectiveness of the current utilization of present facilities by the applicant.

Currently available health science educational facilities are over-utilized and under existing conditions, frequently in inefficient ways. Crowding and inefficiency are especially evident in the medical school and its teaching programs. The necessity for frequent over-crowding of classrooms assignment of several teaching faculty members and support personnel to space off campus, and the development of a "make-do" program of utilization pending completion of new and expanded facilities have created enormous logistical programs. In the clinical departments of the Medical School, the average amount of space allocated per faculty member and supporting personnel, is about 50 square feet.

Clinical facilities for ambulatory patient care and teaching of outpatient medicine at University of Minnesota Hospitals have long been outmoded and inadequate. The current outpatient unit was originally constructed in the 1920's to provide care for a maximum service load of 50,000 patient visits annually. At that time there were 86 medical students in the entering class, approximately one-third of the present first year class. These same antiquated, inefficient, over-crowded facilities now heavily stressed to accommodate 124,000 outpatient visits per year. In the meantime, it has been necessary to convert distant space, not designed for that purpose, into outpatient facilities for clinical teaching of medical students and residents. The site location of this primary care facility is desirable but not amenable to the planning for alleviation of the above "on site" difficulties. While the programmatic aspects of the project are part of the comprehensive education and training planning of the Health Sciences, the physical environment required must be partly handled through grant programs such as the Health Professions Construction project. See page 65 - 70.

8. Effectiveness of the consideration and selection of alternative means for consummation of the project resulting in lower cost with minimum compromise of scope or quality. (Includes extent and fit of area masterplanning consideration of affiliation or consortia agreements, etc.)

Implementation of the curriculum for the large class size (already accomplished under other planning programmatic commitments) maximizes the utilization of four major teaching hospitals, ten limited affiliation health care facilities and approximately 100 other clinical sites including clinics, physician offices, health agencies, etc. These aspects of instruction planning are designed to broaden the base of clinical exposure, but do not represent the ideal in terms of relationship to the community required for primary comprehensive care. Alternatives considered include attempts to augment existing programs in affiliated institutions. Impediments encountered included the non-availability of space for adequate teaching and the cost incurred for the institution whose primary mission is non-ambulatory patient care. Further, the University actively cooperates with Metropolitan govern-

ment. The master plan for health in the area calls for decentralization of primary care facilities and the incorporation of teaching programs in those facilities to stimulate broadened physician experience with the community and to facilitate effective citizen participation in the maintenance of their own health. These goals are compatible with the objectives of Health Professions Educational Facilities Construction project. See page 16, 73 - 75.

9. Impact of the project on supporting the applicant's efforts in providing more opportunities for students from under-represented segments of the population.

Under represented segments of the population in the health sciences include members of geographic areas (rural populations) as well as ethnic, gender and racial minorities. This project will directly increase the opportunities for student physicians to experience delivery of primary care in the community context, hence facilitating those special professional practice goals of minority students compatible with service to particular communities. Admission policies and special programs at the University of Minnesota Health Sciences Center encourage the preparation and recruitment of minority students beyond the State, to the region and the nation. All students of course have access to all the training opportunities and resources of the Health Sciences Center. See page 72, 103 - 104.

10. Impact of the project in supporting educational programs which are designed to promote the effectiveness of health care delivery --e.g., through introduction of interdisciplinary team approach methods, clinical community outreach programs, etc.

The remote site, primary care stipulations of this project are an excellent fit for community based training concepts around which the program is designed. The combination of community participation, interdisciplinary practice, nurse practitioner, and community pharmacy components ideally functional in comprehensive family care provides the Health Sciences Center with the opportunity to investigate the workability of a combination training-service programs of several configurations. The final mix will be determined by the training and educational need of the program and the type and quality of community input concerning the relationship of the program to that community's health goals. This type of planning concept is expected to allow the necessary experimentation with broad program configuration while preserving the resources of the program for the training effort upon which it is based. See page 13-14, 39-40, 77-80.

11. Relative emphasis of the project in effecting the distribution of program output into areas of critical health manpower needs.

The analysis of internships (1973) shows the great proportion of internships in Medicine and Pediatrics, both of which emphasize ambulatory, primary care in their graduate curricula. The facility

which this grant will make possible is perfect resource to augment specific programs already implemented. Technological linkages between the project facility and the learning resources center at the University will assist in the integration of training with core programs at the Medical Center and provide a reciprocal source of teaching material for use by other students. As an aspect of the comprehensive, multidisciplinary approach to the delivery of care in this project, patient education efforts will provide the medical students with the opportunity to assess both their role in the process, its development in a real patient population and the effects of education in the form of behavioral change toward health maintenance and illness prevention. By this method, it is proposed that such an integration of service and training will maximize the potential for innovative practice arrangements among physicians and allied health professionals to alleviate critical shortages, especially in the delivery of primary ambulatory care. See page 71.

12. Relationship and compatibility of the project to state, regional, or area plans for health manpower training as they relate to health care delivery needs.

The B/C building project has been thoroughly discussed with and reviewed by the appropriate agencies responsible for planning of health care facilities and delivery systems in Minnesota. The Certificate of Need for B/C was issued by the Minnesota State Board of Health on March 28, 1974, following extensive study and approval by the local 314B Agency--The Metropolitan Council, and recommendation of its subcommittee, the Committee on Human Resources and the Metropolitan Health Board. The Health Board's unanimous recommendation for re-issuance of the Certificate of Need was endorsed by the 314A Agency--Comprehensive Health Planning Agency and the A-95 State Planning Agency.

In 1966 following a request by the University's Board of Regents for an extensive study of physician and dental manpower needs in Minnesota, the Louis W. and Maud Hill Family Foundation of Saint Paul published a landmark report on that subject, entitled "Health Manpower for the Upper Midwest." The rapid expansion of health science educational programs at the University of Minnesota, including major increases in Medical School entering classes, was a direct response to the recommendations of that document. The long-range building program of the Health Sciences Development Program, including Building A and B/C, was instituted to provide adequate educational facilities for the large numbers of Health Sciences students required to translate the proposals of the Hill Family Foundation report into increased numbers of future physicians and dentists for Minnesota and the Upper Midwest. Other studies of manpower needs have subsequently confirmed and extended the findings of the Hill report. There has been strong State legislative support for implementing these recommendations.

In recent years, the University of Minnesota Health Sciences Center and its Medical School faculty have provided talented, experienced leadership and educational resources for Northlands Regional Medical Program, an important agency for health manpower training in Minnesota. The University is also the sponsor of an Area Health Education Center, which provides valuable training programs and educational expertise for health manpower training and improved health care delivery in Comprehensive Health Planning, Area D, a large 14-county region in north and central Minnesota.

All knowledgeable statements on health manpower problems in Minnesota and the Upper Midwest have addressed cogently the urgent need for greatly increased numbers of family physicians and other primary care doctors in non-metropolitan sectors. The University of Minnesota responded to this expressed need with early development of a large Department of Family Practice and Community Health, now one of the nation's largest and most successful training centers of family physicians, both at the pre-M.D. and residency training levels. The University has conducted, since 1971, the Rural Physician Associate Program, a unique, nationally-recognized 9 to 12 month preceptorship program for 40 third-year medical students participating effectively in rural health care delivery. While providing direct health care services in rural communities of the state, these medical students develop associations which may lead them later to establish medical practices in non-urban communities calling for additional primary care services, especially family physicians. Unit B/C will accommodate clinical faculty support for this program as well as educational resources necessary to accomplish programs at non-University sites. Despite the fact that the space for this project is technically replacement space covered under the Certificate of Need for the B/C Unit at University of Minnesota Health Sciences Center, the program itself is part of the long-range curriculum development. See page 18-20.

13. Effectiveness of the project in promoting broad health objectives --(area health education centers, Health Maintenance Organizations and Regional Medical Programs) affiliation agreements with other educational and community institutions.

The Area Health Education Center is part of the training armamentarium of the Health Sciences Center, and indeed is sponsored by the University of Minnesota. This Center provides valuable training programs and educational expertise for health manpower training and improved health care delivery in Comprehensive Health Planning (CHP) Area D, a large 14 county region in North and central Minnesota. The project facility will provide both an exportable (replicable) model of primary ambulatory care, useable in the program at the A.H.E.C. and an experiential foundation for students training in the metropolitan area who might pursue advance studies in Area D.

The historical relationships between the Northlands Regional Medical Programs and the University of Minnesota Health Sciences Center and its Medical School faculty will continue, especially in the perpetuation of programs in progress. Primary ambulatory care in conjunction with training of physicians and other allied health professionals has historically been one of the mutual goals of both the RMP and the Health Sciences Center. This project is directly related to those goals.


14. Effectiveness in promoting the training of personnel in current shortage skills and disciplines, e.g., primary care physicians and dentists, clinical pharmacists.

This project will maximize the resources necessary to achieve this criterion. As the program develops, training and service needs will be progressively integrated according to program concepts already prepared by each of the health disciplines specifically for this project. Not only will the project assist in the provision of a resource for training of personnel in critical shortage categories, but it will also provide that training in the context necessary to stimulate students to pursue careers in the community as members of the primary health care delivery team.

15. Effectiveness of the project in consummating an enrollment increase in the least amount of time.

Enrollment increases incorporated into the Health Sciences development program are in the process of implementation. Facilities such as the project clinic are conceptually contained in the total plan, which speaks to the project's fit in the overall training effort. The uniqueness of the project facility among the resources being assembled speaks to its importance and to the value of this opportunity to implement it.

LIAISON COMMITTEE ON MEDICAL EDUCATION

 Council on Medical Education
American Medical Association
535 North Dearborn Street
Chicago, Illinois 60610

January 7, 1970

Executive Council
Association of American Medical Colleges
One Dupont Circle, N.W.
Washington, D.C. 20036

Malcolm Moos, Ph.D.
President
The University of Minnesota
Minneapolis, Minnesota 55455

Dear President Moos:

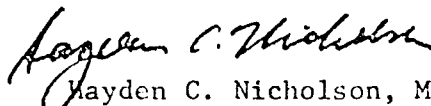
It is a pleasure to transmit to the University of Minnesota formally the final report of the team representing the Liaison Committee on Medical Education, which visited the University of Minnesota Medical School in January of 1969. As you know, this committee represented the Executive Council of the Association of American Medical Colleges and the Council on Medical Education of the American Medical Association. The purpose of the visit was to accredit the program in undergraduate medical education at the University of Minnesota Medical School.

The report recommends continuing accreditation of the program in undergraduate medical education at the University of Minnesota Medical School, effective the date of the survey, January 23, 1969, and continuing Institutional Membership in the Association of American Medical Colleges. The report calls attention to certain problems at the Medical School and asks that the Dean of the School submit reports dealing with these problems one and three years after the survey visit.

A copy of the report is being sent to Dr. Robert B. Howard, Dean of the Medical School. If there are any questions about this report, any of its parts, its implications or uses, I am sure that you will get in touch with this office.

The report is considered confidential. However, it is for the use of the University and the Medical School as dictated by their best judgment. Characteristically, it has not proven advantageous to release the contents of these reports to the public press.

Sincerely,



Hayden C. Nicholson, M.D.
Secretary, Liaison Committee
on Medical Education

HCN:jmz

cc: Robert B. Howard, M.D., Ph.D.
Cheves McC. Smythe, M.D.

Statement of Need for the Facility:

The thrust of the planning for augmentation of enrollment and innovative curricular development at the University of Minnesota Health Sciences Center has presented the institution with very practical problems in implementation. Creative uses of faculty and material resources have allowed many of the aspects of the overall plan to be put into effect in a satisfactory manner. However, the demands of the curriculum for expanded contexts to include consumer education and participation as part of the physician training and patient care aspects of modern health care delivery have simply made the establishment of a primary comprehensive care community based facility imperative. It is not reasonable to expect the kind of family centered, integrative care demanded by this program, to be carried out at a site remote from the community in which the patients live. It is important to note that development of a community clinic in conjunction with the Metropolitan Health Board is called for and encouraged by the Mission Statement for the Health Sciences. To quote:

There should be a continuing dialogue with the community, in order that the Health Sciences may outline possibilities, methods and (the) practicability of meeting the health needs expressed by the public sector.

Just as input from the public sector is encouraged, so too does the Mission Statement call for outreach, primary care, and cooperative activity. Local planning agencies with which the University of Minnesota cooperates toward the development and refinement of metropolitan health care delivery planning, are committed to facilitating the type of community-health care provider relationships which the Health Sciences Center is proposing to establish. Our conception of the program has therefore been validated by direct community expression of approval and support. Further, student and faculty input from all of the participating units in the health sciences have materially aided in the incorporation of sound educational goals into innovative training programs which will be housed in the community based facility which this grant will make possible. The establishment of this facility is the final material barrier to the implementation of the program.

OCCUPANCY DATA

1. Present Enrollment as of October 15, 1974

Medical School - M.D. Curriculum			Public Health	
A	Undergraduate		Pre-degree	Grad
	1st Year	239+8	1st	0
	2nd Year	237	2nd	0
	3rd Year	266 (+35)*	X	
	4th Year	216		
	5th Year	--		
	6th Year	--		
	TOTAL		966 (+35)*	
B	Graduate	Basic Health Sciences	Clinical Sciences	Total
	Degree	204	397**	601
C	Continuing Education	Course and program registrants, 1973-74		239
		2532		

* Through an inter-institutional contractual arrangement, 35 medical students enrolled at the University of North Dakota School of Medicine are fulltime students during their third year in clinical externships at the University of Minnesota Medical School, Minneapolis.

** Includes only post-M.D. graduate students registered for advanced degree in the Graduate School of the University of Minnesota.

2. Enrollment Base

A. Highest undergraduate first year enrollment in the five years preceding the year of application (1969-1973)	<u>239</u>
B. First year enrollment assured as the result of a previous Health Professions Construction grant	<u>254</u>
C. Statutory first year enrollment required under the capitation grant program	<u>239</u>
Enrollment Base (highest of above)	<u>254</u>

3. Assured Enrollment Increase (Entire student increase must be assured in the first year, except for major expansion).

A. Number of Students - 0 -

Year after Completion	Academic Year	First-year Undergraduate	Advanced	Continuing Education
1st	*			
2nd				
3rd				

* See Item 15B of application for date of occupancy.

B. First-year undergraduate student enrollment increase (for 10-year period of commitment) over highest enrollment shown in No. 2: - 0 -

4. No Enrollment Increase

- 32 -

- (A) The facilities are so obsolete as to require the school to substantially curtail its enrollment: **
- (B) The facilities are so obsolete as to require the school to substantially curtail the quality of training: **
- (C) The school has a current waiver under the expansion of enrollment requirement for capitation aid:
- (D) Not applicable

* If applying under no enrollment increase provision, supportive narrative must be included in the "Occupancy Data" (Item 8) section.

** Only acceptable if the proposed project is entirely for the renovation or replacement of existing facilities.

5. Maximum Grant Participation Requested (80%)

- (A) New school (first class not graduated as of date of application)
- (B) School received a waiver under expansion of enrollment requirement for capitation aid
- (C) Major expansion
- (D) Unusual circumstances*
 - (i) School is located in a geographic area with a critical shortage of health professions manpower
 - (ii) Project is necessary to prevent curtailment of enrollment
 - (iii) Project is essential to the maintenance of accreditation
 - (iv) Other relevant factors consistent with purposes of the Act.
- (E) Not applicable

* If unusual circumstances are claimed, a justification must be included in the narrative for "Occupancy Data" (Item 8)

Justification of Request for Waiver of Enrollment Increase

It is expected that the three projects proposed by the Medical School for consideration under the funding consideration category of Family Medicine - Remote Site, will provide an important added dimension to the quality of medical education at this University.

Proportionately, the number of interns and residents and/or undergraduate students who can be accommodated in the proposed community clinic settings is relatively small in comparison with the total scope of this School's program which currently provides for 834 interns and residents and 1001 undergraduate medical students. It is therefore expected that the basic education of medical students in the traditional sense will be continued without serious jeopardy to the basic quality medical education.

More important than the impact of these projects as they relate to volume, is the

- 1) importance of providing a variety of viable educational opportunities for medical students.
- 2) response to national health objectives, particularly in the promotion of professionals for current shortage skills, i.e., primary care physicians.
- 3) providing student experience in population pockets of underserved urban communities.
- 4) response to needs of the State and Region, which is largely a rural area and in need of primary care physicians for clinics such as those proposed in the School's three projected facilities.
- 5) providing clinical experiences in an environment that is more typically a setting which parallels that which a student will encounter.
- 6) development of a variety of clinical sites in different settings to provide a balanced educational experience for students opting to pursue a career of family practice.
- 7) provision of educational programs and clinical experiences which reflect the changing emphasis from inpatient to outpatient care.
- 8) opportunities for interdisciplinary learning experiences in appropriate clinic environments.
- 9) opportunities to put into practice the concepts of interdisciplinary team training, particularly in primary care settings.



In the summary of current and proposed space to be utilized in the educational programs of the Medical School it is demonstrated that no expansion of teaching space is planned. Rather, the reduction of space is reflected in major teaching hospitals. The intent of this reduction is not to discontinue educational programs in the teaching hospitals but is a response to the trend from inpatient teaching to outpatient emphasis. The relinquishing of the utilization of inpatient space will in no way detract from the quality of the School's educational program but in fact will serve to strengthen the total program.

UNIVERSITY OF MINNESOTA

Office of the Assistant Vice President and Treasurer
302 Morrill Hall
Minneapolis, Minnesota 55455

February 11, 1975

Metropolitan Council
300 Metro Square Building
7th Street and Robert Street
St. Paul, Minnesota 55101

Attention: John Boland, Chairman

Dear Mr. Boland:

In accordance with the procedure established under OMB Circular A-95, enclosed please find copies of notification forms which have been sent to the State Planning Agency indicating the University's intent to apply for federal construction funds for the following projects:

- Unit F - College of Pharmacy - School of Nursing
- Primary Care Clinic
- Community University Health Care Center
- Smiley's Point Family Practice Clinic
- Chicago Avenue Family Practice Site
- Basic Science Remodeling

Sincerely,



Clinton T. Johnson
Assistant Vice President
and Treasurer

CTJ/ct

Enclosures

Form 505

Please Read Instructions on the back of this form.

Print or type.

DO NOT USE	State Clearinghouse No. 18	Card Type 9	State of Minnesota
	NOTIFICATION OF INTENT TO APPLY FOR FEDERAL AID		

10 11 Applicant Project Name 12 71
Primary Care Clinic

02 Applicant Agency 12 45
University of Minnesota Medical School

Division 46 79
University of Minnesota

03 Applicant Address (Street) 12 45
1360 Mayo Memorial Building

City 46 60
Minneapolis

Zip Code 76-80
55455

04 Contact Person 12 45
N. L. Gault, Jr., M.D., Dean

Area Code 46-48
612

Phone 49-55
373-8141

Ext. 56-59

05 12 71 Project Description - Nature, Purpose and Beneficiaries (Use 6 lines if needed)
The primary care clinic will be designed, located and staffed to meet the needs of an under-

06 12 71 served community to be selected by the University and the Metropolitan Health Board and to

07 12 71 provide appropriate new educational programs for health science students. For the purposes

08 12 71 of this request for Federal funding, it is assumed that an existing facility in the selected

09 12 71 community will be remodeled. Cost estimates are based on model clinic planning experience.

10 11 Project Location City 12-45
Project Location County 46-79

	FEDERAL FUNDS		MINNESOTA MATCHING FUNDS		OTHER	TOTAL
	(A) Grant 12-19	(B) Other 20-27	(C) State 28-35	(D) Local 36-43	(E) Funds 44-51	(F) Funds 52-60
12	375000		0		125000	500000

13 Type of Other Federal Funds (B) 12-45
Type of Other Funds (E) 46-79
Contributions and foundation support

14 Federal Program Title 12-66
Part B Title VII Section 729

Federal Catalog No. 67-71
A-95 Part I of OMB Circular

15 Federal Agency Name 12-45
Dept of Health Education Welfare

Federal Sub Agency 46-79
Public Health Service - Health Resources

TYPE OF APPLICANT (CHECK (X) ONLY ONE BOX)

State	Inter-State	County	City	School District	Special District	Community Action	Sponsored Organization	Other
<input type="checkbox"/> 12	<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15	<input type="checkbox"/> 16	<input type="checkbox"/> 17	<input type="checkbox"/> 18	<input type="checkbox"/> 19	<input type="checkbox"/> 20

17 TYPE OF ACTION (CHECK (X) BOXES WHICH APPLY)

New	<input checked="" type="checkbox"/> 21	Supplemental	<input type="checkbox"/> 23	Increase Duration	<input type="checkbox"/> 24	Increased Dollars	<input type="checkbox"/> 27
Continuation	<input type="checkbox"/> 22	Cancellation	<input type="checkbox"/> 26	Decrease Duration	<input type="checkbox"/> 25	Decrease Dollars	<input type="checkbox"/> 28

Is State Plan Required?	Has Regional Agency been Notified?	Is Project under A-95 Jurisdiction?	DO NOT USE	Environmental Impact Statement Yes <input type="checkbox"/> 37 No <input type="checkbox"/> 38
Yes <input type="checkbox"/> 29 No <input type="checkbox"/> 30	Yes <input checked="" type="checkbox"/> 31 No <input type="checkbox"/> 32	Yes <input checked="" type="checkbox"/> 35 No <input type="checkbox"/> 36		

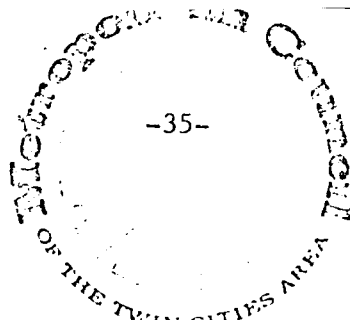
Estimated Date Applicant Expects To Submit Formal Application March 17, 1975
(Date)

State Fund Code 62700 14 211

Signature Clinton T. Johnson Date February 11, 1975
Clinton T. Johnson, Asst Vice President

SUBMIT TWO (Business Administration and Treasurer COMPLETED FORM TO:

State Planning Agency
Capitol Square Building
550 Cedar Street
St. Paul, Minnesota 55101



DRP
CP



300 Metro Square Building, 7th Street and Robert Street, Saint Paul, Minnesota 55101 Area 612. 227-9421

February 28, 1975

Mr. Clinton T. Johnson
Assistant Vice President
Office of Assistant Vice President and Treasurer
302 Morrill Hall
Minneapolis, Minnesota 55455

- RE: Unit F - College of Pharmacy - School of Nursing
Metropolitan Council Referral File No. 2500
- Primary Care Clinic
Metropolitan Council Referral File No. 2501
- Community University Health Care Center
Metropolitan Council Referral File No. 2502
- Smiley's Point Family Practice Clinic
Metropolitan Council Referral File No. 2503
- Chicago Avenue Family Practice Site
Metropolitan Council Referral File No. 2504
- Basic Science Remodeling
Metropolitan Council Referral File No. 2505

Dear Mr. Johnson:

The University of Minnesota project notification for HEW funds to assist in the projects described above were received by the Metropolitan Council on February 18, 1975.

These projects will be reviewed in accordance with procedures of the Office of Management and Budget which require that the Council notify potentially affected units of government, neighborhood organizations, and human rights commissions and inform them that they have an opportunity to comment upon these projects.

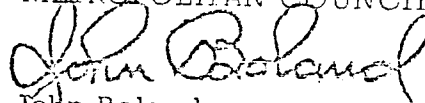
Mr. Clinton T. Johnson
February 28, 1975
Page Two

Should the Council need more information before completing the review, the staff will write or call your office.

Thank you very much.

Sincerely yours,

METROPOLITAN COUNCIL



John Boland
Chairman

JB:emp

cc: Thomas Harren, Office of Local and Urban Affairs, State Planning Agency
Ms. Joan Campbell, Metropolitan Council District 6
Alton J. Gasper, Metropolitan Council District 8



STATE OF MINNESOTA

STATE PLANNING AGENCY
100 CAPITOL SQUARE BUILDING
550 CEDAR STREET
ST. PAUL, 55101

March 13, 1975

Mr. Clinton T. Johnson
Assistant Vice-President
Business Administration and Treasurer
Morrill Hall
University of Minnesota
Minneapolis, Minnesota 55455

RE: Primary Care Clinic
SCH # 75031303

Dear Mr. Johnson:

This is to certify that the Minnesota State Planning Agency has in accordance with the Project Notification and Review System (PNRS) procedures, established by the Office of Management and Budget Circular A-95, reviewed the Primary Care Clinic proposal noted above. State agencies which may be interested in or affected by this proposal have been notified by our office.

This letter represents the final action of the State Planning Agency's review of the proposal in its performance of the function as the State Clearinghouse under the PNRS procedures. University of Minnesota is, therefore, authorized to submit its application without further notice or review by this agency. A copy of this letter should be attached to said application.

Sincerely,

Thomas W. Harren
State Clearinghouse

Undergraduate and Graduate Medical Education Opportunities to be Available at the
Primary Care Clinic

Medical students will have the opportunity to elect clinical experience in this center. Elective courses for medical students in the final five quarters of their curriculum will include:

"Peds. 5-5.. Out-Patient Externship at Primary Care Clinic
6 weeks Offered all periods

The student will provide primary care to an inner city segment of the population. In this elective the student may also study alternative patterns of health care delivery. Students and staff from a dozen or more health and allied health fields are involved in providing care. The student should have some experience in doing physical exams on well and sick children. The pediatric practice and didactic sessions will enable the student to become competent in managing common pediatric problems, well child care, immunizations, and infectious diseases."

"Med 5-5.. Health Assessment and Care at Primary Care Clinic
6 weeks Offered all periods

This elective will provide the student with education and training in determining the health status of a defined adult population, correction of health problems, and correlation of health problems with those of members of the family and socio-economic as well as environmental factors. Activities will be pursued with a complete team of health professionals."

"Obst. 5-5.. Community Obstetrics-Gynecology at Primary Care Clinic
6 weeks Offered all periods

The medical student will learn the role of providing primary ambulatory care of women as it relates to the reproduction process and gynecological conditions. The student will integrate patient care with associated health professionals such as nurses, nutritionists, social workers, and others particularly as care relates to the family involved."

"AdPy 5-5.. Community Psychiatry at Primary Care Clinic
6 weeks Offered all periods

The student will participate as a physician member of a multi-discipline team composed of health science students and mental health professionals. Students will learn to identify emotional problems, gain greater understanding of treatment modalities, establish realistic therapeutic goals, and under supervision participate in counseling, and individual and group therapy. Students will also have an opportunity to gain first hand experience with community mental health resources and in conjunction with the staff, participate in consultation to community professionals such as clergy, teachers, probation officers, physicians, public health nurses, etc."

It is projected that there will be one student in each of the four electives per every 500 patients enrolled. These students will participate for 6 week periods, which relates to a maximum of 32 medical students enrolled for these 6 week tours.

In addition, the graduate medical students enrolled in the University of Minnesota in the primary care areas of Internal Medicine, Pediatrics and Obstetrics-Gynecology will be assigned to this clinic for periods of three to six months.

To develop a complete primary care facility it is essential to include interdisciplinary health science programs that give the students the opportunity to work with each area contributing to the care of the patient. Such a group of professionals offering their services in one building is a means of encouraging the underserved patient to seek health promotion and care.

The School of Dentistry advocates that any Primary Care Center should provide comprehensive dental care to all seeking it. To provide a worthwhile learning experience for students in the clinic it must offer an opportunity of experience in a realistic total health care group practice environment with a minimum of 4 students at a time.

The School of Pharmacy perceiving the clinical pharmacist as being patient oriented rather than drug oriented, needs a community clinic for adequate student teaching. The evaluation of the indications actions and effectiveness of drugs in patients would be of primary concern. Utilizing the team approach, patients on a prolonged usage of medication would be followed, if examinations were required, the nurse practitioner would be utilized, the physician receiving this information would utilize his expertise as to the overall plan of care. In this setting, the student would learn in the disciplines of pharmacology, pharmacokinetics, and biopharmacy. And the patients working with these many providers will better understand their individual drug treatment.

The School of Nursing sees their contribution to the primary care clinic particularly in the area of health promotion and health maintenance. The people who would presumably seek care in this clinic could greatly benefit from the individual and family assessment and counseling offered by the nurse. (In a center where people felt that many of their health needs were being cared for, it is likely that the patient load would be of a number suitable for the support of an interdisciplinary, active teaching program.)

A nurse midwife program would be an available alternative to the child bearing patient and an excellent site for students needing experience in a rapidly expanding program.

Screening programs, nutritional education, home visits, use of neighborhood people to promote and work in the clinic are additional areas of interest to the School of Nursing and felt to be a vital part of a nursing education readily available for developing in such a clinic.

The School of Public Health offers the pediatric nurse practitioner and the adult nurse practitioner working as a team with the physician, pharmacist, nurse and social worker. As in the other disciplines, settings where the team approach can be used as a model in student teaching are scarce. The proposed clinic would provide this vehicle.

It is to be understood that the interdisciplinary programs are of inherent interest to the medical school but that the funding of these programs is to be independent of the medical, pediatric and ob/gyn programs developed as the core of this clinic. Only through the complete services offered in this primary care clinic can the educational component be properly developed. The hope of the medical school is that as early as possible in a student's education, the opportunity for an experience in the process of seeing the patient as a whole person rather than a specific disease and seeing the care of patient dependent on many health care professionals, not only the physician, will enrich their medical training.

It is evident that these extensive efforts and resources do not provide the potential for the ideal community-clinical arrangement combining physician training, multi-disciplinary practice and consumer participation. Admirable and successful as they are, the critical factor of unique design and location proximate to the community served cannot be established at the Health Sciences Center per se. It is critical to realize that the project housed by the facility being applied for, represents a planned for and necessary extension of ongoing training opportunities. In no sense, however, is it a replication of any program currently in operation, although aspects of the student training necessary to bring the program into fruition have been in effect for some time. Further, the Mission Statement of the Board of Regents pertaining to University Hospitals and the Health Sciences Center mandates the demonstration of models of health care delivery for use in the region and the country as a whole. The appropriate location of this project is in the type of facility for which this grant program is designed.

ORGANIZATIONAL STRUCTURE

1. Health Sciences

The University is governed by a board of twelve regents elected for six year terms by the State Legislature. By tradition, eight of the regents are elected from congressional districts and four are elected on an at large capacity. The Regents of the University of Minnesota are by constitutional definition (reaffirmed by court decision) an autonomous body. Responsibility for academic matters has been directed by the Board of Regents to the respective collegiate faculties with all University matters in this area managed through a representative elected Senate of faculty and students.

The President of the University is a member of the Board of Regents. Under his authority are six vice presidents with responsibilities as follows: Vice President for Academic Administration, Administrative Operations, Finance, Health Sciences, Institutional Planning and Relations, Student Affairs.

The Vice President for Health Sciences has responsibility for developing goals and operational plans in conformity with the missions of the Health Sciences and for developing inter-unit collaboration in fulfilling the missions of the Health Sciences.

The Medical School, the School of Dentistry, the College of Pharmacy, the School of Public Health, the School of Nursing, and University Hospitals comprise the Health Sciences of the University of Minnesota. Each unit is represented by a dean or director reporting directly to the Vice President for Health Sciences. Recognition of the mutually important affairs and activities of the College of Veterinary Medicine is expressed in the adjunct status of this collegiate unit in the Health Sciences. A Council of Deans and Directors from the Health Sciences units and the College of Veterinary Medicine serve the Vice President in a cabinet capacity.

The Vice President for Health Sciences has several assistants for functional areas that affect all units. Examples of this include a Coordinator of Affiliations, a Coordinator of Continuing Education, a Coordinator for Allied Health Programs, A Coordinator for Health Care Systems Research and Development, a Coordinator of Learning Resources, and a Coordinator for Health Sciences Student Advising. A Health Sciences Constitution currently in the final stages of development will not materially alter the present organizational structure of the Health Sciences or the Medical School.

2. Medical School Organization

The Medical School is headed by the Dean of the School. He is aided in his responsibility for academic administration and management by an associate dean and one assistant dean. In addition, one associate dean and two assistants aid the Dean of the School in student affairs and planning. One assistant dean aids in the area of curriculum. The Faculty Advisory Council, an elected committee of the Executive Faculty of the Medical School, advises the Dean in matters of policy for the Medical School.

MEDICAL SCHOOL COMMITTEES

Administrative Board of the Medical School

It shall be responsible for overseeing the administration of the policies of the Executive Faculty relating to educational matters and shall be advisory to the Dean with respect to budgetary and other aspects of the administration of the Medical School. In particular, the Dean will discuss with the Administrative Board all aspects of the preparation of the annual budget, including policies governing the allocation of funds for salary increases and general policies concerning the allocation and expenditure of the various resources of the Medical School not designated for specific purposes.

Faculty Advisory Council of the Medical School

In recognition of the need of the Dean for a small, responsible group of advisors who can meet with him frequently, regularly, and on short notice when necessary, there shall be a faculty Advisory Council that shall include members elected by the Executive Faculty. On policy matters the Faculty Advisory Council shall, through the Dean, make recommendations to the Administrative Board and/or the Executive Faculty, as may be appropriate. It shall take definitive action only with respect to such matters for which responsibility has been delegated to it by the Administrative Board or Executive Faculty. Such delegated responsibilities shall be defined in the Bylaws.

Committee on Committees of the Medical School

The Committee on Committees shall review the scope of the various standing Committees of the Executive Faculty. It shall, after consultation with the Dean, recommend for the consideration of the Executive Faculty at the October meeting each year a slate of candidates for election to each of the various other standing committees of the Executive Faculty. The Committee on Committees shall make a report concerning its activities to the Executive Faculty at least once each year.

MEDICAL SCHOOL COMMITTEES continued

Educational Policy Committee of the Medical School

The Committee on Educational Policy shall be responsible for continuing review and evaluation of the undergraduate and graduate educational programs of the Medical School and for making appropriate recommendations to the Executive Faculty for additions to or modifications of the educational programs of the Medical School. The Chairman of this Committee serves as a member of the Health Sciences Educational Policy Committee. A report of Educational Policy Committee activities is made to the Executive Faculty at least once each year. Recommendations reported to the Executive Faculty for action shall be subject to prior consideration by the Administrative Board as described in Section D of the Bylaws of the Medical School.

Medical School Admissions Committee

The Medical School Admissions Committee shall be responsible for the selection each year of the students who will carry out studies toward the degree Doctor of Medicine.

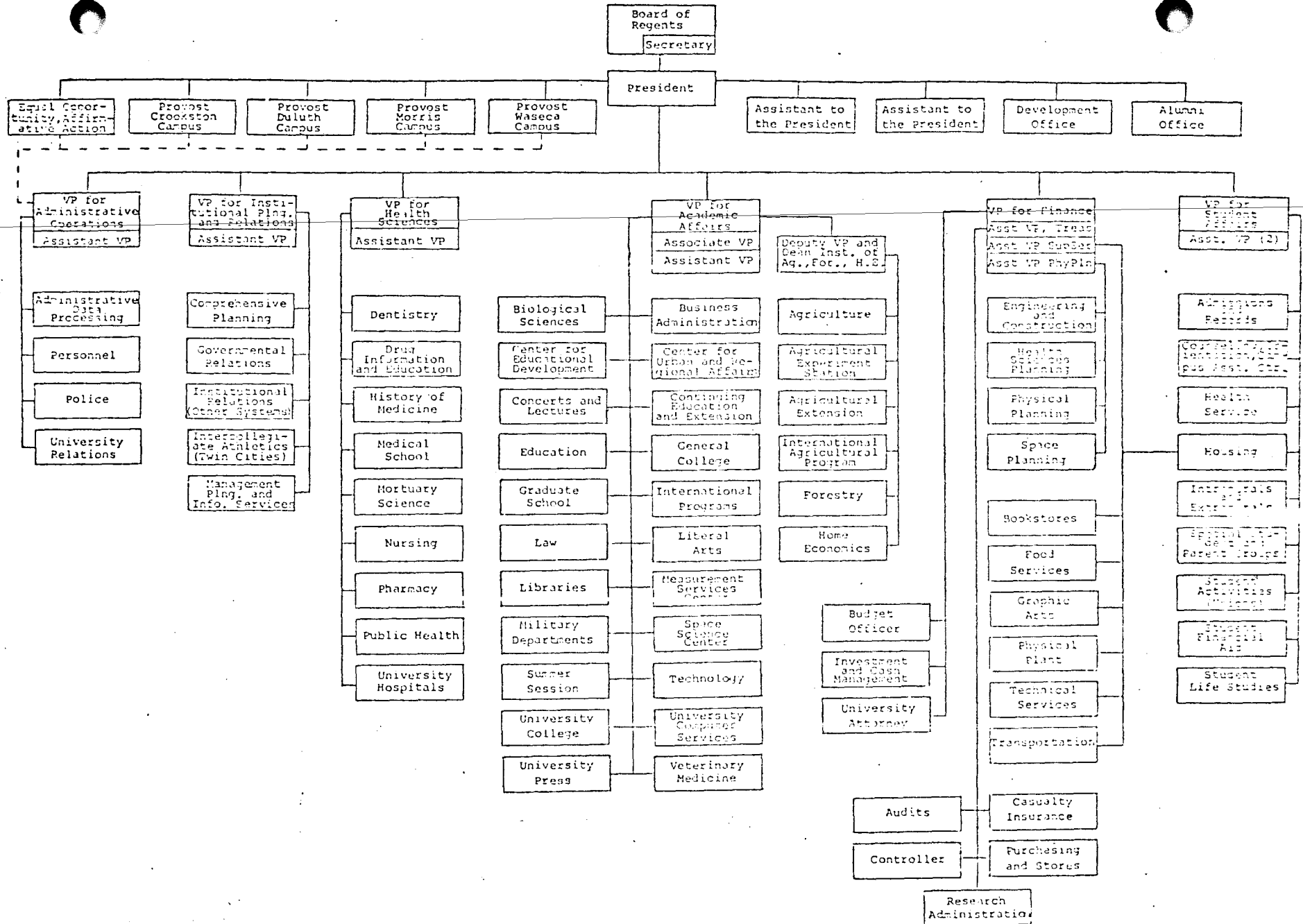
Faculty Academic Promotions Committee of the Medical School

Review of recommendations for faculty promotion made by the various Medical School departments to the Dean's Office; notification to the Dean of the Medical School of the Committee's recommendation concerning each proposed promotion; general advice to the Dean of the Medical School concerning policies and procedures for Medical School faculty academic promotions, in accord with the Academic Promotion Policy of the College of Medical Sciences adopted by the General Faculty of the College on November 7, 1968.

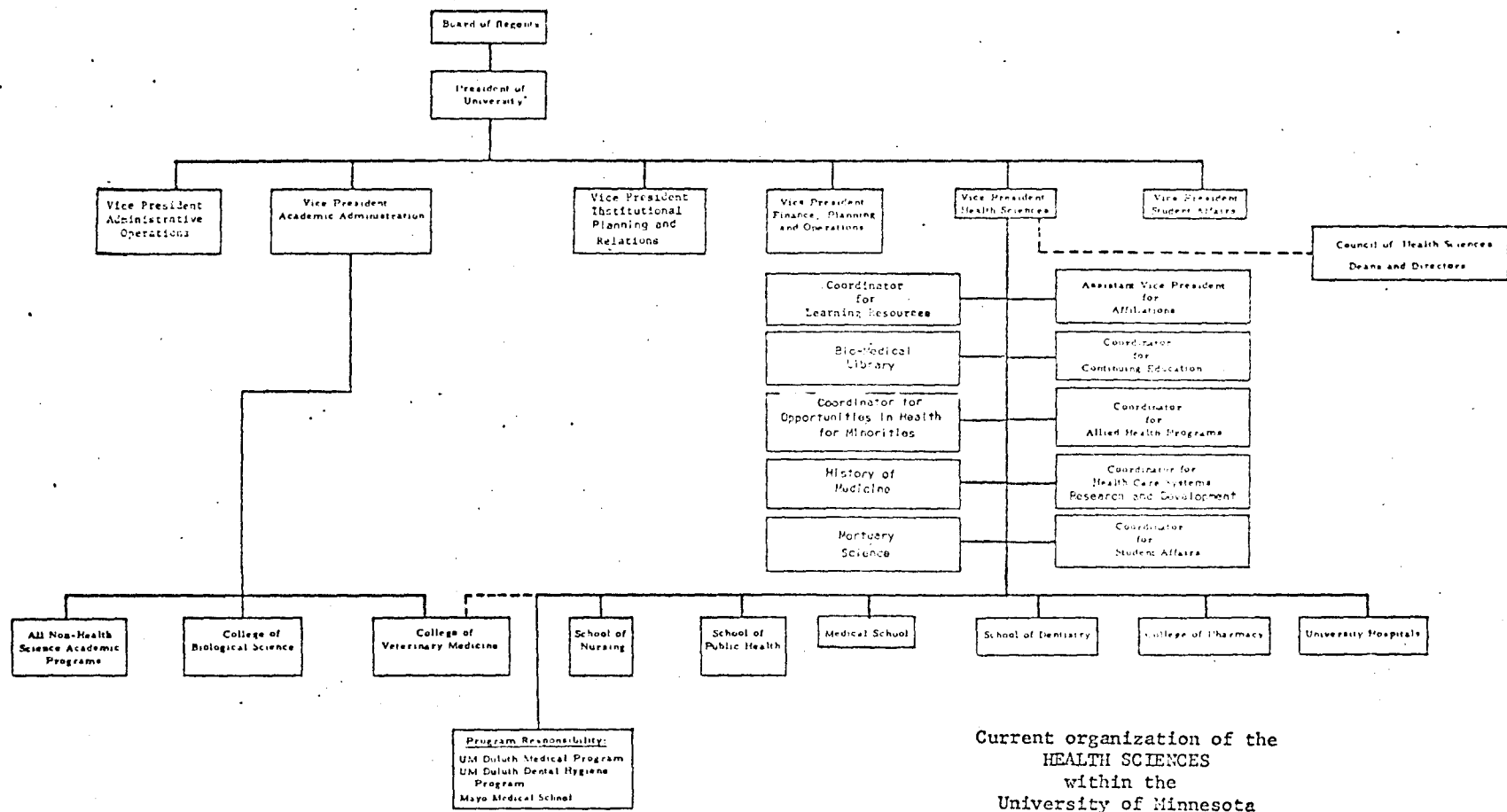
Committee on Student Scholastic Standing of the Medical School

This Committee will consider the cases of students doing unsatisfactory Medical School work at the end of each academic quarter and recommend appropriate disposition of each case. Acting for the Executive Faculty, it shall be responsible for recommending to the Dean those students eligible for advancement and those students eligible for graduation with the degree Doctor of Medicine. Policy matters not satisfactorily resolved by the usual procedures of the Committee will be referred for final determination to the Executive Faculty as a whole, which shall hold a special meeting for this purpose at the request of the Committee. In any event, the Committee on Student Scholastic Standing will report on its activities to the Executive Faculty at least once each year.

ADMINISTRATIVE ORGANIZATION OF THE UNIVERSITY OF MINNESOTA

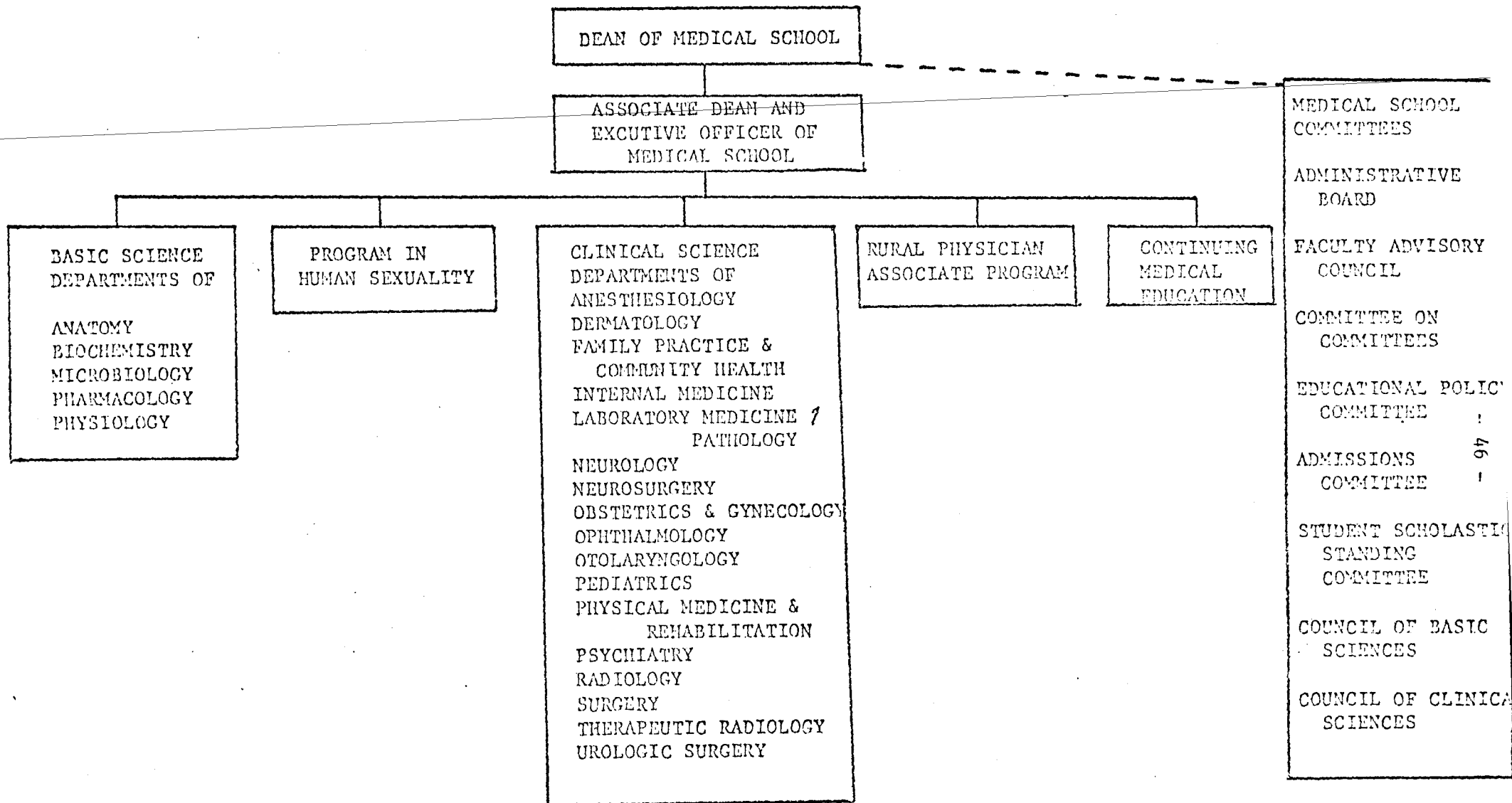


2/10/75



Current organization of the
HEALTH SCIENCES
within the
University of Minnesota

10/74



CURRENT ORGANIZATION OF THE
 MEDICAL SCHOOL
 WITHIN THE
 UNIVERSITY OF MINNESOTA
 FEBRUARY, 1975

Composition of the Faculty

Health Sciences full time equivalent faculty - 1974-75:

Medical School	- 544.0
School of Dentistry	- 160.0
School of Nursing	- 54.0
School of Public Health	- 68.0
College of Pharmacy	- 42.0

Existing faculty vacancies:

Medical School - Vacancies exist in the Department of Biochemistry and Obstetrics and Gynecology. A Search Committee has been appointed for both the Biochemistry and Ob/Cyn vacancies and it is expected that these search committees will complete their efforts within the next few months.

Faculty members of the Health Sciences units perform instructional duties in addition to and outside the unit's curricula as follows:

Medical School	- 916.0 FYE students
School of Dentistry	- 0
School of Nursing	- 0
School of Public Health	- 164.0 FYE students
College of Pharmacy	- 25.0 FYE students

In most cases, facilities used for instruction are shared classrooms, seminar space and auditoria of Unit A. The Basic Science teaching of all health sciences students by the Medical School faculty takes place in the Basic Science facilities partially provided in Unit A with the rest in the Jackson-Owre-Millard complex. Facilities to complete the Basic Science space requirements are planned in space to be renovated in the Jackson-Owre-Millard building which is the basis for this grant proposal.

The Medical School's responsibility for instruction of students other than medical students includes:

Dental students	- 196 FYE
Pharmacy students	- 84 FYE
Nursing students	- 60 FYE
Allied Health students ¹	- 259 FYE
Other Health Sciences students ²	- 105 FYE
Non-Health Sciences students ³	- 212 FYE
TOTAL	916 FYE

¹Medical Technology, Occupational Therapy, Physical Therapy, Radiologic Technology, Dental Hygiene, Radiation Therapy Technician, Respiratory Therapy Technician, Urological Assistant Technician.

²Public Health, Mortuary Science, Veterinary Medicine

³Agriculture, Forestry, Home Economics, Business, Education, Biological Sciences, Liberal Arts, University College, General College.

Projected Faculty

Projected faculty required to operate the facility for its intended purpose is presented in tabular form on page 48, by department for the Medical School.

Student-Faculty Ratios

Based upon an enumeration of all full time faculty of the Medical School, with rank of assistant professor and above, and the numbers of medical students currently enrolled, the student-faculty ratio is approximately 2 to 1. This ratio will probably remain relatively constant as both faculty size and total medical student enrollment increase commensurately in the next few years.

The ratios, however, do not take into account the much larger total student body taught by Medical School faculty and are an inadequate reflection of the extensive teaching activities of the faculty. A large number of other undergraduate health professional students, at the doctoral and baccalaureate degree level, are taught by the same faculty members. Graduate education and the larger number of graduate students, both basic health science and clinical, are not portrayed in the ratios. Neither is continuing education represented. Listing of faculty does not indicate source of funding or relative portion of faculty effort devoted strictly to teaching activities.

MEDICAL SCHOOL FACULTY AT HEALTH SCIENCES CENTER

DEPARTMENT	Total Faculty 1974-75	Total Projected Faculty 1980-81
Anatomy	21*	28*
Biochemistry	10*	16*
Microbiology	19*	22*
Pathology Faculty, in the Department of Laboratory Medicine & Pathology	12*	15*
Pharmacology	20*	23*
Physiology	21*	24*
Total, Basic Health Sciences	103	128
Anesthesiology	14	16
Dermatology	5	7
Family Practice & Community Health	34	36
Internal Medicine	45	52
Laboratory Medicine Faculty, in the Department of Laboratory Medicine & Pathology	40**	47**
Neurology	25	30
Neurosurgery	9	11
Obstetrics-Gynecology	21	30
Orthopedic Surgery	7	9
Ophthalmology	8	11
Otolaryngology	14	20
Pediatrics	45	53
Physical Medicine & Rehabilitation	36**	54**
Psychiatry	47	48
Radiology	29**	31
Surgery	35	38
Therapeutic Radiology	9	14**
Urology	11	7
Total, Clinical Sciences	434	514
TOTAL, ALL DEPARTMENTS	537	642

Projections are for faculty of rank, assistant professor or higher. In some instances, wherever appropriate, instructors and research fellows are included. Projections are based upon the assumed availability of all facilities in the Health Sciences Development Program, and the full complement of increased enrollment to be realized by 1981.

* Although administratively within the Medical School, faculty in the Basic Health Science departments are responsible for the instruction of students including Dental, Pharmacy, Nursing, Allied Health, Mortuary Science, Veterinary Medicine and other students. Instruction is also provided by the Basic Health Sciences faculty for graduate students and non health science students.

Intramural Practice Program

Until several years ago the clinical faculty of the Medical School engaged in a geographic full-time system of medical practice. Under this system the individual faculty member received a basic salary from the University which he augmented by funds from private practice. Three years ago a strict full-time system was developed and was made available on a voluntary basis.

Under the strict full-time system, an individual receives a total University salary which is thought of as consisting of two components. "Basic salary" is a salary comparable to that received by other people of comparable rank and stature in various other parts of the University, for example, the Basic Science departments, the Department of Psychology, and the Arts College, etc. This segment is subject to the same kind of considerations and negotiated in the same manner as are all University salaries. The second segment is known as a "commutation allowance", which the individual receives in lieu of private fees directly received. This segment is also negotiated each year, but the basis of negotiation is different from that applied to the "basic salary". The commutation allowance is influenced by the particular specialty of the individual and by the nature and extent of his clinical activities within the department. The basic salary and commutation allowance together constitute the individual's University salary for the year in question. The department on the strict full-time basis thus has a substantially higher University salary scale than the department on the geographic type basis.

Commutation allowances are derived from a number of sources, but a good measure comes from the departmental fee pool, into which fees resulting from the professional services of faculty members are placed. Instructional funds provided by the state are not ordinarily used for commutation allowances. Currently the Department of Pediatrics, the Department of Physical Medicine and Rehabilitation, the Department of Family Practice and Community Health, the Department of Obstetrics and Gynecology, the Department of Medicine, and a group within the Department of Surgery serve on a strict full-time basis. Certain administrative officers serve on a strict full-time basis as individuals.

Faculty on a geographic full-time basis also receive a basic University support salary. As a general rule, income augmentation does not exceed this basic salary, in accordance with a University Regents Policy decision of 1963, modified in 1966.

There are no intramural practice areas, as such, in the University Hospital. All patients are admitted to the outpatient and inpatient services for teaching purposes regardless of whether their faculty physicians serve on a geographic full-time or strict full-time basis.

Student-Faculty Ratios

Based upon an enumeration of all full time faculty of the Medical School, with rank of assistant professor and above, and the numbers of medical students currently enrolled, the student-faculty ratio is approximately 2 to 1. This ratio will probably remain relatively constant as both faculty size and total medical student enrollment increase commensurately in the next few years.

The ratios, however, do not take into account the much larger total student body taught by Medical School faculty and are an inadequate reflection of the extensive teaching activities of the faculty. A large number of other undergraduate health professional students, at the doctoral and baccalaureate degree level, are taught by the same faculty members. Graduate education and the larger number of graduate students, both basic health science and clinical, are not portrayed in the ratios. Neither is continuing education represented. Listing of faculty does not indicate source of funding or relative portion of faculty effort devoted strictly to teaching activities.

THE MEDICAL SCHOOL CURRICULUM

At the end of 1968 the Executive Faculty of the Medical School approved a new curriculum, implemented September, 1969. This approval followed several years of intensive planning by faculty and students under the auspices of the Educational Policy Committee of the Executive faculty.

Goals formulated by the Educational Policy Committee to be satisfied in the new curriculum include:

Flexibility

To achieve this goal, a three-fold approach has been incorporated: 1) a curriculum consisting of a core of basic medical and clinical science knowledge constituting a part of the medical education of all physicians, followed by continued study and training along "tracks" planned by the student and his advisor from elective offerings related to the student's individual interest; 2) elective courses taken concurrently with the later quarters of the core curriculum; 3) selected students are given the option of completing medical school in three calendar years.

Student Participation

To achieve this goal, provision has been made for the student to be involved early in his student career by selecting certain experiences, such as those relating to the early introduction to the patient, on an optional basis. Later, in Phase B he must not only select a certain minimum number of elective offerings but must to a great extent plan and structure his day to maximize opportunities for studying and learning. In Phase D, the student must select and develop a program in one of six alternative tracks.

In order to augment the development of this goal, the student is provided with alternative ways of obtaining and using course integrated learning resources. The newer methods of instruction require that the student be given the ability to utilize resource materials that are specifically designed for self-instruction and incorporated delivery devices reflecting advances in technology. This will function to stimulate student decision-making concerning his learning experience. It will also free the instructor from the role of teacher-presenter and enable him to be a teacher-manager. More of the instructor's time can then be spent in monitoring student learning problems and in counseling the student so the student can make responsible decisions about his learning program. Much of the print and non-print materials will be used in a Learning Center environment.

Relevance

Relevance of the medical education to the ultimate goal of patient care is dramatized in the experiences of instruction to the patient where clinical problems in a variety of settings are shown to students from the very start of their medical education. Relevance and importance of the basic medical sciences to clinical medicine are built into the basic clinical correlations used as examples in Phase A, in interdisciplinary teaching sections in Phase B, and in basic science electives in Phase D.

Improved Communication Among Faculty and Between Faculty and Student

The most powerful mechanism for bringing the faculty together and improving communication between individuals with similar interest in several departments is the teaching section method of curriculum planning and presentation in Phase B. The advisor system helps to bridge the gap between student and faculty.

Preparation for the Future of Medical Practice

Medical education must provide the future practitioner of medicine with the basic tools of biomedical information upon which the practitioner can add new knowledge as well as the mechanisms by which the practitioner may apply this information in several possible settings in the practice of medicine. The curriculum has been established to place this information in a patient-care oriented setting and to enhance and encourage the students' awareness of preventive measures in medicine and of the integral relationships of psycho-social-economic factors and disease states. Thus students will be well suited to function within practice settings including solo practice, multi-specialty group practice, pre-paid health maintenance organizations, community oriented public health medicine, and hospital-oriented specialty practice. Most importantly, these methods will encourage the students' orientation to a life-long career of self-education in medicine.

Humanism in Medical Practice

To this end the student is exposed early to man and will develop an understanding of his inner psychological workings and his relationship to society. This involves early exposure to the behavioral sciences and early exposure to patients in a setting which places emphasis on an understanding of their human problems.

Features of the curriculum designed to attain these objectives include:

1. Small groups of student learners; tutorial teaching.
2. Numerous optional and elective courses.
3. A Learning Resource Center designed to encourage and facilitate self-instruction.

4. Extensive student involvement in curricular planning and in feedback and evaluation.
5. Six alternative pathways (tracks) of special emphasis in the elective final phase (D).
6. An optional three-year shortened curriculum.
7. An optional nine or twelve-month Physicians Associate Program.
8. An integrated, systemic approach to "core" curriculum in the second phase (B).
9. Combined and correlative clinical-basic science instruction.
10. Infusion of behavioral science knowledge and skills.
11. Opportunities for clinical experience with practicing physicians.
12. Opportunities for interdisciplinary activities.

GENERAL DESCRIPTION OF THE CURRICULUM

The curriculum for the Doctor of Medicine degree is organized into a core program for all students composed of a Phase A of 4 academic quarters and a Phase B of 4 academic quarters in length. On completion of the core program, the student begins an individualized program ("pathway" or "track") which will be 3 academic quarters or 5 academic quarters in length, depending on the span of the student's entire program. The standard curriculum for the degree of Doctor of Medicine is 13 academic quarters, to be completed in less than 4 calendar years. Students will be considered, at their request, for completion of work for the M.D. degree in 11 academic quarters in less than 3 calendar years with the stipulation that the first post-graduate M.D. year will be taken at a University, or a major affiliated, teaching hospital.

Phase A

Phase A is planned for 4 academic quarters beginning in the fall. The major emphasis of the Phase A curriculum is a presentation of a core of material in 6 basic medical sciences, anatomy, biochemistry, pharmacology, physiology, microbiology, and general pathology. In addition, there is course work in behavioral sciences and introductory experiences with patients. The content of the quarters is as follows:

Fall Quarter 1973 and Winter Quarter 1974 (A-1 and A-2)

- Gross Anatomy (Anat 5-100/5-101)
- Human Histology (Anat 5-103/5-104)
- Embryology (Anat 5-106/5-107)
- Medical Biochemistry (MdBc 5-100/5-101)
- Introduction to Clinical Medicine (InMD 5-100/5-101)
- Behavioral Science (AdPy 5-107/5-108)
- Social Behavior (AdPy 5-111/5-112)
- Medical Genetics (InMD 5-111)

Spring Quarter 1974 and Summer Quarter 1974 (A-3 and A-4)

- Medical Physiology (Phs1 5-100)
- Pathology (Path 5-101)
- Neuroanatomy (Anat 5-111)

Student as Physician (InMD 5-103)
Microbiology (MicB 5-205/5-206)
Pharmacology (InMD 6-110)
Introduction to Clinical Medicine (InMD 5-102)
Physiology (Phs1 5-111)

All courses stress small group teaching and use of various audio-visual and self-learning aids in addition to lecture-laboratory format. Special emphasis is placed upon tutorial teaching in the Introduction to Clinical Medicine, Behavioral Science and Student as Physician courses. Patient contact, often in an outpatient setting, is initiated early in this phase of the curriculum.

Phase B

The 4 quarter sequence of Phase B begins in the fall. There is an emphasis on correlated, interdepartmental teaching designed to highlight fundamental principles and stress pathophysiologic concepts. The courses are organized in relation to 18 organs, systems, or topics. Additional courses, such as Student as Physician and Behavior of Man in the Phase B sequence are important courses designed to increase the student's clinical skills and knowledge, to enhance awareness of psychopathology and psychological factors related to illness, and to broaden perception of the physician role and the relationships of patients and their medical and health problems to the community.

The Phase B program is not traditionally organized and required classes are reduced to a minimum. "Core" didactic lectures related to specific organ system or topic and "Student as Physician" tutorials comprise approximately 70 percent of the student's daytime schedule. The remaining 30 percent will be "free" or unscheduled time in which the student arranges his own activities with maximum opportunities for independence and maturity in the learning process. This arrangement affords the student the opportunity to order his own activities and develop maturity and independence as he seeks to broaden his medical knowledge and skills and develop professional attitudes and interests. The student may utilize this time in optional activities or he can study in the Learning Center, participate in clinical experiences, or take elective courses available to students in Phase B. The formal Medical School activities in Phase B are thus divided into three categories:

PHASE B

FALL	WINTER	SPRING	SUMMER	
* Cardiovascular Respiratory Sex Behavior Pharmacology	* Community Pharmacology Gut Blood Skin Fluid Kidney	* Reproduction Endocrine ENT Eye	* Nervous System Bones, Joints **	12 hours per week
OPTIONAL ACTIVITIES	OPTIONAL ACTIVITIES	OPTIONAL ACTIVITIES	OPTIONAL ACTIVITIES	12-16 hours per week
STUDENT AS PHYSICIAN	STUDENT AS PHYSICIAN	STUDENT AS PHYSICIAN	STUDENT AS PHYSICIAN	12-16 hours per week

* Organ System Courses

** Summer 1974 Phase B required course Statistics and Epidemiology

Optional Activities include elective courses as well as supplementary scheduled activities such as lectures (expanding didactic material offered in Core Time), films, clinical experiences, laboratories, surgical experiences, demonstrations, clinical rounds, teaching rounds, clinical-pathological conferences.

Student as Physician tutorials:
(from 2 to 4 half-days per week)

- Medicine - 18 weeks (including 2 weeks (PM&R))
- Surgery - 6 weeks
- Pediatrics - 6 weeks
- Obstetrics - 4 weeks
- Neurology - 6 weeks
- Psychiatry - 6 weeks
- Family Medicine - One day per month

The required program in Phase B consists of the following Interdepartmental Medicine (InMD) courses:

REQUIRED PHASE B COURSES

	FALL B-1	WINTER B-2	SPRING B-3	SUMMER B-4
Student as Physician	5-202	5-203	5-204	5-205
Behavior of Man		5-212		
Basic Pharmacology	5-111			
Cardiovascular	5-220			
Respiratory	5-221			
Fluid and Electrolytes	5-222			
Kidney and Urinary Tract	5-223			
Endocrine and Metabolic			5-224	
Reproduction			5-225	
Blood		5-226		
Skin			5-227	
Ear, Nose, and Throat			5-228	
Eye			5-229	
Nervous System				5-230
Gut		5-231		
Bones, Connective Tissue, and Joints				5-232
Human Sexuality		5-233		

TYPICAL WEEKLY SCHEDULE--PHASE B
Spring Quarter, 1974

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8:15 -	Core	Core	Core	Student as Physician	Core	Examinations or Optional Activities
9:15 -		Optional Activities or Electives			Optional Activities or Electives	
10:15 -	Optional Activities or Electives					
11:15 -						
12:15 -						
1:15 -	Student as Physician	Core	Student as Physician	Student as Physician	Core	
2:15 -		Electives				
3:15 -						

All courses utilize audio-visual aids. Strong emphasis is placed upon small group teaching. Certain courses such as Student as Physician, and Behavior of Man, are tutorial courses with low student to faculty ratios. These courses stress learning in doctor-patient relationships in an inpatient, and whenever possible, in an outpatient setting. The free time allocated to the student is especially designed for self-learning experiences predominately in the Learning Center.

Phase D

The new curriculum affirms that it is no longer desirable to educate all medical students in an identical fashion. Fundamental knowledge and concepts common to the needs of all who will be physicians are identified and included in Phases A and B. Beyond these minimum requirements, opportunities in Phase D allow students from a variety of backgrounds and with a variety of talents and interests to pursue their goals along different pathways.

Required electives are different in the several tracks but, in general, each student is urged to include at least 12-18 weeks in an internship type experience in an inpatient and outpatient setting in his program. The opportunity to return to basic science subjects in each of the tracks after some exposure to clinical medicine is one of the attractive features of Phase D. The balance of the individual programs is planned by the student with his advisor from the extensive elective offerings listed by each Medical School department.

Each pathway is under the supervision of a review committee made up of the faculty involved in the pathway and including at least one member of a basic science faculty in each committee. The committees, which also have representation from the student body and from the junior faculty are appointed by the Educational Policy Committee and have the responsibility of reviewing and approving each student's program on the specific pathway.

Tracking is not specializing. But it does insist that the student, with advice, plan in relation to desirable goals in medical school in relation to the student's career goals.

Consider the alternative: modern day medical education recognizes that all physicians will take post-M.D. specialty training (e.g. the phasing out of "free standing" internships by 1975). Students must do long-range planning in medical school or they will not be prepared to make a choice of the next stage of their training. In other words, waiting to plan for the future during a rotating internship year is no longer an alternative.

Thus, students should not confuse their need to select one of the Tracks with their eventual practice. Inspection of the Track models described reveals considerable overlap and conformity about the essential elements leading to any kind of practice.

TRACKS

- TRACK 1 Medicine-Pediatrics, Medical Specialties, including Obstetrics
- TRACK 2 Surgical Specialties
- TRACK 3 Psychiatry and Behavioral Science
- TRACK 4 Neurological Sciences
- TRACK 5 Family Medicine
- TRACK 6 Medical Sciences

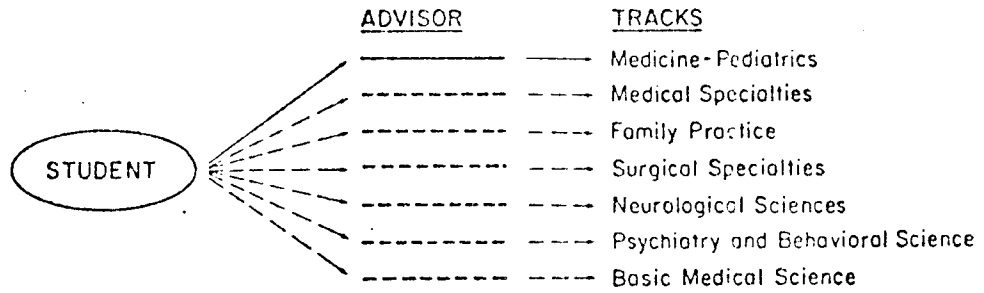
The length of Phase D is determined by review of the student's personal needs. Some will plan careers which no longer require an internship, or at least one with classical content; these students probably will prefer a 5-quarter Phase D. Others may see that their educational continuum beyond receipt of the M.D. includes activities likely to duplicate substantial parts of the standard 5-quarter Phase D and these students may opt for a 3-quarter program. Students desiring to complete Phase D in three quarters must make satisfactory progress in their course work and must provide evidence that they will spend their first postdoctoral year in a university or other major affiliated teaching hospital. There are no restrictions on type of first-year training program for students graduating in four years, in the 13-quarter curriculum.

The Phase D program emphasizes clinical training of the student and, as such, is conducted in an inpatient and outpatient setting. Small group teaching is the rule and tutorial teaching is widespread. Depending upon the elective, audio-visual and other teaching aids are used extensively. The Phase D students utilize the Learning Resources Center extensively, especially to review materials and to expand their own self-learning experiences and aptitudes.

PHASE D

	FALL	WINTER	SPRING	SUMMER
YEAR 3	D	D	D *	Free
YEAR 4	Free	D	D **	

* 3-year option
** 4-year option



Graduate Education - Medical School

Virtually all specialties of Clinical Medicine and the Basic Sciences are represented by Graduate Programs in the School of Medicine. A somewhat unique feature is the opportunity for students to register in the Graduate School of the University of Minnesota. This includes fellows in the clinical specialties who may be eligible for a degree of Master of Science or Doctor of Philosophy in the clinical specialties. Basic Science graduate students obtain the M.S. or Ph.D. degree in the specific field. Curriculum, plan of study, and thesis work are determined by the student and his advisors. In the case of the clinical specialties, curriculum and study plan are consistent with Specialty Board requirements.

The newest field of graduate work and the largest of the graduate programs is the specialty of Family Practice.

The primary objective of the Department is to train well-qualified family physicians to meet area needs and to provide continuous comprehensive, personal care to patients within the context of the individual's family and community.

The Department stresses the training of physicians who must understand patient care responsibilities within the context of their families and communities.

The Department has organized programs which include affiliations with six local community hospitals. Practicing physicians of the community hospitals, hospital staff, allied health personnel and hospital administration have joined together with the University to develop the largest Family Practice Training Program in the country. This program, combined with University Family Practice Training Programs based at Hennepin County General Hospital and St. Paul-Ramsey Hospital will provide an output of approximately 60 family physicians per year by 1975 (University Affiliated Program - 40 per year, St. Paul-Ramsey - 8 per year, Hennepin County General - 12 per year.)

Continuing Education in the Health Sciences

The rich history of continuing education in the Health Sciences dates back to the early 1930's. For almost 30 years, the programming was of a very traditional nature, using the short course and lecture technique. As educational methods have matured and each of the Health Sciences disciplines have become more clinically oriented, some changes have taken place. It has become necessary to take many programs off-campus because of inadequate facilities. This, in turn, restricts the use of advanced educational techniques. At this time, we have been unable to fully develop our goals of interdisciplinary programming and demonstration of the team approach to health care since neither the support services for the use of advanced educational techniques, nor the facilities for using these techniques are available within the Health Sciences.

The office of the the Health Sciences Coordinator for Continuing Education was formed in January of 1972. This office is charged with adapting the interdisciplinary training and health team concept to the professional-in-practice audience through continuing education programs. Given the constraints of funds, physical distances, personnel resources and the energy crisis, methods must be found to deliver educational experiences to our widely scattered clientele. At the same time, the Metropolitan area clientele must be served in the most efficient and educationally sound manner. The proposed Learning Resources Center in Unit B/C will be a focus for continuing education program development. In this Center, the content expertise of the faculty can be transferred to formats which will be replicable at many sites throughout the Health Sciences service area. These sites are already developed in many instances, through the efforts of Health Sciences Continuing Education personnel. The availability of adequate teaching space within Unit B/C will provide the site for Metropolitan area participation. In fact, it is proposed to utilize live presentations to Metropolitan health professional audiences for direct or delayed transmission to out-state audiences. Immediate feedback mechanisms will provide for access to faculty expertise and for immediate reinforcement and response to questions.

Two grants, functioning through Health Sciences Continuing Education are currently providing pilot experience for these concepts. Acting as a response organism to the 7 Community-based Health Education Consortia, the Health Sciences are working with regionalized embryonic learning centers throughout the State. With appropriate and accessible central support services, this program could well provide the "oases-for-learning" which are necessary to attract health professionals to outstate practice sites. A second grant deals with health professionals' responses to chemically dependent patients. Its experimentation with media use will prove to be a model for future continuing education development.

One additional example illustrates the potential for development which might be expected with adequate facilities and learning resources support. The Pharmacy television lecture series uses an interdisciplinary faculty and meets the needs of an interdisciplinary audience. It will be viewed by well over 1,000 health professionals in Minnesota and then by additional thousands in other states. Other Health Sciences units will be able to program in this fashion if resources and facilities such as those proposed for Unit B/C are available. Limitations of resources currently restricts the potential for this development.

Specific Continuing Education programs for the individual units include the wide range of activities in the Medical School program which attract registrants from all 50 states plus Canada and foreign countries; however, the principal aim of the program is to offer the educational resources necessary to physicians practicing in Minnesota and surrounding areas in order that they might maintain and increase their professional knowledge and skills and thus render the best attainable level of patient care. During the 1973-74 year, over 2682 physicians participated in 24 formal continuing medical education programs.

A listing of Medical School Continuing Education offerings for the 1974-75 year is contained in the brochure which is attached to the back cover of this book.

CONTEMPLATED OR PLANNED CURRICULA

The primary objectives, salient features and integrated format of the curriculum have been described elsewhere in the present application.

Based on the faculty's recognition of the need for more emphasis of training in the delivery of ambulatory health care, the new curriculum was designed to increase training of this type but physical facilities available to the medical school have precluded a proper emphasis of ambulatory care delivery both at the University and at a variety of remote sites.

A prominent intention at the time of inauguration of the curriculum was to provide effective mechanisms for constant, ongoing review and resultant modification of the curriculum in subsequent years. This "revise and reform" process continues and will continue in the future through weekly meetings of the student-faculty Educational Policy Committee, ongoing planning by the Curriculum Affairs staff, and semi-annual review by the entire Executive Faculty of the Medical School. Improvements and minor changes have been made annually through these dynamic processes and can be expected in future years. However, no major curricular revolution comparable to that of 1969 is contemplated in the immediate future.

The attached chart, Table I, provides outpatient statistics for the clinics now under construction.

In considering the projected patient population which will be served in the outpatient facilities, it is not possible to project specifically and with total accuracy what the origin patterns will be. This is due to a variety of factors including the impact of socioeconomic factors, geography, transportation, financing, etc., upon referral and utilization; a changing emphasis from inpatient to outpatient care; changes in medical technology; and the large service area of the University. What can be provided at this time, however, is the best possible information on the basis of historical trends and considered judgment of the impact of changes in health care.

In considering patient origin, a distinction is made between primary care and specialty care resources. Family practice, as the major provider of primary care, can be expected to continue to draw the majority of its patients from the immediate environs of the University and thus serve as a local community health resource. On the basis of current projections family practice will, for the 1980-81 year, have approximately 39,000 patient visits.

The remaining clinics will continue to provide services primarily to a patient population referred by other health providers.

The patient origin statistics (excluding family practice) reflect that approximately 58% of outpatients are from the seven-county metro area, 29% from the remainder of Minnesota, and 13% from outside the state or country. On the basis of these figures, past trends and the increasing emphasis on outpatient care, it is anticipated that an increase of about 134,000 patient visits in those clinics relocating to the new facility, will take place by 1981, reflecting substantially the same patient origins with a slight increase from out-state areas. Patient origin figures remaining stable, an additional 6,000 patients will be from the metropolitan area.

Table II, attached, provides outpatient data for major metropolitan hospitals with which the University maintains affiliation agreements. These figures include all clinics - both those relocating to the new facility and those remaining in their present locations.

Table III, provides occupancy information for the major affiliated hospitals. Most hospitals have experienced a significant trend toward decreasing length of patient stay, and increased use of outpatient facilities.

Table IV, provides a tabulation of teaching beds by hospital location and by service.

Table V, provides a tabulation of outpatient exam rooms which will be replaced by the new facility and related census.

ACTUAL AND PROJECTED CLINIC VISITS - Clinics to be Moved to Building B/C

SERVICE	Actual					Projected							
	69-70	70-71	71-72	72-73	73-74	74-75	75-76	76-77	77-78	78-79	79-80	80-81	81-82
Audiology	3,824	4,030	4,119	4,363	4,640	4,810	5,050	5,302	5,832	6,415	7,056	7,761	8,537
Cl. Psych	674	774	1,613	1,365	1,304	1,411	1,453	1,554	1,709	1,879	2,067	2,273	2,500
Dental Cl.	7,267	7,447	7,266	3,879	5,033	5,234	5,443	5,660	5,886	6,121	6,365	6,619	6,883
Dermatology	3,312	2,983	4,410	5,331	6,201	8,328	9,993	11,991	14,389	17,266	20,719	23,826	26,208
ENT	6,564	7,273	8,836	10,232	10,889	11,433	12,000	12,600	15,120	18,144	21,772	23,949	25,828
Eye	16,885	17,351	19,401	20,665	19,989	21,449	21,928	22,366	25,049	28,054	30,298	32,721	34,684
Fam. Practice		325	2,821	4,056	5,593	8,527	10,658	13,322	19,316	28,008	39,211	39,000	39,000
Medicine	10,408	11,157	12,397	12,071	13,777	14,465	15,188	15,947	18,339	21,089	23,197	24,820	26,557
Neurology	5,516	5,558	7,252	7,196	6,993	7,782	8,093	8,416	9,678	11,129	12,241	13,465	14,811
Neurosurgery	3,016	3,404	3,857	4,193	3,548	3,725	3,911	4,106	4,516	4,967	5,463	5,845	6,254
OB-Gyn	12,647	15,732	15,077	15,639	18,448	19,000	19,570	20,157	21,164	22,222	23,333	24,499	25,723
Orthopedics	3,685	4,129	4,467	4,452	4,686	4,722	4,863	5,009	5,610	6,283	6,784	7,326	7,912
Pediatrics	10,593	11,961	14,460	14,126	14,585	14,985	15,434	15,897	19,076	22,891	26,325	30,272	34,812
Proctology	893	975	1,183	1,254	1,456	1,516	1,668	1,835	2,201	2,641	3,169	3,644	4,190
Psychiatry	5,120	5,490	5,288	4,544	3,582	3,689	3,873	4,144	4,558	5,013	5,514	6,065	6,671
Surgery	5,046	5,291	6,290	7,307	7,419	8,680	9,461	10,312	12,168	14,358	16,224	18,333	20,716
Urology	3,854	2,900	3,133	3,461	4,465	4,688	4,922	5,168	5,529	5,916	6,330	6,773	7,179
TOTAL	99,304	106,780	121,870	124,134	132,608	144,444	153,508	163,786	190,140	222,396	256,068	277,191	298,465
% Change from previous year		7.6%	14.1%	1.9%	6.83%	8.93%	6.28%	6.7%	16.09%	16.96%	15.14%	8.24%	7.67%

TABLE I

OUTPATIENT VISITS

Service	University of Minnesota Hospitals		Hennepin County General Hospital		St. Paul-Ramsey Hospital		Veterans Administration Hospital	
	1972-73	1973-74	1973	1974	1973	1974	1972-73	1973-74
Audiology	4,363	4,460						
Clinical Psychology	1,365	1,304						
Dental Clinic	3,879	5,033	6,849	9,813	2,357	1,715		
Dermatology	5,331	6,201	3,833	4,942	4,266	5,113	2,450	3,955
Ear, Nose & Throat	10,232	10,889	7,293	9,479	5,242	5,161	3,950	3,890
Eye	20,665	19,989	10,425	11,436	8,481	8,460	4,380	6,220
Family Practice	4,056	5,593	5,924	6,995				
Medicine	13,663	15,701	18,453	23,464	22,153	13,325	22,375	24,355
Neurology	7,196	6,993	2,814	2,725	3,287	3,733	2,070	2,140
Neurosurgery	4,183	3,548	997	1,000			1,025	1,425
Obstetrics and Gynecology	15,684	18,448	10,557	9,939	13,659	15,960		
Orthopedics	4,452	4,686	5,218	5,372	8,631	8,870	3,605	4,643
Pediatrics	15,894	16,253	15,611	15,084	10,143	12,334		
Proctology	1,254	1,456	1,320	1,311	510	551	1,035	1,130
Psychiatry	4,544	3,582	28,808	28,405			13,115	20,625
Surgery	6,178	6,477	6,533	5,796	7,059	7,753	6,340	5,610
Urology	3,461	4,465	3,394	3,274	4,971	4,626	5,760	6,495
Cardiac								
Emergency Receiving	19,776	20,036	75,293	75,739	73,434	76,871		
Physical Medicine & Rehabilitation	3,042	3,394	6,307	6,301			1,315	1,315
Vascular			901	832				
Other	352	455	*4,311	4,406 (Birth Control)			9,270	13,190 (alcohol & drug treatment)
Radiation Therapy	1,152	1,604						
Tumor	1,035	942	943	993				
Oncology (Masonic)	5,477							
Trauma			4,359	4,327				
Prothrombin			731	1,511				
TOTAL	157,233	167,885	233,934	249,658	164,193	173,950	76,690	94,995
			*13,060	16,008				
			(Red Door)					

TABLE II

1973 AVERAGE INPATIENT OCCUPANCY RATE

<u>Univ. of Minnesota Hospitals</u>	<u>Hennepin County General Hospital</u>	<u>St. Paul Ramsey Hospital</u>	<u>Veterans Admin. Hospital</u>	<u>Mount Sinai Hospital</u>	<u>North- western Hospital</u>
72.6%	82.5%	62.7%	75.7%	75.1%	81.3%

1974 AVERAGE INPATIENT OCCUPANCY RATE

70.6%	78.1%	80.0%	79.7%	*72.2%	81.8%
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* For Fiscal Year October 1, 1973 - Sept. 30, 1974

TABLE III

AVAILABILITY OF RESOURCES FOR CLINICAL STUDIES

EXISTING TEACHING BEDS

<u>Service</u>	<u>Univ. of Minn. Hospitals</u>	<u>Hennepin County General Hospital</u>	<u>St. Paul- Ramsey Hospital</u>	<u>Veterans Admin. Hospital</u>	<u>Mount Sinai Hospital</u>	<u>Northwestern Hospital</u>
Anesthesiology	4					
Clinical Research	11					
Dentistry	3					
Dermatology	8	5				
Family Practice	12					
Gynecology	43	12				
Medicine	130	138	128	269 ¹	50 ¹	150
Neurology	38	24		84		
Neurosurgery	31	4				
Obstetrics	20	31	18			
Ophthalmology	24	4				
Orthopedics	28	40				
Otolaryngology	16	6				
Pediatrics (general)	126	55 ³	44 ³			
Pediatrics (newborn)	31					
Physical Medicine (adult)	20		14*	38*		
Physical Medicine (peds)	20					
Psychiatry (adult)	49	20*	85	107*		
Psychiatry (peds)	18					
Radiation Therapy	5					
Surgery	129	59	170 ²	374 ²	45 ²	
Urology	23	10				
Nursery		24				
Other			8(TB)			
TOTAL	<u>789</u>	<u>432</u>	<u>467</u>	<u>872</u>	<u>95</u>	<u>150</u>

1-Includes Medical Specialties

2-Includes Surgical Specialties

3-Includes Newborn

* Indicates combined total adult and child

TABLE IV

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OUTPATIENT EXAM ROOMS SCHEDULED TO RELOCATE TO UNIT B/C*

	<u>Present Exam Rooms 1972-73</u>	<u>Present Patients 1972-73</u>	<u>Rooms to be Completed Immediately 1977-78</u>	<u>Projected Patient Visits 1977-78</u>	<u>Proposed Capacity</u>	<u>Optimal Utilization</u>
I. General Clinic Modules	77	80,929	89	117,280	161	201,250
II. Specialty Modules (Eye, ENT, Audiology)	18	39,139	37	53,123	37	58,750
III. Family Practice	7	4,056	30	19,316	30	37,500
TOTALS	<u>102</u>	<u>124,124</u>	<u>156</u>	<u>189,719</u>	<u>228</u>	<u>297,500</u>

TABLE V

* Approximately another 32 rooms are scheduled to remain in their present location due to functional relationships with inpatient facilities or equipment.

NATIONAL HEALTH OBJECTIVES

The Health Sciences units of the University of Minnesota have specifically responded to the national and state objectives of increased health manpower by increasing the numbers of enrollees in each of the disciplines as well as in allied health fields. The total enrollment of Health Sciences students for the 1973-74 year, represents an increase over the 1969 enrollment of 2056.

SPECIAL PROGRAMS

Training Courses in Current Shortage Disciplines

The dramatic increase in medical student enrollment pursuant to the Physicians Augmentation Program coincided with the process of curriculum change at the University of Minnesota Health Sciences Center. The additional students stimulated implementation of planned programs and innovative use of resources in short supply. Among the programs planned for is the community based, comprehensive family care clinic specifically designed to facilitate the training of medical students in the aspects of primary care delivery. To this point in time, basic educational goals of the innovative curriculum have been supplemented by experiences in several community contexts established in non-educationally oriented private hospitals and agencies. While the experiences have served the needs of the curriculum in part, their limitations (which were always recognized) have prohibited the development of the integrated patient-student contexts which we have known to be required for optimum teaching and service. The commitment of the Medical School, Departments of Internal Medicine, Pediatrics, and Obstetrics and Gynecology to the model, has made the development of the appropriate facilities to house the program imperative. This potential coordination of primary care deliverers at several varieties and levels of sophistication provides a truly unique opportunity to construct the comprehensive environment necessary for the training of medical students in family centered, high quality comprehensive primary care with the other members of the health care team (clinical pharmacists, nurse practitioners, health educators, health facilities administrators, specialists in environmental health, etc.).

Physicians Augmentation Program

In September 1970, the University of Minnesota Medical School commenced a major program of enrollment expansion in conjunction with the national emphasis during that year on the Physicians Augmentation Program through the Special Projects Grant program of the National Institutes of Health. Documentation of the Medical School's very substantial increments in numbers of entering medical students, graduates, and total medical student enrollment is provided in detail in the tabular data recorded earlier in this application.

The considerable magnitude of this large enrollment increase, requiring the rapid marshalling of significant additional resources in personnel, facilities and funding, is emphasized by several statistics and comparisons. As of September, 1969, the base figure for entering medical class size at the University of Minnesota was 163. The increment of 65 additional entering places in the fall, 1970 freshman medical class represents an impressive 40% augmentation in a single year on the input side of an already relatively large institution devoted to high quality physician education. By absorbing this increment, this medical school accounted for 7% of the total increase in entering medical students in all United States medical schools for the year 1970 (there were 938 new places in the nation's 1970 entering medical class). That increment of 65 students in the University of Minnesota Medical School's entering class represented the largest class increase by any one medical school in 1970, as well as the largest increment funded through the Physicians Augmentation Program for that year, and exceeded the total increment that year for all other state-supported medical schools in Big Ten institutions. Clearly, this augmentation program initiated at Minnesota in 1970 represents a major contribution by one institution in "significantly increasing the supply of adequately trained personnel in the health professions needed to meet the health needs of the Nation."

There were two strongly motivating considerations which propelled the University of Minnesota forward in this Medical School enrollment project. These were:

1. The realization that a disturbingly large number of qualified Minnesota resident students aspiring to careers in medicine were being declined admission due to limitations in the number of available places in the entering class. These qualified young persons were thus being unfairly denied fulfillment of their legitimate professional career objectives at a time when the state and nation were calling insistently for more physicians.
2. A well-documented shortage of physicians, both in the nation and the Upper Midwest region, demanded acceleration of efforts of enrollment expansion on the part of medical schools able to respond to the pressing needs for more physician manpower.

This substantial expansion of Medical School enrollment and contribution to the supply of trained physicians, as a portion of a larger Health Sciences expansion program at the University of Minnesota, will continue during the decade of the 1970s. The specific enrollment projections for medical students through 1975-76 are tabulated elsewhere in this applications.

Program in Family Practice and Community Health

In 1967, the University of Minnesota Medical School established a training program in Family Practice and Community Health as a Division in the Department of Medicine. In November of 1968, the Program in Family Practice and Community Health was elevated to full departmental status within the Medical School. The Department now includes 23 full-time faculty members housed within the University of Minnesota Health Sciences Center and operates a primary, comprehensive health care clinic, called the Family Practice Clinic, in the outpatient section of the University of Minnesota Hospitals.

The Department of Family Practice and Community Health is heavily involved in several instructional programs, both undergraduate and graduate (residency) training. The faculty participates in all three phases of teaching in the M.D. curriculum, beginning with the course of Introduction to the Patient and Clinical Medicine in the first weeks of Phase A. Several Family Practice instructors provide tutorial instruction in the "Student As Physician" segment of Phase B during the second year. One of the six pathways or tracks available for selection and emphasis in the completely elective program of Phase D (third year, fourth year) is entitled "Family Medicine" and is under the direction of faculty advisors in the Department of Family Practice and Community Health. Approximately 40 students of 469 in the 1973-74 Phase D class have selected the Family Medicine pathway as the major special focus for constructing their elective sequences in Phase D, either 3 or 5 quarters in length. Of the 1973-74 graduating class, 85 of 263 students selected Family Practice residencies.

At present, the Department of Family Practice has the largest graduate training program in the United States.

Clinical Pharmacy Program

The College of Pharmacy is committed to the clinical concepts of pharmacy. This concept is constructed around the intimate relationship of the pharmacist to the treatment of the patient by the physician and others who carry out the prescriptive responsibilities for patient care. It is expected that the clinical pharmacy role will be carried out in several contexts, among them the community based comprehensive primary care clinic. The development and utilization of such practitioners is undoubtedly best achieved in an environment which is structured around the concept of coordinated, interdisciplinary training of primary care givers. While the College of Pharmacy curriculum is structured to provide several levels of training and expertise to fulfill a variety of critical manpower shortages, all students will be required to have some exposure to the type of pharmacy practice described here.

The courses offered can be separated into three distinct groups. The first group encompasses those courses which are required of all pharmacy

students. This includes social and administrative orientation covering the general concepts in dealing with people and the application of these concepts (along with basic pharmaceutical knowledge) to a clinical situation. The second group includes courses which are elective in nature and are meant to provide depth to the basic clinical knowledge and experiences. The third group provides the basis for the Doctor of Pharmacy degree.

The College does not, of course, believe that for all students this requires 6 years of formalized education (Pharm. D. degree). A majority of the needs for our Health care delivery system can be met through the B.S. graduate who has had appropriate training in clinical areas (in addition to the basic pharmacy curriculum). The six-year Doctor of Pharmacy graduate is a clinical specialist with more refined expertise. This drug information specialist will provide manpower for a variety of shortage areas. Included here are clinical teaching roles, drug therapy advisors for specialized medical areas, i.e., infectious disease, and applied clinical pharmacology. The College's commitment to this training can be seen by the present number of F.T.E. clinical faculty (16.5 out of a total of 41.8) and the projected number of F.T.E. clinical faculty for 1977-78 (31.5 out of a total of 79.0).

Public Health Programs

The implementation of medical education programs which purport to train medical students in the effective delivery of primary care, implicates many resources and types of health workers. To demonstrate the variables necessary for maximum effectiveness of medical treatment, the services of health educators is necessary to support the clinical instruction of patients by the physician, the nurse practitioner and the clinical pharmacist. Community medicine involves the home and related neighborhood environments which form the contexts in which the patient-family experiences health and illness, learns to control the agents of disease and applies the measures learned for the maintenance of health. Environmental health specialists are an invaluable source of expertise for the patient and the primary care giver. The administration of facilities which form the nexus of these coordinated programs, requires particular skill and familiarity with the numerous problems associated with a multi-functional organization. Particularly important is the management of the articulation among the organizational, physical and service demands, of a program which stimulates the participation of patients in the assumption of responsibility for efficient utilization of the facility and its services.

The School of Public Health contains formalized training programs in Health Care Administration, Health Education, Environmental Sanitation and Nurse Practitioner Training among its 13 divisions. All of the programs utilize interdisciplinary formats which include medical and dental students at several levels. The utility of, and need for a

facility, located in the community, to house the program designed to integrate the learning of the physician and the support personnel described, is enormous.

Graduate Programs in Nursing

Pediatric nurse practitioners, adult nurse practitioners, generalist nurse practitioners and nurse clinicians are among the graduate level personnel being prepared for service delivery at the School of Nursing and the School of Public Health Nursing at the University of Minnesota Health Sciences Center. Each has a role in the delivery of comprehensive primary care, although several shortage areas for nursing personnel stimulated increased enrollment and program innovation in these separate schools. The School of Nursing has expanded its enrollment from 23 in 1969, to 76 in 1974. Thirty-four students are pursuing medical-surgical emphasis, 24 psychiatric, and 18 child bearing-child rearing curriculum orientations. The School of Public Health recently enrolled 10 students in the Adult Nurse Practitioner sequence. Two years ago, the school received a grant to train fifteen Pediatric Nurse Practitioners in a program which is currently ongoing. In addition, undergraduate level training in community orientated nurse practice is taught in both schools. The same limitations on the appropriate context for the demonstration of interdisciplinary practice exists for nursing and other personnel as does for medical undergraduate and graduate students. The importance of the clinical facility which this grant will facilitate is clear. Such a facility would be unique among the resources at the disposition of this center.

School of Dentistry Programs

One of the aspects of primary care that has received increased attention is that of dental health and its relationship to medical care. The School of Dentistry advocates the concept of comprehensive family oriented primary care and has implemented curricular changes to enable dental students of several levels of training to contribute to the efforts of the health care team. Diagnostic, treatment, restorative and above all, preventative dental services in conjunction with the broad nature of comprehensive care are the goals of the training in primary care delivery. The opportunity for dental students and other personnel to experience a realistic program integrated into a total health care program is the expressed value of the project for the School of Dentistry and is affirmed by the other units cooperating in the design of the coordinated effort.

INTERINSTITUTIONAL PARTICIPATION IN TRAINING PROGRAMS

Regional and State

The region serviced by the University of Minnesota Health Science Center includes the state of Minnesota and educational efforts from the neighboring states of North and South Dakota. Other relationships in health services education extend as far West as the state of Montana. The commitment of the University of Minnesota Medical School to the education of 35 third-year medical students from the University of North Dakota beginning in 1975 is a recent example of a long history of regional cooperation in health education training programs. Third and fourth year medical students from the University of South Dakota are regularly accepted at the University of Minnesota as well. These efforts are the result of inter-state cooperation among the states maintained and nurtured by the Midwest Board for medical and Allied Health Education. This board is composed of legislators and representatives of the various Health Sciences schools from the three states.

In addition, the Medical School faculty of the University provides liaison and consultation with the faculty of the University of Minnesota Medical School program at Duluth. This two year program annually provides 24 third year students to the enrollment on the Minneapolis campus for their third and fourth years of training. The Duluth Medical School Program serves a tri-regional area of Minnesota, Northern Wisconsin and the penninsular area of the state of Michigan.

With the state of Minnesota proper, the University of Minnesota provides degrees to the graduates of the Mayo School of Medicine in Rochester, Minnesota. Relationships between the University Medical School and this complete four year institution have continued to increase since its inception in 1972, particularly in the area of curriculum coordination.

The Area Health Education Center, sponsored by the University of Minnesota, provides training programs and educational resources for health manpower training for the entire Comprehensive Health Planning Area D of the state (encompassing 14 counties). The project related to this grant will augment opportunities for development of replicable primary care delivery models directly useable in expanded programs through the A.H.E.C. for the entire state and region.

Interdisciplinary Training

A key objective of the establishment of the Health Sciences Center at the University of Minnesota has been the encouragement of interdisciplinary educational effort among the various collegiate units of the Health Sciences. Consumer-oriented health professionals will require a working knowledge of health care teams and an awareness of group processes involved in team problem-solving behavior. In order to foster the health team concept as a basis for mature and responsible participation in the health care process, it is necessary that appropriate educational experiences be provided in the crucial early phases of professional development when cooperative attitudes, inter-professional respect, and common objectives are most readily established. The Health Sciences faculty has been among the most innovative in the nation for developing integrated curricula. Interdisciplinary courses encourage flexibility in resource utilization, increase the permeability of disciplinary boundaries and foster the mutual respect among disciplines which is essential to effective teamwork.

A Health Sciences Educational Policy Committee, consisting of faculty and student representatives from each of the Health Sciences Schools has been examining alternative models for augmenting and expanding interdisciplinary education. The committee is designed to foster specific curriculum initiatives among faculty and students as a basis for translating the Health Sciences concept into curriculum formats which interrelate the activities of the various units of the Health Sciences complex. Relevant activities extend from orientation of pre-Health Sciences students to team-training of health professionals at all levels of competency. A sequence of new interdisciplinary courses is now operational. These have stimulated excitement in both students and faculty. Evaluations have been consistently positive. The following summaries give a flavor of their breadth and content.

Introduction to Health Care Delivery (PubH 3-790)

This course is offered to all undergraduate students who are interested in exploring career avenues in the Health Sciences. It is presented as a seminar with about fifteen students per section. Students select a topic with relevance to health care delivery. After conducting a literature search, a summary statement and implications are presented to the class by the student. Students are also required to complete three field experiences in some agency involved in health care delivery either in the Twin Cities area or in the out-state area. The objectives of this

course include the development of the team concept and preparation for effective participation in the interdisciplinary sequence after entry into a Health Sciences education program. Up to 100 students can be currently accommodated.

Interdisciplinary Team Training and the Health Care Delivery Process (HSU 5-001)

This course is directed at Health Sciences students who have entered professional programs and seek substantive interdisciplinary experiences. By subdividing the student body into interdisciplinary collaborating teams, the students learn each discipline's functions and roles. This approach deliberately produces an educational climate which is designed to bring the team concept to life in a relevant and practical sense. Since the student team is responsible for functioning as a unit and for presenting as a team, the emphasis in this learning experience is on team process as it relates to content of the topics under consideration. Some of the latter include drug and alcohol abuse, disability and rehabilitation, health maintenance strategies, involvement of the consumer in the health care delivery process, mental health and illness, population control, environmental health, and death and dying. The objective of this course is that of encouraging personal and professional commitment to the health team approach as a result of experiential and behavioral participation in group process. Class size has been limited to 150, despite great student interest, insofar as availability of team space units is extremely limited.

Allied Health Roles in Health Care Delivery (HSU 5-200)

This course complements the experiential interdisciplinary approach above by providing an account of the roles of allied health professionals at all levels of care. The objective of this course is to generate consumer-oriented models of how problems are solved by health teams in specific, circumscribed clinical contexts. The course was designed to place the contributions of allied health professionals into a total health delivery perspective.

Statement of the problem is followed by an interdisciplinary presentation including the etiological determinants, pathophysiological manifestations, psychopathological complications and longitudinal

monitoring of a delineated health delivery challenge. An interdisciplinary faculty panel then discusses implications and strategies for diagnosis, treatment, rehabilitation, maintenance, and prevention. Emphasis throughout is placed upon the problem of how the consumer-patient can be assimilated and utilized as a member of the team in health maintenance and care delivery.

The clinical problems examined include the child dying of leukemia, the stroke patient, the brain damaged child, the cardiac patient, and the patient whose life style or sociocultural milieu complicates effective utilization of health services. Progressive increases in enrollment could reach 500 within the next two years, but a shortage of space limits foreseeable enrollment to 150 per quarter.

Patient Rights and Professional Responsibilities (HSU 5-002)

This course was designed with the assumption that the patient would be better served by allied health professionals with appropriate knowledge of themselves and the patient, within the psychosocial and sociocultural framework of a rapidly changing health care system. Self knowledge should contribute to the establishment of a humanistic value system, realistic role identifications and development of professional ethics. The course emphasizes:

1. Normal behavior as viewed by various subcultures and ethnic groups.
2. The role of prejudicial attitudes and beliefs in patient-professional interaction.
3. Descriptive psychopathology-manifestations of major forms of deviant behavior, including film demonstration.
4. Coping with atypical, new or unexpected behavior.
5. Personal and professional value systems.
6. Ethical guidelines for professional conduct.

The course is expected to serve large numbers of Health Sciences students after the pilot presentation and initial evaluation have been completed.

Interdisciplinary Health Seminar (Nurs 8-062)

An interdisciplinary faculty group provides a collective statement of the current state of knowledge at the beginning of each seminar period for the topic under discussion. The student group then forms interdisciplinary discussion groups which meet with selected faculty members. This seminar is directed at graduate students and practicing professionals to encourage the assimilation of the health team concept among a wide range of disciplines. The seminar provides a natural extension of the integrated course sequence to graduate and inservice educational programs.

Drugs and Society (HSU 5-295)

This interdisciplinary course of study presents concepts and provides experiences applicable to the solution of drug problems encountered in the practice of health-related professionals. Students are encouraged to apply these concepts in a variety of community practice settings as well as in small, interdisciplinary discussion and task-oriented groups. Approximately 600 students from medicine, nursing, pharmacy, occupational therapy, physical therapy, hospital administration psychology, counseling, education, law, mortuary sciences, institute of technology, audiology and speech pathology and communications have enrolled in the course. Future enrollments are limited by current spatial constraints, but student interest has been exceedingly high.

The Basic Health Sciences (i.e., Pharmacology, Physiology, Pathology, Microbiology and Anatomy) are taught by the Medical School and are common components of each unit's curriculum. Another common link between health science disciplines is the University Hospitals which serve as the clinical laboratory for all health science students. Finally, CHIP--the Council for Health Interdisciplinary Participation--is a health science student organization dedicated to the health team concept.

Existing space is insufficient for implementation of an expanding team-education program. Furthermore, more effective interdisciplinary learning environments will need to be provided in the future. Necessary consumer educational technologies and team-delivery strategies will also require new spatial designs. This project will be critical to partially satisfying these needs by facilitating a medical education based model of interdisciplinary cooperative service delivery.

Among educational institutions in the upper Midwest, the Health Sciences of the University of Minnesota has the most comprehensive capability for developing and evaluating team-education curricula and team-delivery models. It is anticipated that the most productive changes in the health care delivery systems will result from the cooperative consumer-oriented behavior of health professionals who have a working knowledge of health care teams and an awareness of themselves and of the group processes involved in team problem-solving behavior.

The School of Dentistry is one of the largest producers of dental auxiliary personnel in the nation. Enrollment in these programs has undergone remarkable upward change with 300 undergraduate Associate Degree and 75 Baccalaureate Degree students currently enrolled. The undergraduate programs will be expanded to 150 each in dental hygiene and dental assisting to match the 150 enrollment in dentistry. These corresponding numbers will allow systematic team-training of student triads representing the various levels of the dental health delivery team. The advanced baccalaureate program provides instructional personnel for other dental auxiliary programs in the state and region. The programs are a key component of our efforts to provide effective preventive dental health care for the state and region since no other program of this size or capability exists in the upper Midwest.

At least 500 allied health students from academic programs which are administered elsewhere on the campus or in the community rotate through Health Sciences units for the supervised clinical training. These students require considerable Health Sciences space and faculty support. Such feeder programs include the health-related curricula of almost every professional program on the campus including the General College (human services generalist, community health worker, urological assistant, biomedical electronics technician, orthotics and prosthetics technician), the College of Liberal Arts and Graduate School (clinical psychology, counseling psychology, audiology and speech pathology), and the School of Social Work (medical social work, psychiatric social work).

Allied health programs within the Health Sciences which are well into their planning and design stages include a comprehensive Instructional Personnel Development Sequence for all the disciplines to prepare teachers for the allied health programs of the other post-secondary educational systems of the state and region. Programs which will utilize this core sequence include the four year programs in dental hygiene and assisting, nursing anesthesia, and respiratory therapy and emerging programs in histotechnology, cytotechnology, electron microscopy technology, biocommunicator, emergency room associate, and radiation therapy technology.

A number of potential feeder programs have expressed strong interest in relating to the Health Sciences for participation in interdisciplinary courses (see listing below), supervised clinical experiences, the instructional personnel development curriculum, and research. Such new relationships involve programs in the School of Education (educational psychology, recreational therapy), and the General College (vocational education, career latticing into Health Sciences programs for human services generalists).

While necessarily requiring careful selection according to basic project needs, every one of the aforementioned programs is potentially useful in the program design for this facility.

Distribution of Health Professions Personnel

Each school and college of the University of Minnesota Health Sciences Center recognized its responsibility to provide health manpower to meet the needs of the state of Minnesota. Each has undertaken significant steps from recruitment and admissions policies through curriculum design and integration of clinical experience to encourage students to consider health career opportunities in Minnesota.

In an effort to build more active liaison between outstate communities and graduating students from all health science disciplines, the Health Science Center holds an annual Minnesota Opportunities Day. Representatives from many outstate communities come to the University to present to graduating health professionals information about their community and its health care needs.

The Area Health Education Center is another health science initiative to effect the distribution of health manpower. An important thrust of AHEC is to develop educational programs in areas of health scarcity. Residents of the area can participate in local health training programs which prepare them to respond to community health needs.

Medical School

Within the Medical School, 60 percent of the 1973 graduating class selected internships in Minnesota. This compares with 55 percent of the graduating class the previous year, and 38 percent in 1969.

The Medical School developed the Rural Physician Associate Program in an effort to aid the distribution of physicians into the rural areas of Minnesota. RPAP provides interested third-year students with extensive exposure to clinical medicine in a rural community under the direct supervision of a practicing physician. For 9-12 months, the physician associate sees and experiences life as a physician in a small town. The program accepts 40 student-physicians annually.

The University provides extensive supervision and support to these students and liaison with their physician-preceptors. The program directors spend 80-90 percent of their time in the field. Regular monthly visits are made by specialty faculty from the Health Sciences Center who are available as teacher-consultants for the day to the participating community. Marriage counseling seminars have been initiated to teach principles and concepts for creative problem solving for troubled families. Interview technique taping sessions have been implemented to help students learn to extract valid information during history taking and physical examinations. Student interest in this alternative has surpassed expectations.

In addition, the Department of Family Practice sponsors a six week elective course of preceptor training for medical students in extramural settings. Also, the University Health Science Center now accepts 44 first year residents in Family Practice. As of July, 1974, the total number of Family Practice residents in training will be 109. This promises to significantly increase the pool of qualified physicians available to meet the health needs of Minnesota communities.

A significant shift in admissions policies has also taken place within the last few years. Previously, up to 20 percent of the entering class were from states other than Minnesota. For the 1973-74 entering class, 94 percent of the students were Minnesota residents. This shift has not affected the commitment of the Medical School to accept third-year transfer students from the Dakotas. The number of transfer students from North and South Dakota has increased from 18 to 44. The Medical School views the change in admissions policies as a means to better serve the health manpower needs of the state and the upper midwest.

School of Dentistry

The School of Dentistry is undertaking a major effort to affect the distribution of dental care personnel in Minnesota. Some of the projects of the School are carried out within the School while others are done in cooperation with the Minnesota Dental Association and the Minnesota State Board of Dentistry.

The Rural Dental Program is designed to send our dental students into rural areas to become oriented to the advantages of practicing in rural communities and to provide students with an opportunity to appreciate the need for their services in rural areas. The Rural Dental Program began in 1967. During the first few years, seventy-four practicing dentists provided one to one training opportunities for students.

At the urging of the dental professions and the rural communities the program was expanded in 1972 to a full 10 week summer program with additional adjunct staff and full time faculty for program development, instructional research and coordination of the service effort. The program has now been extended to North Dakota and Montana and includes dental hygienists and dental assistants.

The Dental Information Service Center is a research and service center which applies computer technology and information systems analysis to a broad spectrum of health manpower problems. All of the Center's activities are directed toward two basic objectives:

First: To provide individual dental professionals and para-professionals with manpower information services which will assist them in their efforts to provide more and better dental services to the consumer.

Second: To provide health service planners and administrators with comprehensive, reliable manpower analyses which are appropriate to the requirements of decision-making and policy development.

The Center's research and service facility is located in the Division of Health Ecology in the University of Minnesota School of Dentistry. Research conducted under the auspices of DISC includes such projects as psychological investigation into practice location decision-making, dental marketing research, continuing dental education program planning, and dental demand and productivity studies. The services provided include the Continuing Dental Education Records Service, a comprehensive dental manpower placement service, and a Practice Location Search Service. A wide variety of specialized manpower analytical reports can be generated, depending on user requirements. For example, DISC has developed accurate profiles of some 300 communities in Minnesota to help students and practitioners in selecting practice locations.

This system was developed as one of several research and service components in a \$174,800 federal contract to develop a Health Manpower Information System. The success of this program clearly provides a base methodology which can be expanded to other Health Science disciplines. This ambitious program has received national attention and could very well serve as a national model.

The School of Dentistry has initiated a placement service for prospective graduates and practitioners--dentists, dental hygienists and dental assistants.

The School of Dentistry is considering geographic distribution in the selection of students for admission. While this needs to be done with care, the rationale is based on records which show that dental students whose homes are in rural communities tend to return to rural communities for practice.

Some evidence of the positive results of efforts to help solve the distribution problem are the decisions of our 1972 graduating class for practice locations in Minnesota. Of those starting practice in Minnesota, 76 percent chose rural areas, while 24 percent elected to practice in urban communities. In contrast, of the 1968 graduates, 57 percent went to urban communities while 43 percent went to rural areas.

The programs developed at the School of Dentistry are designed to respond to the dental health care needs of Minnesota. They consider the need to provide new methods of dental care, to train additional personnel for the underserved areas of Minnesota, to help educate the public on the value of good dental health, and to train sufficient dental personnel for replacement needs and allowance for population growth and increased demand for dental care.

School of Public Health

In an effort to encourage distribution of health professions in areas of need, the School sought and received special state support to develop an outreach continuing education program for nurse practitioners which is currently training nurses in ten Minnesota communities. In addition, we are operating an interdisciplinary course through the Area Health Education Center to provide team interdisciplinary training for the health professions in rural Minnesota communities. All Health Education students, 15 settings and our pediatric and adult nurse practitioners are, likewise, trained utilizing community clinical facilities.

College of Pharmacy

No data is available to indicate the geographic distribution of graduates. Approximately 75 percent of the graduates of the College of Pharmacy remain in the State of Minnesota after graduation.

The emphasis being placed on the clinical aspect of community pharmacy will hopefully promote an understanding of the needs, wants, and relationships occurring in the smaller communities. This sensitization could not occur with a clinical component that was exclusively institutionally based. Biases for the institutional setting and misunderstandings about the role of the community pharmacist undoubtedly would have developed.

As a broader clinical program (community and institutional) is developed, an effort is being made to incorporate part of the licensure internship requirements into the College's program. The College is actively promoting such a concept. The State of Minnesota requires that one year (approximately 2000 hours) of internship be acquired prior to licensure. The National Association of Boards of Pharmacy (NABP) has recommended recently that up to 400 hours of this total time required could be derived from approved clinical pharmacy programs. No action has been taken in the State of Minnesota to allow such internship time credit. Hopefully, such action will be taken in the near future. With this occurrence, the College will be in a much improved position to encourage the distribution of pharmacists into areas of critical health manpower needs.

Health Professionals Auxiliaries Training

Program Objectives and Directions

The allied health programs of the Health Sciences have produced a rich flow of line delivery personnel and have been the primary source of competent faculty for entry- and middle-level allied health curricula of the state colleges, junior colleges, and vocational-technical institutes of the state and region. The allied health sciences are being programmed on the basis of the assumption that allied health personnel who can function at differentiated yet interrelated levels of professional competency are essential to implementation of the health team concept. The expanding health-related technological and knowledge base has stimulated rapid and complex changes in the health services roles of the allied health disciplines. Consolidation of the Health Sciences resources for the education of allied health professionals has yielded curricular innovations and new program initiatives which are consistent with the evolving interdisciplinary orientation of Health Sciences.

The Allied Health Programs are contributing heavily to the development of interdisciplinary educational opportunities. Team-education is considered to be essential for preparing students to become more responsive to needs of the consumer-patient. Similarly, such training will improve the effectiveness with which allied health professionals interact on health care teams. Curriculum and clinical strategies which bring integrated faculty and student teams into closer relationship will be required. Interdisciplinary education will serve the objective of teaching allied health professionals to help the consumer to participate more actively as an integral member of the health care team. This would enable the consumer to contribute more knowledgeably to his own care, make more valid health-related decisions, and utilize health services in a timely manner.

The Allied Health Programs are developing an educational model which is designed to introduce economies of cost while it strengthens the quality of its educational products. A bio-behavioral core curriculum, relevant new interdisciplinary educational experiences, and specific program pathways are being synthesized as a basis for launching a School of Allied Health Sciences. The evolving educational model is expected to produce allied health professionals with a humanistic value orientation, dedicated to the coordinated provision of health services to individuals.

Major program objectives include improved career mobility for allied health professionals so that entry-level personnel

trained elsewhere in the state and region can find access into the middle- and upper-level professional programs of the Health Sciences. Career mobility provides a guiding value, for both the developing student and the public, on the assumption that the increasing public need for the services of allied health professionals will be maximally met by competent personnel who are not locked into a designated level by inflexible academic policies which do not recognize changing career orientations and aspirations. The interdisciplinary learning and exposure to multiple role levels afforded by additional space would provide opportunities for the discovery of latent aptitudes and abilities and the attainment of new skills. Such latticing channels are expected to contribute to acceptance of responsibility for continual renewal and elaboration of competencies on the part of allied health professionals trained in the Health Sciences. Major activities of such professionals will involve primary health care, management of chronic disease, modification of psychosocial barriers to the availability and utilization of health care, prevention of disease, maintenance of health, and emergency care.

Allied Health Education: Degree Granting Programs

Estimations of the space required for allied health sciences students must be derived from consideration of the multiple academic sources through which these students come to the Health Sciences complex. More than 1,000 allied health students are sponsored by the various collegiate units which make up the Health Sciences. Current programs include medical technology, occupational therapy, physician therapy, radiologic technology, clinical psychology internship, and counseling psychology internship.

The Medical School has traditionally provided quality programs at the baccalaureate and masters degree level in medical technology, occupational therapy, and physical therapy. Current enrollment of these programs are 120, 60, and 60 undergraduate students respectively. All are located in the Health Sciences complex except for brief periods of rotation through the affiliated hospitals for some of the students. It is anticipated that enrollments in medical technology will increase substantially during the mid- and late-70's as specialty tracks in histotechnology, cytotechnology, and electron microscopy technology are developed. In addition, statewide demand for instructional personnel in these disciplines for the state colleges, community colleges, and vocational-technical institutes, will be met by graduate programs of these disciplines.

Several of the above programs have combined resources of the Health Sciences and the General College. For example, the human services generalist program involves a two-year curriculum in mental health and personal services leading to an associate of arts degree. The primary purpose of this curriculum is the upgrading of middle level personal services workers to provide increased psychosocial skills in the delivery of mental health and the related services for the state of Minnesota. The program will graduate up to 120 students per year during the next few years.

The General College of the University of Minnesota and the Department of Radiology of the University of Minnesota Hospitals have jointly sponsored a program of training leading to certification and registration in radiologic technology and an associate of arts degree. This is the first program in the state of Minnesota in which the radiologic technologists obtain a broader academic background through a general college curriculum.

A comparable relationship between the Anoka Vocational-Technical Institute, the General College, the Department of Anesthesiology of the Medical School, and the Department of Respiratory Therapy of the University Hospitals has produced a new respiratory Therapy Career Development Sequence from entry at the technician level (certificate) and subsequent laddering to the therapist (associate degree), and therapist educator level (baccalaureate degree). The supervised clinical learning experience of 20 (30 by 1975) students yearly for this sequence is provided by the University Hospitals, while the didactic components are given by the above participating academic units.

COMPLEMENTARY PROGRAMS

A major emphasis in the re-organization of the units in the Health Sciences in 1970 was the establishment of a collaborative method of responding to health concerns of the people of the State and to National health objectives. Combining the Schools of Medicine, Dentistry, Nursing, Public Health and Pharmacy into a single structure provided a mechanism for multidisciplinary development of health science education and response to changing needs in health care delivery.

The important missions related to "outreach" efforts which the Health Sciences Center recognized as attainable through this structure include:

Special and increased emphasis should be given to research and development of innovative systems for delivering optimum health care, which will serve all areas and all people in the State.

Sponsor cooperative efforts in Minnesota with professional groups, hospitals, educational institutions and community organizations and all agencies concerned with health care.

Remain in the closest contact with the people of the State to perceive their health needs in their own terms.

The University Hospitals and other health science clinics should provide the facilities and resources through which exemplary models of health care programs can be tested and the delivery of comprehensive health care services can be used as a teaching laboratory and demonstration model for all health professions.

A wide variety of activities, which respond in part to these objectives have been developed over a period of years through departmental arrangements or through the efforts of interested individual faculty members.

The scope of many relationships between the University and the Community it serves range from faculty members who voluntarily contribute their time and talent in community programs to major affiliated hospital teaching programs in which several health science disciplines are involved.

Several programs are briefly described here to demonstrate the effectiveness of a comprehensive approach to University involvement with and responsiveness to "outside" activities.

The first is a University Area Health Education Center (AHEC) based in St. Cloud, Minnesota. As one of 11 such centers in the nation, AHEC provides public education and increased educational opportunities for

residents in the area, relating the educational system to the health service system. AHEC serves the 14-county Planning Area D section of the State, an area identified by the Carnegie Commission as having substantial shortages in terms of health manpower. The center, in operation since 1972 is a five year \$3 million federally funded contract with the Bureau of Health Manpower Education.

The Health Sciences AHEC supports the innovations of interdisciplinary training leading to team care, increased emphasis on ambulatory care and real integration between health services delivery and health education.

The second program, which is illustrative of interdisciplinary involvement in health service resources, is the Community-University Health Care Center (CUHCC) located at 2016 - 16th Avenue South, in Minneapolis. CUHCC provides continuous comprehensive health care for children under the age of 18. Episodic services and preventive care is provided on a team concept basis utilizing the services of nurses, social workers, physicians, dentists, nutritionists, psychologists, speech therapists, health educators, community workers and other necessary health disciplines on a parallel basis. CUHCC, a Children's and Youth Project in operation since 1966, serves eligible children in three elementary school districts in South Minneapolis. The University has provided the matching funds for the C&Y Project since 1966, the first year of operation.

Phase D medical students can choose a six-week learning experience at CUHCC for elective credit. Dental ecology students, nutritionists, social work students and health education students receive instruction at the Center on a structured basis. The Center currently has 2200 children registered and has recorded 13,490 patient/staff encounters for the year ending 1973.

The University of Minnesota Health Sciences Center currently operates a 24 hour a day statewide integrated medical information service. There are four component services currently available to Minnesota physicians, dentists, nurses and pharmacists via a single toll free telephone number. The services consist of (1) Dial Access Tapes, (2) Drug Information Service, (3) Minnesota Medical Information Service (MMIS), and (4) Medical/Dental Specialty Advice. Twin City metropolitan residents may also address the Center for drug information or Dial Access Tapes.

The objectives of each program element are:

1. Dial Access Tapes - To continue to provide authoritative "core" taped information on multiple subjects related to patient care.
2. Drug Information Service - To extend personalized drug information service and to serve as a back up medical information resource to health professionals in Minnesota.

3. Minnesota Medical Information Service - To meet the informational medical library service needs of health professionals when hospital libraries are inadequate or nonexistent.

4. Medical/Dental Specialty Advice - To improve patient care by providing the practitioner with person to person medical or dental advice from an appropriate specialist from the faculty of the University of Minnesota Schools of Medicine or Dentistry or the Mayo Clinic.

There are over 500 medical subject tapes in the dial access library. The University of Minnesota Hospitals' Pharmacy Drug Information Center serves as a quick information retrieval resource for health practitioners who have specific questions. MMIS provides a means for non-University health professionals to utilize the MEDLINE service available through the Bio-Medical Library as well as receive photocopies of specific journal references. The Medical/Dental Specialty Advice is designed to provide a practicing physician or dentist with telephone advice from an appropriate specialist about a patient-care problem. The specialists consist of participating physicians and dentists from the faculty of the University Schools of Medicine and Dentistry and the Mayo Clinic.

The tape library consists of approximately 500 single concept tapes designed to provide the physician or other health professional with up to date medical information. The tapes vary in length from four to ten minutes with an average of about five minutes. Tapes range from general information, such as a discussion of a group of drugs or upper respiratory infections in children to very specific topics, such as the treatment of ventricular septal defects or the management of mesenteric arterial embolism.

The Drug Information Center (DIC), with its specialized resource material, is designed to serve as an additional resource for health professionals.

The Bio-Medical Library will provide a photocopy of an article if the librarian in the local hospital is unable to obtain the specific journal reference desired.

The Library has installed a new service, MEDLINE (MEDLARS on-line). This system makes it possible for the library to provide computerized bibliographic searches of the medical literature published since January, 1969.

The Medical/Dental Specialty Advice service is designed to provide a physician or dentist with telephone advice from an appropriate specialist about a patient-care problem. The specialists are the approximately 1,000 participating physicians and dentists from the faculty of the University Schools of Medicine and Dentistry and the Mayo Clinic.

COMMUNITY SERVICES

This office completed its fourth full year of service in 1972-73, making available to health care agencies throughout the state the resources of the University Hospitals and, cooperatively, the Health Sciences. All programs have been conducted without charge. Salary support for the coordinator and travel expenses are provided by State appropriations.

This program is designed to build relationships between communities and the University by assisting community agencies or institutions in a broad range of programs which bring Health Sciences staff to the communities involved. Community Services has increasingly served as a coordinator of resources to provide access to assistance in any area of Health Sciences capability.

Following a pattern noted in past years, problem-solving requests usually have related to organization or development of specific hospital services, such as Pharmacy, Nursing, or Physical Therapy. In each case, the response to the request has been tailored to the agency's particular need. Requests for educational programs have covered a broad range: a medication review course presented by the Pharmacy staff to nurses; joint programs for medical and nursing staff dealing with specific problems such as care of the high risk infant and mother in labor and delivery; and classes or workshops on nursing care plans, interpersonal communication, and leadership skills.

COMMUNITY HEALTH EDUCATION CENTER PROJECT (CHEC)

The University of Minnesota CHEC, funded through the Northlands Regional Medical Program, operates in a response and stimulus mode to the outstate Community Health Education Centers and cooperates with the Mayo CHEC. In the response mode, the objective is to meet continuing education and consultation needs as identified by outstate CHECs. Constant communication, by telephone, mail and publication of continuing education offerings facilitates the meeting of this objective. In the stimulus mode the objective is to provide specific programs which are developed in cooperation with outstate CHECs. Training in educational methods with emphasis on audio visual use is provided for inservice educators of health care institutions to upgrade their skills in preparing or selecting educational materials. A management training program is being developed which will prepare health care administrators to function as change agents in their institutions. This program will complement the inservice education activity as well as equip the administrator with modern management skills. Both of these activities are actively marketed in an attempt to provide concurrent stimulation in all CHEC areas so that the meta objective of improving the quality of health care delivery throughout the state may be achieved.

THE HEALTH PROFESSIONALS DRUG ABUSE EDUCATION PROJECT

Organized under the National Drug Abuse Institute, a Training Grant awarded to Health Sciences Continuing Education program promotes health professionals' interest in drug abuse problems, provides training in the handling of drug-related problems, and encourages involvement in community drug abuse efforts. The target area covered by the project includes western Wisconsin, northern Iowa, North and South Dakota and Minnesota.

All health professionals with an interest in drug abuse problems are eligible for involvement in project activities. This includes physicians, nurses, pharmacists, dentists, social workers, veterinarians, health educators, counselors, as well as other allied health and helping professionals.

The overall goal of the project is to enhance the utilization of the health professional's resources in order to promote more effective and appropriate responses to the existing and potential drug problems in their communities by:

- encouraging a more responsive attitude toward drug users
- teaching basic skills for drug-related treatment and referral
- promoting involvement in the community
- demonstrating the need for effective interdisciplinary responses to drug problems.

MEDICAL SCHOOL

During the 1973-74 year, portions of the clinical training program for medical students are provided by ten Metropolitan community hospitals affiliated with the University.

In addition, a number of undergraduate students are involved in the Rural Physicians Associate Program. The RPAP, now in its third year, offers third year medical students the opportunity to spend 9 to 12 months of their medical education in an outstate community, working and learning the principles of primary health care delivery under the preceptorship of a practicing family physician. The RPAP was developed as a step toward emphasizing family practice as a career choice and to encourage medical practice in rural communities by exposing students to life in these communities.

Phase B students are placed with a practicing family physician in the Metropolitan area for one day every month for their entire second year and the Phase D Preceptorship Program places 60 to 80 students per year with a family physician for a six week period of time.

As mentioned earlier, the Medical School's relationships with other health resources are often the result of individual and/or departmental efforts. An exhaustive listing of all activities has not been compiled since, not only is there a wide range of activity, but constant change makes impossible a status report of the large numbers of public service commitments, planning assistance efforts, telephone consultations, service contributions, participation in state, regional and national professional organizations, seminars and speaking engagements. Ongoing departmental efforts however provide the scope of Medical School activity. For example, consultation programs are conducted by the Department of Otolaryngology at the Minnesota Regional Hearing Center and Anoka State Hospital. The Department of Medicine provides programs upon request anywhere in the State and the Hematology Section provides faculty for community hospital staff meetings and regional medical meetings. The Department of Neurosurgery provides weekly consultative service to St. Cloud and the Department of Orthopedics has arrangements for on-site education and consultation in Austin, Albert Lea and Hibbing. Psychology Interns are present at CUHCC and Gillette Hospital through the Department of Psychiatry. Several departments, most notably, the Department of Urology are engaged in teaching/consultations in Planning Area D in cooperation with AHEC. Dermatology involves practicing dermatologists, in its teaching program at all levels and in its weekly departmental conferences. The Department of Laboratory Medicine and Pathology is involved in extensive collaboration with hospital clinical laboratories and independent pathologists.

The Medical School's Continuing Medical Education program is one of the most significant examples of response to need outside the University. In assuming the responsibility for maintenance of the capability of Minnesota's practicing physicians through continuing education, each year's program is designed to promote life-long learning and responsiveness to professional needs.

During the 1972-73 year, over 4000 physicians participated in 26 formal continuing medical education programs. There were 593 outstate Minnesota physicians and 1809 participants from all other 49 states. (594 of those from the Region V area, Wisconsin, Illinois, Indiana, Ohio and Michigan) and 107 foreign participants made up the total paid registration of 2,402. The remaining participants, mostly Twin Cities physicians, were University clinical faculty and residents to whom all continuing medical education courses are offered without charge.

Other departmental programs which occur regularly afford opportunities for personalized continuing education for practicing physicians who have interest in a particular field. Many departments conduct weekly conferences which are open to practicing physicians.

SCHOOL OF NURSING

Some of the most significant progress in the School of Nursing in building relationships with other health resources has developed in that unit's continuing education programs.

Two thousand practicing nurses from hospitals, schools, clinics, industry, nursing homes, public health nursing education and private duty nurses have participated this year. Programs are presented in two ways. One is through workshops, institutes or seminars presented at locations throughout the state, and the second is the telephone conference call (telelecture) programs which are directed to 32 listening sites.

These programs demonstrate how the School of Nursing is successfully expanding its goals and direct service to non-University and outstate groups, and establishing important communication links between the University and the community it serves.

New Programs

The School of Nursing faculty is currently devoting substantial planning efforts to respond to an increasing demand for the development of degree credit courses for registered nurses who wish to get their degrees but want to remain in their own geographic location and continue practicing. Two programs which may be operational next year include:

Rochester, Minnesota - Planning is currently underway between the School of Nursing and the Consortium of southern Minnesota institutions of post-secondary education to develop a program for an estimated 25 registered nurses seeking degrees.

St. Cloud, Minnesota - In cooperation with St. Benedict's College, the only institution in that region offering a baccalaureate in nursing, a program for 30 registered nurses is being planned.

Current Undergraduate Programs

Consistent with the School's objectives to provide contact with the learning in a variety of settings, the School has greatly expanded the number and kinds of agencies in which students are placed. Many of these agencies are located where the people have easy access to service. School of Nursing faculty accompany students to provide teaching.

In response to demands for a more flexible master's degree in nursing, the School of Nursing has recently submitted a grant proposal requesting funds to develop such a program. The request has been submitted with the endorsement of the Rochester Consortium, the groups in Grand Forks, North Dakota through the University of North Dakota and Eau Claire through the University of Wisconsin.

SCHOOL OF PUBLIC HEALTH

The School of Public Health is involved in community programs in the Minneapolis-St. Paul metropolitan area as well as in rural settings in Minnesota. A significant aspect of the education experience for many students in Public Health Nursing, Health Education, Nutrition, Hospital Administration, Occupational and Physical Therapy, and Environmental Health is their clinical residency and/or field work experiences. The School of Public Health has affiliation with over 90 health care organizations which assist in carrying out the field training experiences of the students. Full time faculty members as well as over 100 preceptors supervise these learning experiences.

The School's commitment to train practicing health personnel in Minnesota is seen in its continuing education programs. Over 300 individuals are trained annually in the School's Chemical Dependency Counseling program. As a certificate program the course work and student experience is designed to prepare persons whose work brings them in contact with alcoholics and drug abusers in the basics of alcoholism, drug abuse and counseling. The program offered by the School of Public Health through the University's Continuing Education and Extension Department of Pharmacology of the Medical School and the School of Social Work, consists of nine credits of basic courses and nine credits for a six-month rotating placement in a variety of settings such as inpatient treatment facilities, residential aftercare facilities and educational, referral and other community agencies. In addition, hospital and health care administrators throughout Minnesota have available to them independent study programs. This year (1973-74) 20 individuals are enrolled in the Patient Care Administration program. The School has recently inaugurated an educational program for trustees of hospitals.

The Public Health Nursing program has initiated several unique educational opportunities for nurses. The Adult and Geriatric Nurse Practitioner program is designed to train nurses to function as associates to physicians in delivery of primary care. The program expands the nursing role to provide increased preventive and health care services to the adult population, particularly in those geographic areas where health care services are limited. The course differs from traditional offerings in that the student gains clinical practice at her place of employment rather than at formal educational institutions. The classroom material is provided by traveling nurse faculty members who bring the material to the students at selected sites around the state. Taking an educational program out to the student rather than bringing the student to the program allows more nurses around the state to participate in advanced education pursuits and encourages their remaining to practice in these rural sites.

The Public Health Nursing program has also inaugurated a post-Baccalaureate program for nurses. The Pediatric Nurse Practitioner program is designed to enable nurses to assume a primary role in ambulatory child health care. The members of the Public Health Nursing faculty and the pediatric faculty in the School of Medicine conduct the program.

The Laboratory of Physiological Hygiene helped initiate and is centrally involved in three large-scale studies in the community concerned with the detection and possible prevention of complications to hypertension and atherosclerosis, i.e., strokes and heart attacks. They are large-scale research studies. The NHLI Hypertension Detection Follow-up program recently completed a door-to-door hypertension detection program in about 16,000 households in South Minneapolis, St. Louis Park, and Golden Valley, finding over 800 men and women hypertensives who were confirmed on a second visit to the Mt. Sinai Hypertension Clinic. The study is set up to compare special care in that clinic with usual care in the community, for mildly and moderately elevated blood pressure. The NHLI Study of the Prevalence of Lipid Abnormalities is nearing completion of its goal of 6600 men, women and children in Census tracts in Richfield; those with elevated blood lipids are referred to other programs or to their private physicians. The NHLI Multiple Risk Factor Intervention Trial is screening approximately 25,000 middle-aged men to detect over 600 considered at high risk of coronary attacks due to the combined risk factors of elevated blood pressure and serum cholesterol and cigarette smoking habit. Again, usual care after referral for high risk will be compared with an intensive intervention program to answer the urgent public health question whether such health measures are truly effective in heart attack prevention.

These are mass clinical trials aimed at testing major hypotheses and delivery methods for use by the medical profession and community. The L.P.H. is directly and heavily involved in community activities through consultations with Pilot City, the Y.M.C.A., State and Local Departments of Health and Industry, and through activity on the community service committee of the Minnesota Heart Association, the State Medical Association, and the many professional and public education enterprises.

COLLEGE OF PHARMACY

This unit of the Health Sciences has developed a curriculum demonstrating the "core" concept of education for health professionals. During the early years, students obtain their education in University based programs. The seniors and Pharm D students, receive much of their clinical training in off-campus programs chosen to provide learning experiences in active work situations.

The senior students' experience in community based health resources is structured into segments designed to provide exposure to inpatient, clinic, community pharmacy, and hospital pharmacy settings.

The Philosophy for clinical pharmacy education at the University of Minnesota is based on the application of basic health and pharmaceutical services in the environments in which pharmacy is practiced. Accordingly, students plan their training from elective offerings in relation to individual interests. This sequenced study provides an early introduction to the patient where clinical problems occur.

Those students choosing a community practice clerkship elect two sites. The student spends six hours weekly for five weeks in each of the two ambulatory patient care settings involved in patient monitoring, interviewing and consultation. St. Louis Park Medical Center, Appel Pharmacy, University of Minnesota and Veterans Administration Outpatient Pharmacies and multiple community pharmacy settings provide these clerkships.

Inpatient Clerkships are provided for twelve hours weekly for a ten week period at University Hospitals and community hospitals.

REGIONAL PLANNING AND COORDINATION

The faculty and staff of the University of Minnesota Health Sciences serve in leadership roles in many local, regional and state planning efforts.

Comprehensive Health Planning

The Dean of the College of Pharmacy was Chairman for the Advisory Committee to the Minnesota Comprehensive Health Planning Program, 314-A agency, during its first years, 1969-1972. The Dean of the School of Public Health was a member of the Metropolitan Health Board, the health planning body for the 314-B agency, from 1970-1973. During this period, the Dean served as Chairman of the subcommittee for developing the Health Chapter of the Metropolitan Development Guide. A nurse with University Hospitals serves on the Metropolitan Council, parent committee of the Metropolitan Health Board.

State Board of Health

The General Director of University Hospitals has been re-elected for a third term as President of the State Board of Health. Among its many responsibilities, the State Board of Health carries out the following planning and coordination activities: the state plan under Hill Burton; final review under the state certificate of need law for the construction of hospital facilities; and coordination of the credentialing functions of professional licensure boards under a grant of authority from the State Legislature.

Northlands Regional Medical Program

University of Minnesota Health Sciences participation in Northlands Regional Medical Program (NRMP) is extensive. As one of the nine-member Board of Trustees, the University is a grantee. Dean Lee Stauffer,

School of Public Health, is Chairman of the Board of Trustees. The initial NRMP project at the University of Minnesota Health Sciences Center began in 1970 with a core staff of four full-time equivalent positions and an annual budget of \$150,000. The program established a statewide system of medical audit in community hospitals to enable physicians to determine their continuing education needs. In 1972, the program was transferred to the central NRMP office. Through short term project grants, NRMP funds additional activities at the University such as dial access tape cassettes, library services, development of nurse-clinician programs, and pilot model health systems.

The current NRMP sponsored program is the Community-Based Health Education consortia (CHEC) initiated in 1972. The University Health Sciences Center, together with Mayo Clinic, Rochester, Minnesota, serve as response organizations to seven outstate CHECs. The project mobilizes the resources of the University to respond to the continuing education and consultation needs identified by the seven outstate CHECs.

Regional Health Care Programs

The Medical School and University Hospitals are involved in a growing number of regional health programs. (1) The State Legislature funds an emergency fly-in service for children with acute health problems that require emergency or specialty treatment not available outstate. (2) The Department of Laboratory Medicine has organized an outreach program for community hospitals outstate. The program will provide direct line communications between pathologists at outstate hospitals and the University laboratories, and will provide continuing education for participating pathologists and laboratory technicians. (3) The regional chronic dialysis/kidney transplant network is organized by University hospitals, the Veterans Administration Hospital, Hennepin County General Hospital and Mayo Clinic. The network is funded by NRMP and administered by the Kidney Foundation of the Upper Midwest. Its purpose is to develop supplies of frozen blood for transplantation, to produce and disseminate educational programs on kidney disease for physicians, patients and the public, and to provide education for physicians and hospital personnel on organ acquisition.

Various consultation programs are also available to bring the tertiary care resources of the University Health Sciences Center to outstate physicians. These programs are discussed in a previous section on complementary programs.

Area Health Education Center

The Area Health Education Center, discussed in the section on complementary programs, is a program for long range health manpower planning and development. Faculty from the University Health Sciences Center work together with provider and consumer groups in the 14-county

Planning Area D to define health manpower needs and plan for creative response. ANEC is dedicated to regional planning and the coordination of resources for delivery of health care and education of health manpower.

Hennepin County Health Care Coalition

The University of Minnesota Health Sciences Center also participates as a member of the Hennepin County Health Care Coalition. Two representatives from University Hospitals Administration work with the Coalition in planning to meet the primary health care needs of the people of Hennepin County. The Coalition presently has a grant to study the health care delivery needs of the elderly and recommend a program for implementation. The Coalition is an unusual pluralistic planning group including representation from hospitals, third party payors, health professionals, and three consumer interest groups--community clinics, unions and the community at large.

Relation of Project to Area Health Plans

"Regulations for Certificate of Need Act," Chapter #628 of Minnesota Statutes, 1971, establishes the process necessary for review of the out-patient facilities component of Unit B/C. The Metropolitan Health Board considers the project with respect to the health care delivery needs of the Metropolitan area. The Metropolitan Health Board makes recommendation to the Metropolitan Council, 314-B agency, which makes recommendation to the State Board of Health. The procedures outlined have been followed for issue of the initial certificate of need in 1972 and issue of the extension to the certificate of need in 1974.

HEALTH CARE DELIVERY

One of the basic, major objectives of the Health Sciences organization at the University of Minnesota is to encourage and develop concepts of the team approach to increase the effectiveness of health care delivery. The Health Sciences Development Program provides for integrated Health Sciences educational facilities as an outstanding model for this approach. The programs described under the section, Interdisciplinary Training, are indicative of the trend to offer courses which stress the team approach to health care delivery. The Chairman of the Health Sciences Education Policy Committee, a Professor in the Medical School, and Coordinator of Allied Health programs in the Office of the Vice President for Health Sciences is responsible for the coordination of development and evaluation of interdisciplinary training courses.

Specific research in health care delivery in the Medical School includes programs under the auspices of the Department of Family Practice. For example, the department is undertaking an in-depth medical and sociological study of a small community in Minnesota in an attempt to determine what kind of health care professionals and how many might be necessary to provide optimal health care in this prototype rural community. A field study of health care in army reserve training center during summer camp will be undertaken to determine some of the sociological and psychological factors responsible for consumer choices of health care professionals. Various physicians, nurses and other health professionals, sociologists, and psychologists are performing studies of health care delivery currently in the clinical setting in the Department of Family Practice. The medical students, participating with other Health Sciences students, are intensely interested in this area and are actively engaged in programs of health care education for consumers. The very active organization of Health Science students, known as CHIP (Council for Health Interdisciplinary Participation), has sponsored numerous highly effective student projects in health care delivery and consumer or student education. These include programs on venereal disease education for secondary school students, several free community clinics, and minority-disadvantaged student recruitment.

The Health Sciences Development Program, including Unit B/C, has been designed to encourage interdisciplinary teaching and the team approach to health care delivery. When completed, the various teaching units of the Health Sciences will be closely integrated in facilities which provide optimal interchange among various Health Sciences faculties and students leading to increased interdisciplinary cooperation in health care delivery. The outpatient facilities are particularly adapted by the nature of their modular arrangement to programs of interdisciplinary health care delivery. The Family Practice Clinic is specifically designed to promote this concept, with space to be provided in that unit for various health professionals and supporting personnel such as sociologists and psychologists. The

evolving programs of the Health Sciences in the team approach to health care delivery will be greatly augmented by the provision of the B/C facilities, which in their design integrate the Health Sciences and provide the appropriate settings in which to do applied research in health care delivery. In addition, the facilities, because of their flexibility, will be adaptable to any evolving system of interdisciplinary or team approach to health care maintenance, disease prevention, and correction.

It is evident that these extensive efforts and resources do not provide the potential for the ideal community-clinical arrangement combining physician training, multi-disciplinary practice and consumer participation. Admirable and successful as they are, the critical factor of unique design and location proximate to the community served cannot be established at the Health Sciences Center per se. It is critical to realize that the project housed by the facility being applied for, represents a planned for and necessary extension of ongoing training opportunities. In no sense, however, is it a replication of any program currently in operation, although aspects of the student training necessary to bring the program into fruition have been in effect for some time. Further, the Mission Statement of the Board of Regents pertaining to University Hospitals and the Health Sciences Center mandates the demonstration of models of health care delivery for use in the region and the country as a whole. The appropriate location of this project is in the type of facility for which this grant program is designed.

QUALIFIED APPLICANTS FOR ADMISSION

Medical School

<u>Year</u>	<u>No. of Applicants</u>	<u>No. Accepted</u>
1974-75	1898	239
1973-74	1638	239
1972-73	1716	239
1971-72	1653	227
1970-71	974	227
1969-70	833	164

GEOGRAPHIC DISTRIBUTION OF ENROLLEES

(Current Year and Preceding Five Years)

	<u>Medical School</u>					
	<u>1974-75</u>	<u>1973-74</u>	<u>1972-73</u>	<u>1971-72</u>	<u>1970-71</u>	<u>1969-70</u>
Minn. Residents	860	811	734	716	663	613
Non-Residents	99(+35)	140	127	116	95	80
Other Countries	7	6	7	6	6	5

GEOGRAPHIC DISTRIBUTION OF GRADUATE STUDENT

(Basic Health Sciences Departments only)

	<u>Medical School</u>					
	<u>1974-75</u>	<u>1973-74</u>	<u>1972-73</u>	<u>1971-72</u>	<u>1970-71</u>	<u>1969-70</u>
Minn. Residents	164	149	180	162	153	138
Non-Residents	35*	29	35	17	28	14
Other Countries	5	3	3	4	--	1

* Estimate

COMPOSITION OF THE STUDENT BODY

Medical School; Academic Year 1974-75

Class Year	SEX		ETHNIC BACKGROUND							Total
	Male	Female	Black	Amer. Indian	Amer. Spanish Surname	Asian Amer.	(Other) Mainland Puerto Rican	Foreign	Amer. Caucasian	
1st	205	42	11	0	9	3	0	1	223	239+8
2nd	192	44	15	2	3	2	0	1	213	236
3rd	230(+33)	37(+2)	6	1	0	0	2	1	257(+35)	267(+35)
4th	183	28	5	2	3	1	0	4	201	216
Post Grad.	--	--	--	--	--	--	--	--	--	--
TOTAL	815(+33)	151(+2)	37	5	15	6	2	7	894(+35)	966(+35)

Numbers in parentheses () refer to 35 medical students from the University of North Dakota School of Medicine, who, through an inter-institutional agreement, are enrolled fulltime during their third year in clinical externships at the University of Minnesota Medical School.

 Medical School, 1970-71 through 1974-75
Ethnic Background of First Year Class

First Year Class	Black	American Indian	American Spanish Surname	Asian American	Other including (Mainland Puerto Rican)	Foreign	American Caucasian	TOTAL*
1974-75	11	0	9	3	0	1	223	239+8
1973-74	16	1	6	1	0	1	219	239+5
1972-73	7	2	0	0	2	1	231	239+4
1971-72	10	0	3	0	1	2	215	227+4
1970-71	7	4	0	4	0	1	213	227+2

* First figure (e.g., 239 of 239+8) is the number of newly-entered first year students; second figure is the additional number of previous students (e.g., repeaters) enrolled in the first year class.

ADMISSIONS POLICY

The most significant change in admissions policy for the Health Sciences within the last five years has been an increased emphasis upon recruitment of minority or disadvantaged students. This aspect of admission policy is discussed in the following section.

Since the University of Minnesota is a state supported institution, its Medical School has a primary obligation to accept for admission legal residents of this State. In 1974-75, 95 percent of the medical students enrolled in the first year class are legal residents of the State. Non-residents who may be given relative preference for admission include residents of a state in the upper Midwest area where, until very recently, there has been no four-year medical school (South Dakota, North Dakota, and Montana); or non-residents who have had previous residence in Minnesota or have attended college in this state. In general, these criteria of residency have not applied to acceptance of minority applicants for Medical School admission.

During the past five years there has been a large increase in the number of applicants for Medical School admission, with a corresponding increase in over-all qualifications of applicants. There is no shortage of qualified Minnesota or non-resident applicants.

The University of Minnesota is guided by the principle that there shall be no difference in the treatment of persons because of race, sex, creed, color, or national origin and that equal opportunity and access to facilities shall be available to all. This principle is applicable in the admission of students in all colleges, and in their academic pursuits. It is also applicable in University-owned or University-approved housing, in food services, student unions, extra-curricular activities, and all other student services. It is a guiding policy in the employment of students either by the University or by outsiders through the University and in the employment of faculty and civil service staff.

Medical School Enrollment

The Medical School has experienced an increase in enrollment of Minnesota residents. During the 1960s, up to 20 percent of the entering class were residents of states other than Minnesota. In the 1974-75 entering class, 96 percent of the first year students are Minnesota residents.

Selection of resident students from Minnesota reflects statewide geographic balance. About one-half of the students are from relatively rural out-state areas, while the remaining one-half are residents of the urban communities of the state. The establishment of the two-year Medical School at the University of Minnesota, Duluth, provides an added emphasis on the recruitment of students from rural areas whose career orientation is directed toward serving the needs of rural populations.

Seventeen percent of students enrolled in the 1974-75 entering medical class are females, while 19 percent of 1973-74 entrants were females. These figures represent a marked increase from approximately 10 percent five years ago. Correspondingly increasing numbers of well qualified women are now applying to the Medical School for admission.

The third year class for 1974-75 includes 34 transfer students, 24 of whom represent the first transfer class from the 2-year medical educational program at the University of Minnesota, Duluth. Nine third-year students transferred from the University of South Dakota, in continuation of a long-term transfer agreement with that institution. In addition, through a recently completed inter-institution contractual arrangement, during 1974-75 35 students enrolled in the "2-1-1" medical educational program at the University of North Dakota are full-time students in clinical externships at the University of Minnesota Medical School.

STUDENT RECRUITMENT: MINORITIES AND DISADVANTAGED

Medical School

For several years, the University of Minnesota Medical School has conducted an increasingly effective program for recruitment and education of disadvantaged students. Although the program was initially designated as concentrating on disadvantaged students, within two years from its inauguration, the designation was changed to "Special Educational Program for Minority Students". The committee active in this field felt that the most urgent priority for action among disadvantaged groups resided in the pressing social, economic, and educational problems of minority persons. Prior to the advent of this recent program, the University of Minnesota Medical School had graduated less than a dozen black physicians in the last half century.

Concern for the Medical School's role of providing educational opportunities for minority students in medicine and other health professions was expressed increasingly among faculty and students in 1967-68. In the fall of 1968 a committee of the Executive Faculty of the Medical School was asked to develop a proposal in this field for early consideration by the faculty. That proposal, presented to the Executive Faculty in April, 1969, outlined an extensive program calling for the encouragement, recruitment, admission, counseling, and financial support of minority individuals for medical education at the University of Minnesota. The program was adopted unanimously by the Executive Faculty in spring of 1969 and the implementing committee was modified to include adequate participation by students, persons from minority groups, and knowledgeable consultants.

A substantial initial advance was made with the enrollment of nine minority students in September, 1970, followed by subsequent annual increases. Currently in the 1974-75 academic year, enrollment of minority students includes 23 in the first year medical class and a total of 65 in all Medical School classes, approximately 7 percent of the total medical student enrollment. Thirty-seven of these minority medical students are black-Americans, 15 are Mexican-Americans, 5 are American Indians and the remainder are American-Orientals or mainland Puerto Ricans. The Medical School intends to maintain the minority admissions program at a level of approximately 24 students annually in each of the next several entering classes. Nine minority persons received the M.D. degree in the most recent graduating class in June 1974.

The Medical School has joined forces with other health science units in a joint program for recruitment and education of disadvantaged students in the several health professions. Considerable emphasis has been placed on both a short-range and long-range program directed toward the special socio-economic and educational problems of the American Indian, since the State of Minnesota contains a relatively large population in this category. An inner-city area of Minneapolis, only a few miles from the site of the Health Sciences Center, is frequently cited as containing the largest urban concentration of American Indians in the United States.

In 1969 the Medical School also initiated a program referred to as Career Opportunities in Health Sciences (COHS). Especially during summer months, COHS provides jobs for high school students from minority backgrounds in the laboratories of research investigators at the University Health Sciences Center. Participation in a variety of research and learning opportunities introduces the students to careers in medicine. In several instances, participants have co-authored professional papers and attended professional conferences. Initially funded by the Minnesota Medical Foundation, the Minnesota Heart Association and the Office for Economic Opportunity, the COHS program is now a component of Opportunities in Health for Minorities.

The Medical School provides tutorial services, on request or as needed, for all students, with special emphasis on assistance to minority students in major courses in basic health sciences during the first two years of the M.D. curriculum. During the past two years, special efforts have been expended by the Medical School faculty, by the Office of Medical Student Affairs and by special counselors to extend and improve academic and personal counseling for minority medical students. In Fall 1974, the Dean of the Medical School added to the Medical Student Affairs staff an Assistant to the Dean, on a 25% basis, who is a competent black physician and surgeon, and who has been especially effective in establishing rapport with and providing counseling support for minority students.

It has been necessary to provide extensive additional financial aid to minority medical students, especially since more than two-thirds of these students are not Minnesota residents and therefore must pay tuition and fees to the University of Minnesota at non-resident rates, about \$4600 per student per year. In addition to the usual institutional state and federal loans and grants available to any medical student who demonstrates financial need, minority medical students have received a disproportionately large portion of student aid funds provided by the local Minnesota Medical Foundation (MMF). This funding of minority medical students includes more than \$125,000 in 1973-74 from MMF, especially from a dedicated grant to the Medical School from the Robert Wood Johnson Foundation.

Recently the President of the University has taken an intense personal interest in financial needs of minority medical students and has been instrumental, during the fall of 1974, in securing an additional \$200,000 directed specifically to financial support of minority medical students.

Both the University of North Dakota School of Medicine and the University of Minnesota-Duluth School of Medicine (UMD) have special projects for the identification, orientation, and selection of American Indian students into health careers in general and into medicine in particular. Essentially all students in the UMD two-year program, including minority students in that program, transfer to the University of Minnesota Medical School, Minneapolis for the third and fourth years of their medical education in clinical fields. Annually, through an inter-institutional contract arrangement, 35 students from the University of North Dakota School of Medicine, including

minority medical students, complete the entire third year of their medical education curriculum in clinical externships at the University of Minnesota Medical School and its affiliated teaching hospitals in the Minneapolis-St. Paul metropolitan area.

During recent years, substantially increasing numbers of women have applied and have been accepted for admission to the University of Minnesota Medical School, Minneapolis. In the current 1974-75 first year class of 239 medical students, there are 42 women, or 18 percent. There are 151 women in all classes of the medical student body (966 students), equivalent to 16 percent. These percentages accent the marked increases which have occurred during the past five years; prior to 1970, about 10 percent of students enrolled in each entering class and a comparable 10 percent of applicants were female.



UNIVERSITY OF MINNESOTA

Office of the Vice President for
Finance, Planning and Operations
301 Morrill Hall
Minneapolis, Minnesota 55455
(612) 373-5940

March 10, 1975

Lyle A. French, M.D.
Vice President for Health Sciences
432 Morrill Hall
East Bank Campus

Dear Doctor French:

My office has prepared the financial information for the Health Sciences Medical School for the years 1971-72, 1972-73 and 1973-74 from the information contained in the University of Minnesota Financial Report and other internal records.

Our projected budget for 1974-75 approximates a 9% increase over 1973-74. Based on previous expenses, 1975-76 and 1976-77 are projected using a 10% rate. For 1977-78 through 1979-80, 8% increases in costs are projected. The increases of the first three years are generally larger than those of the later two years which reflect our five-year estimates of costs.

In terms of the format of this Financial Report, tuition estimates are shown as part of the income, even though tuition is collected centrally and is not credited to college accounts. Indirect costs such as maintenance and operation of University buildings, central administration and library expenditures are not shown in the collegiate summaries but are funded centrally.

We will be happy to supply any further information that may be needed for the applications.

Sincerely yours, .

A handwritten signature in cursive script, appearing to read 'J. Brinkerhoff'.

James F. Brinkerhoff

JFB:vma

Enc.

UNIVERSITY OF MINNESOTA
MEDICAL SCHOOL
Statement of Expenditures and Source of Funds

SOURCE OF FUNDS	1972-73	1973-74	Projected 1974-75	Projected 1975-76	Projected 1976-77	Projected 1977-78	Projected 1978-79	Projected 1979-80
State Government	\$ 5,268,209	\$ 5,686,996	\$ 6,200,000	\$ 6,820,000	\$ 7,502,000	\$ 8,102,000	\$ 8,750,000	\$ 9,450,000
Student Tuition	899,331	1,441,384	1,571,000	1,728,000	1,901,000	2,053,000	2,217,000	2,395,000
Sponsored Research								
Government	12,385,259	12,614,380	13,750,000	15,125,000	16,639,000	17,968,000	19,405,000	20,958,000
Non-Government	3,754,221	3,438,815	3,748,000	4,123,000	4,535,000	4,898,000	5,290,000	5,713,000
Non-Research & Student Aid								
Government	6,303,984	7,184,154	7,830,000	8,613,000	9,473,000	10,233,000	11,052,000	11,936,000
Non Government	5,414,933	6,504,633	7,090,000	7,799,000	8,579,000	9,265,000	10,006,000	10,806,000
Miscellaneous--Temporary Investment Overhead, Department Income and Other	347,288	312,959	340,000	374,000	411,000	444,000	480,000	518,000
Total Funds	\$34,373,225	\$37,183,321	\$40,529,000	\$44,582,000	\$49,040,000	\$52,963,000	\$57,200,000	\$61,776,000
EXPENDITURES								
Instructional	\$							
Salaries & Wages	\$ 5,718,079	\$ 5,887,221	\$ 6,418,000	\$ 7,060,000	\$ 7,765,000	\$ 8,386,000	\$ 9,057,000	\$ 9,782,000
Supplies, Fringe Benefits, Expenses, Materials, Services	691,974	1,430,490	1,559,000	1,715,000	1,887,000	2,038,000	2,201,000	2,377,000
Equipment	104,775	123,628	134,000	147,000	162,000	175,000	189,000	204,000
Sponsored Research								
Salaries & Wages	8,772,289	8,853,951	9,651,000	10,616,000	11,678,000	12,610,000	13,618,000	14,707,000
Supplies, Fringe Benefits, Expenses, Materials, Services	6,138,340	6,385,545	6,960,000	7,656,000	8,422,000	9,096,000	9,824,000	10,610,000
Equipment	1,228,851	813,699	887,000	976,000	1,074,000	1,160,000	1,253,000	1,354,000
Non-Research & Student Aid								
Salaries & Wages	7,822,974	9,782,081	10,662,000	11,728,000	12,901,000	13,935,000	15,050,000	16,253,000
Supplies, Fringe Benefits, Expenses, Materials, Services	3,618,837	3,412,754	3,720,000	4,092,000	4,501,000	4,861,000	5,250,000	5,670,000
Equipment	277,106	493,952	538,000	592,000	650,000	702,000	758,000	819,000
Total Expenditures	\$34,373,225	\$37,183,321	\$40,529,000	\$44,582,000	\$49,040,000	\$52,963,000	\$57,200,000	\$61,776,000

Description of Facility

The University of Minnesota Hospitals presently have approximately 136 examination rooms available either totally or partially for ambulatory care activities and teaching programs. These rooms are located in 16 separate clinic areas including all buildings of the Health Sciences complex.

As of Spring, 1977; 104 of these 136 rooms are scheduled to be replaced by 156 examination rooms in the new Health Sciences Unit B/C. The other 32 rooms will remain in their present locations due to close interaction with inpatient activities or other facilities. The majority of ambulatory care support activities will also be relocated to Unit B/C in 1977.

The Certificate of Need application for Unit B/C proposed a facility to 1) accommodate increased enrollment, 2) develop new programs and 3) replace inadequate facilities. The outpatient facilities to be replaced and expanded were built in the 1920s to accommodate 50,000 annual patient visits and a medical student enrollment of 86 per class at a time when educational emphasis was oriented toward inpatient care. Existing facilities were cited by the Joint Commission on Accreditation of Hospitals as inadequate for the patient population served by the University Hospitals. The Liaison Committee on Medical Education also cited the Medical School's space inadequate.

The rationale for the proposal of 229 examining rooms was figured on the basis that in 1969-70 there were 99,304 outpatient visits. By 1972-73 the corresponding number had risen to 124,134. Based upon a conservative rate of increase it was estimated that by 1980 there would be 275,000 outpatient visits. The present clinic facility is being constructed with 156 finished examining rooms.

This decision to cut back on examining rooms within the University B/C Clinics came about during the review of the Certificate of Need application by the Metropolitan Health Board, the advisory board for the Metropolitan Council, the B-agency. The consumer representatives on this Board expressed their concern over what they perceived as inadequate community-based primary care clinics offering a learning experience for the medical student. This concern was shared by members of the local health care community involved in serving the underserved in their own neighborhoods. This concern was also shared by members of the University Health Sciences who saw an added commitment of teaching institutions to set up new models and curriculum for a changing health scene.

The remote site primary care clinic that this grant speaks to is a direct response to a shared concern. It calls for taking examining room space used for education of the medical student out of the University walls and putting it in the community setting where it will be more relevant. Other clinic space replacement will be in the development of the adult component of the Community University Health Care Clinic and other primary care sites removed from the University.

The facilities in which the University of Minnesota Health Sciences is carrying out its current educational programs is described in the following section and elsewhere in this application.

The facilities covered in this grant, namely a remote site community location, are ultimately dependent upon available buildings in or near the community which is selected for the service-education program. (The process of site selection is described and referred to throughout this application). None-the-less, it is anticipated that basic conception of care delivery space as described in section titled "Applications for Patient Care Facilities", pp. 32 ff. guidelines, will be reproduced as closely as the configuration of remodeled space will allow.

The primary aim of the facilities design is to provide an atmosphere which combines flexibility of function with the integration of the patient care process and the teaching and mutual learning activities which are central to this model of comprehensive community teaching program. Areas designed for the reception of patients should be designed with controlled activity and quiet areas to provide options for the use of "waiting" time. Activities such as educational audio visual materials designed for separate adult and child learning will be utilized. Professional attention by members of the health team will commence immediately upon arrival to facilitate patient involvement in the entire visit experience. If space allows, private areas or rooms will be located adjacent to the main reception area to enable nurse practitioners, etc. to conference with the patient as need arises (either indicated by staff or the client). Examination areas will be located physically proximate to the reception areas, but segregated for sound and visual privacy by walls, etc. Private conference space for medical staff and students will be necessary to allow control of the discussion taking place in the presence of the patient. However, it is anticipated that the majority of relevant information and teaching will occur in the examination treatment suites. The fundamental idea is to provide functional space which transmits an atmosphere of participation, efficiency and useful comfort.

Summary of the Number of Examination Rooms
Controlled by the Medical School

C U R R E N T

<u>Location</u>	<u>Number</u>
University Hospitals	156
Major Affiliates	460
Community-University Health Care Clinic	<u>7</u>
TOTAL	623

P R O P O S E D

<u>Location</u>	<u>Number</u>
Universtiy Hospitals	156
Major Affiliates	460
Community-University Health Care Clinic	increased to: 12
Primary Care Clinic	12
Chicago Avenue - Family Practice Clinic	<u>14</u>
TOTAL	654

As indicated on the chart shown on page 114b, there is no anticipated increase in the net square feet of space controlled by the Medical School as a result of the three proposed primary care clinics. However, an emphasis on out-patient teaching rather than just the traditional inpatient teaching program is reflected in the increase in the number of examination rooms available to the Medical School at these remote sites to enable us to accomplish this goal.

CURRENT
SUMMARY OF SPACE CONTROLLED BY THE MEDICAL SCHOOL
AT MINNEAPOLIS CAMPUS

	<u>Net Assignable Square Feet (NASF)</u>			<u>Number of Student Stations</u>	
	<u>Total</u>	<u>Total Utilized</u>	<u>Usable by Program</u>	<u>Total</u>	<u>Usable by Program</u>
Classroom-type instructional space	10,425	8,209	8,209	3,809	2,528
Laboratory-type instructional space	81,360	43,983	43,983	1,265	460
Library space	3,051	3,051	3,051	---	---
Auditoriums	3,123	3,123	3,123	300	300
Administrative Office and Areas	88,050	88,050	88,050	---	---
Faculty Offices	84,554	72,723	72,723	---	---
Research and Research Training Space	271,061	247,400	247,400	---	---
Animal Facilities	41,406	41,406	41,406	---	---
Support Space	74,905	68,990	68,990	---	---
Other Space	3,000	3,000	3,000	---	---
TOTAL (Exclusive of patient Care Facilities)	660,935	579,935	579,935	5,374	3,288



1



Summary of Space controlled by the
 Medical School (Mpls. Campus) Showing
 Patient Care NSF, including Major Affiliated Hospitals

A Current Teaching NSF	B Patient Care NSF including the University Hospitals and major Affiliated Hospitals	C Total NSF	D Remote Site Patient Care space requested to replace NSF at affiliated Hospitals	E Balance of NSF at affiliated Hosp. After Completion of Projects	Total Columns A, D + E
657,935	1,370,200	2,028,135	14,700	1,355,500	2,028,135

PROPOSED
SPACE UTILIZATION FOLLOWING COMPLETION OF PROJECT

	<u>Net Assignable Square Feet (NASF)</u>			<u>Number of Student Stations</u>	
	<u>Total</u>	<u>Total Utilized</u>	<u>Usable by Program</u>	<u>Total</u>	<u>Usable by Program</u>
Classroom-Type instructional space	10,425	8,209	8,209	3,809	2,528
Laboratory-type instructional space	81,360	43,983	43,983	1,265	460
Library space	3,051	3,051	3,051	---	---
Auditoriums	3,123	3,123	3,123	300	300
Administrative Office and Areas	88,050	88,050	88,050	---	---
Faculty Offices	84,554	72,723	72,723	---	---
Research and Research Training space	271,061	247,400	247,400	---	---
Animal Facilities	41,406	41,406	41,406	---	---
Support space	74,905	68,990	68,990	---	---
Other space	3,000	3,000	3,000	---	---
TOTAL (Exclusive of patient Care Facilities)	660,935	579,935	579,935	5,374	3,288

Summary of Space not controlled by the Medical School but Jointly used
with other Health Science Units

CURRENT

<u>Type</u>	<u>Net Sq. Ft.</u>
Auditoriums	16,000
Classrooms	11,000
Seminar	<u>2,000</u>
TOTAL	29,000

PROPOSED

<u>Type</u>	<u>Net Sq. Ft.</u>
Auditoriums	16,000
Classrooms	11,000
Seminar	<u>2,000</u>
TOTAL	29,000

Summary of Patient Care Space
Currently Controlled by the Medical School
Including Major Affiliates

<u>Location</u>	<u>Net Sq. Ft.</u>
University Hospitals	223,000
Hennepin County Hospital	275,000
St. Paul Ramsey Hospital	320,000
Veteran's Administration Hospital	485,000
Mt. Sinai Hospital	67,000
	<hr/>
Total	1,370,000 NSF

Summary of Proposed Patient Care Space
Which is Controlled by the Medical School,
Assuming Completion of the (3) Remote Site Clinics

<u>Location</u>	<u>Net Sq. Ft.</u>
University Hospitals	223,000
Hennepin County Hospital	271,000
St. Paul Ramsey Hospital	315,000
Veteran's Administration Hospital	480,000
Mt. Sinai Hospital	66,300
3 Remote Site Clinics	14,700
	<hr/>
Total	1,370,000 NSF

Summary of the Number and Location
of the Undergraduate and Graduate Medical Students

CURRENT 1974-75

<u>Students</u>	<u>No. at Health Science Center</u>	<u>Number at Affiliates</u>	<u>(1) No. at other com- munity Resource</u>	<u>No. at Remote Site Clinics</u>	<u>Total</u>
Undergraduate (includes 35 3rd year North Dakota students)	423	348	229	1	1001
Intern	29	87	-	-	116
Resident	193	423	100	2	718
TOTAL	645	858	329	3	1835

PROPOSED 1979-80

Assumes Completion of the (3) Remote Site Clinics

Undergraduate (includes 35 3rd year North Dakota students)	445	357	244	14	1060
Residents	222	502	100	10	834
TOTAL	667	859	344	24	1894

(1) The space at these community resources is not controlled by the Medical School.

FYE Graduate Medical Students in training at Patient Care Facilities controlled by Medical School

<u>Students</u>	<u>Current Number FYEs</u>	<u>Proposed Number FYEs</u>
Interns	116	116
Residents	<u>618</u>	<u>618</u>
Total	734	734

An additional 100 residents are in training at Patient Care Facilities in other community resources, whose space is not controlled by the Medical School.

Proposed Project

The Medical School will utilize the proposed facility as a clinical teaching base for training students in the primary care disciplines of Medicine, Pediatrics and Ob/Gyn. The proposed clinic will be a community based location selected jointly by the Metropolitan Health Board and the University as described on page of this proposal. The structure will be located in an area with a stable population from various social and economic levels within reasonable traveling distance for health science students.

The following purposes will be primary in the site selection.

1. To provide alternative educational experiences for medical students.
2. To improve the quality of patient care in the selected community.

Following the selection process and the refinement of the educational program, modification of the basic model clinic design already utilized within the Health Sciences will begin.

Specific consideration relative to construction will be given to the following:

1. Functional capabilities.
2. Environmental health and life safety aspects.
3. Availability of diagnostic and treatment services.
4. Limiting physical impediments which inhibit flexibility.
5. Coordination of educational activities to provide an integrated and balanced teaching program.

The program as here presented is not an end in itself but merely one of several important stages in the planning process. The functional program gives information that the architect should not be expected to derive from his own knowledge of the project.

Service and administration areas are generally somewhat less critical in terms of functional relationships than are other more specialized areas, but are nevertheless included in our programming to illustrate their most probable relationships, and relative space requirements.

Programmed areas (in net square feet) do not include stairs, corridors, elevators, dumbwaiters, shafts, common vestibules, walls, partitions, open courts or passageways. (Such areas may account for 1/3 to 1/2 of the gross area required to accommodate the program.)

It is recognized that the area called out for each room in the program is only a guideline which suggests a reasonable and adequate area suitable for most applications of that particular type of room. Therefore, one obvious conclusion to be drawn when comparing a written program with any conceptual plan, i.e., single-line space relationship diagrams, is that the area totals need not match exactly nor, indeed should they match. Numerous factors can, and will influence the final size and configuration of any given room. Once detailed planning is underway, some of the more obvious influences may be: What equipment goes in this room? How big is this equipment? Who uses it? What is the best traffic pattern for performing the assigned function? Will the room be suitable for an alternate use if this immediate function is relocated? What economic climate is prevalent regarding the project as a whole? What relative rank does this function have in the overall scheme? etc.

UNIVERSITY OF MINNESOTA
MEDICAL SCHOOL

Utilization of Clinic Examining Rooms
for Medical Education

A projection is made to 1979-80 concerning the anticipated utilization at that time for medical educational activities in clinic examining rooms available to the Medical School for its teaching program. University of Minnesota Hospitals has projected a need in 1979-80 for 156 examining rooms based on approximately 210,000 patient visits anticipated during that year, including an average of 5 patient visits per examining room per day of clinic operation.

Enrollment of Undergraduate Medical Students

The following table provides data on medical student enrollment at the University of Minnesota Health Sciences Center during the current year, 1974-75.

<u>Medical Student Year</u>	<u>Medical Student Class</u>	<u>Current Enrollment 1974-1975</u>
First	Phase A	247
Second	Phase B	237
Third	Phase D ₃	517 < $\begin{matrix} 301^* \\ 216 \end{matrix}$
Fourth	Phase D ₄	
Total medical students		1001

*Includes 35 third year North Dakota students.

Utilization of Clinic Examining Rooms by Medical Students

Phase A and Phase B medical students utilize examining rooms intermittently during the first and second years of medical school in their clinically-related courses entitled Introduction to Clinical Medicine and Student as Physician. For this analysis, we estimate that, on the average throughout the year 1979-80, approximately 10 student equivalents from Phase A and/or B will be involved in outpatient clinical activities in the examining rooms of B/C.

The great bulk of day-by-day medical student utilization of clinic rooms is by students in Phase D, who are assigned, essentially on a full-time basis, in block periods of time to clinical activities, a significant portion of which relates to outpatient experience. We assume that, on the average in 1979-80 as is now the case, 28 percent of Phase D students will be assigned to clinical activities at University of Minnesota Hospitals. We further assume that in 1979-80 approximately 60 percent of the clinical experiences of medical students so assigned will be in the outpatient units, utilizing clinic examining rooms in Building B/C. In the projected enrollment for 1979/80, we project that we will have 539 Phase D students. Of these, on the average 151 will have continuing daily educational experience at University Hospitals; of that number, 91 Phase D students will utilize 91 B/C clinic examining rooms. These numbers of Phase D students in residence at the Health Sciences Center and utilizing clinic rooms represent a 23% increase over comparable figures for the current year.

Utilization of Clinic Examining Rooms for Medical Education

Daily Work Load of Medical Students, Housestaff and Faculty in Clinic Examining Rooms

In 1979-80, on the average, one-half of the examining rooms will be utilized by Phase D medical students who, at their various levels of limited experience and educational background, are able to function significantly less efficiently and rapidly than more experienced housestaff and faculty. In a teaching environment, a Phase D student will usually need about 1.5 hours to perform adequately a complete "workup" on a University Hospital patient, plus an additional 1.0 hour for teaching review with or by one or more staff members, further consultation with the patient and appropriate disposition of the clinical problem. Thus, occupied 2.5 hours per average teaching outpatient, one student examining room accommodates about 3 such patient workups and related teaching exercises in 7.5 hours, leaving about one-half hour in an eight-hour day for room preparation and changes of occupants.

In the remaining one-half of the examining rooms, housestaff physicians (interns and residents) and medical faculty will be simultaneously learning, teaching and providing medical service as they care for an average of 7 patients per day per room. Generally these more experienced physicians work in the outpatient setting considerably more rapidly and efficiently than do medical students, although, due to intermingled teaching activities and frequently very complicated patient problems, less so than many experienced physicians in a non-teaching practice.

At the Health Sciences Center educational setting, an average of 10 outpatients will be cared for in each 2 examining rooms of the 156 available rooms in 1979-80, providing service for a total of 210,000 patient visits during the year. Working in this manner in the clinic, on a daily average basis, will be 10 Phase A and B medical students, 91 Phase D medical students, approximately 40 housestaff physicians and 20 faculty physician-teachers, for a total of 161 medical personnel in 156 examining rooms.

The following outline will graphically show the current and projected overall utilization of the total clinic examining rooms available to the medical school for its educational program. This assumes completion of the (3) remote site clinics.

	<u>Current (1974/75)</u>	<u>Proposed (1979/80)</u>
Total Number of Exam Rooms Available	623	654
Total number of Medical Students using the available exam rooms		
Undergraduate	408	429
Graduate	<u>309</u>	<u>359</u>
Total	717	788

For brevity, this analysis of educational use of clinic examining rooms has focused only on undergraduate medical students, and, to a lesser extent, on clinical graduate students and related faculty. This analysis does not consider the extensive but variable use made of clinics in educational programs by numerous other health science students, including students of nursing, clinical pharmacy, occupational therapy, physical therapy, clinical psychology and other allied health fields, as well as their related faculty teachers.



PLANNING NOTES

1. Typical Clinic Areas:
 - a) patient exam rooms
 - b) patient consultation rooms
 - c) conference offices
 - d) small clinical laboratories

2. Examination Room Utilization:

Students:	1st visit: 2 hrs. = 4 patients/day
	Follow-up: 45 min. = 10 patients/day
House Officers and Faculty:	1st visit: 45 min. = 10 patients/day
	Follow-up: 20 min. = 24 patients/day

3. Misc. Sizing Criteria:

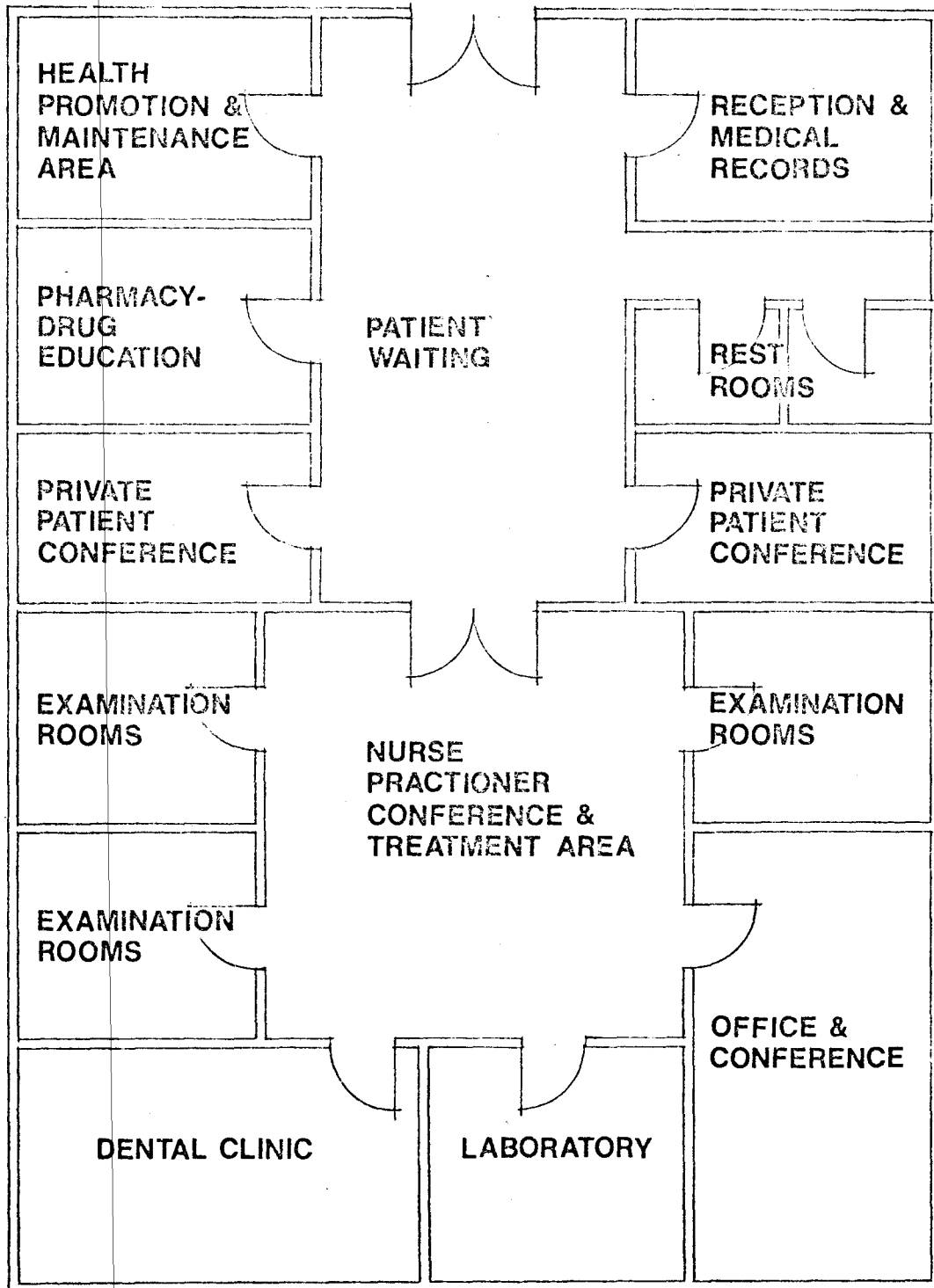
Waiting areas: (outpatient ambulant patients = 12 sq. ft./each, ambulant patients in wheel-chairs = 15 sq. ft./each, stretcher patients = 25 sq. ft./each.

Exam rooms	120 sq. ft./ea.
Consultation rooms	40 sq. ft./ea.
Utility rooms	120 sq. ft./ea.
Reception clerks	45 sq. ft./ea.
Laboratories	150 sq. ft./ea.
Offices	100 sq. ft./ea.
Toilets	40 sq. ft./ea.
Conference rooms	10 sq. ft./person
Storage	100 sq. ft./ea.

4. Exam Room Characteristics: Accommodate:
 - a) patient/student/instructor/other
 - b) take & record medical history
 - c) exam table/light
 - d) lavatory
 - e) patient dressing
 - f) writing area
 - g) diagnostic instrument storage & ?
medical storage

5. Consultation Areas:
 - a) use 1 consultation room per 4 exam rooms

CIRCULATION



PRIMARY CARE CLINIC FUNCTION DIAGRAM

Future Expansion

Following completion of Unit B/C, now under construction and remodeling of vacated space, first priority of future Medical School construction will be finishing areas in Unit B/C.

These facilities will be used to house Medical School faculty needed to teach the total enrollment of the Medical School. The approximate scheduling of construction is planned between 1976-1981. At present we are not requesting Federal participation for completion of these facilities; however, depending upon the status of eligibility under the Health Manpower Act, future Federal participation may be requested. It is expected that funds for construction might be obtained from private sources, departmental funds or specific research funds.

Health Sciences expansion includes Unit F which will house the College of Pharmacy and the School of Nursing.

Foreseeable expansion of the Health Sciences beyond 1980 and 1985 would include: Remodeling of vacated space for the School of Public Health, and a new hospital, Units J and H, to replace beds. Space vacated by these beds and other hospital functions will be remodeled and used for expansion in the areas of clinical teaching and research; student study spaces; faculty and administrative offices.

THE MASTER CAMPUS PLAN

The University of Minnesota Health Sciences Expansion provides facilities for the consolidated units of the Health Sciences: School of Medicine, University Hospitals, School of Dentistry, School of Public Health, School of Nursing and the College of Pharmacy.

The complex of new and remodeled existing buildings comprising the Health Sciences facilities is the Architects' response to the University's goal of physical and curricular integration of the Health Sciences units with each other and the rest of the Minneapolis campus of the University.

The problem as defined by this goal was to develop a high density building system on a tight urban site with strong relationships to major existing facilities. This system needed to respond to the initial phase of expansion as well as to the continuing need for growth and change inherent in health sciences units.

The Architects' initial effort was to develop a master plan which provided for short and long term expansion and responded to the integrated relationships called for in the program. This master plan serves as a framework for growth by establishing the major paths of circulation knitting together new and existing buildings. A centralized receiving unit (Unit E) is the focus of a separate service circulation network connecting existing buildings and new construction two floors below grade. The centralized receiving with material distribution tunnels to Health Science areas will replace 18 widely dispersed receiving areas. The master plan also provides for an eventual major pedestrian spine with branches to existing buildings and new construction to the 2,000 car parking ramp providing the capability of moving to all parts of the Health Sciences without being exposed to the frequently severe weather (see site plan, following pages).

The master plan is comprised of Units A, B/C, K/E and F as shown on the site plan attached.

Unit A houses the School of Dentistry, Basic Sciences teaching laboratories, Auditoria, and programs from the Schools of Public Health and Medicine. Construction was completed on this unit in November, 1973.

The general criteria which established the basic planning framework are as follows:

- 1) Because of the great investment from public and private sources in existing facilities, the plan must conserve and enhance the desirable characteristics of the present Health Sciences Center.

- 2) The plan must be adequate in scale to serve all contemplated programs of the Health Sciences Center-- programs that include substantial enrollment increases in all areas.
- 3) The plan must facilitate and, in fact, encourage interaction among persons in all Health Sciences programs.
- 4) The plan must provide maximum flexibility for adaptation to anticipated but unspecified changes in programs in the wake of social and scientific progress.
- 5) The plan must be compatible with other aspects of University development and enhance the involvement of the Health Sciences with the rest of the University and the community.
- 6) The plan must provide opportunity for development beyond any programs now contemplated.

Unit B/C, now under construction, is primarily a Medical School facility and will include auditorium and general classrooms, a Learning Resources Center, outpatient clinics and seminar rooms, faculty offices and teaching faculty research and support space. Unit B/C is designed as a continuation of the recently completed Unit A, both physically and functionally.

Unit E, as previously mentioned, constitutes the centralized receiving unit for the Health Sciences. Above Unit E, Unit K houses a Cardiovascular Research Center.

Unit F will house the College of Pharmacy and School of Nursing.

The current B/C program consists of two parts. One part will be completely finished space. The other part will be shell, or unfinished space at present. The finished space will include auditorium and general classrooms, a Learning Resources Center, outpatient clinics and seminar rooms, faculty offices and teaching faculty research and support space.

Unit B/C is designed to integrate the education of medical students with patient care through more effective use of outpatient clinics as well as providing the usual teaching and office facilities. A total of 228 examining rooms is planned for the new outpatient area. As part of this proposal a total of 156 examining rooms are scheduled to be completed. Also included in the clinic modules are seminar rooms to allow increased

interaction for faculty, student and patient. It has been recognized that the patient, as well as the students and faculty, must be easily and comfortably accommodated within the clinic complex to provide the type of interaction needed for both effective teaching and effective health care for the patient.

The Health Sciences Expansion project is bounded almost entirely by existing University dormitories, libraries, hospitals, and classroom buildings. The notable exception is an area to the North and East of the site along Washington Avenue. This contains some commercial and housing functions, part of the area has been considered a logical direction for long-range future expansion. The University has initiated discussions with the community regarding future land acquisition in the area so that property owners are apprised of the time-table well in advance of any University acquisition. In 1967 the Regents of the University established official boundaries for the campus.

With the exception of the area mentioned, and the space discussed in this application, future expansion of the Health Sciences will involve remodeling and renovating vacated space, most of which is of early 1900 vintage and must be updated for use as health professions training facilities, but is structurally sound and ideally located within the Health Sciences complex.

PROJECT DESIGN AND DEVELOPMENT, COMPLIANCE AND ENVIRONMENTAL STANDARDS FOR PROJECTS DEVELOPED THROUGH THE UNIVERSITY OF MINNESOTA.

Project design is administered through the University's Physical Planning Office. The Physical Planning Office has within its own personnel, the professional resources (architecture, engineering, planning and landscape architecture) to relate to the complete spectrum of environmental design factors associated with the planning and construction of public facilities. The Physical Planning Office is responsible for the planning, design development and working drawing preparation on all its projects as well as coordination and review with the appropriate agencies within and outside of the University System.

The Department of Environmental Health and Safety in the University of Minnesota Health Service is the official agency responsible for surveillance of the physical environment. The Department is also the official representative of the University in relationship to the provisions of the Occupational Safety and Health Act. This Department reviews all plans and specifications for new buildings and incorporates recommendations into the construction in both the internal and external portions of new structures. In this role, the Department will review the drawings in the latter stage of design to assure that features are incorporated to minimize disturbance to the surrounding environment. Also, the project will be reviewed to assure that appropriate environmental standards are met. The professional specialties included within this department are: occupational health, safety, general sanitation, microbiology, public health engineering, and health engineering, and health physics. Where there are not specific standards covering an environmental consideration relative to the project, subjective judgement of the University of Minnesota's team of specialists are used to help determine the most appropriate course of action.

It is the University's policy to comply with local, state or federal statutes, standards, or regulations that pertain to pollution. These include the regulations of the Minnesota Pollution Control Agency for Air Quality, Solid Waste and Noise (as the latter standard evolves under the direction of the agency) and standards pertaining to medical care facilities of the Minnesota State Department of Health. Also, there will be compliance with the local regulations including the "City of Minneapolis Noise Control Ordinance," and "Metropolitan Sewer Board Regulations" and compliance with appropriate Federal regulations including the "Clean Air Act," the "Federal Water Pollution Control Act," the "New Source Performance Standards for Steam Generators and Incinerators," the regulations of the "Occupational Safety and Health Act," and the regulations of the "Atomic Energy Commission."

All contractors bidding on this University project must submit an affirmative action plan along with their bid. This plan must follow the guidelines required by the University's Affirmative Action Officer, the State of Minnesota's Equal Opportunity Officer and other interested Federal Agencies.

All construction controlled by the University complies with the Unified Building Code and the Minnesota Building Code.

Project Cost Estimate - Primary Care Clinic

In order to ascertain the amount of federally eligible monies for this project recognizing that 50% of the space requested must be utilized for instructional purposes, the following eligible cost has been derived.

$$\text{Project Cost } \frac{\$431,537}{9600 \text{ n.s.f.}} = \$44.95/\text{n.s.g.}$$

Cost to the Federal Government

It is anticipated that the total assignable square foot of the clinic used for instructional purposes by the Medical School departments of Medicine, Pediatrics and Obstetrics and Gynecology, will represent one-fourth of the available n.s.f. of the clinic.

The federal dollars requested have therefore been estimated at \$102,838.

$$\frac{\$102,838}{2400 \text{ n.s.f.}} :: \$42.85/\text{n.s.f.}$$

primary medicine area

SECTION III

Primary Care Report

B-C Implementation Committee

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University of Minnesota Health Sciences

Primary Care Report

I. Introduction

The purpose of this report is to outline the Committee's approach to a primary care outreach clinic.

The B-C Implementation Committee was given this assignment as part of modifications to the B-C certificate of need application. The terms of the Health Sciences commitments are included in the report of the Human Resources Committee of the Metropolitan Council, March 13, 1974, included as Appendix A-1.

We approached this assignment by reviewing the area of primary health care in relationship to the Health Sciences Center. The Health Sciences units are involved in a number of primary care programs within the Health Sciences Center and in the community. The form and content of any new outreach primary care program should be undertaken against the framework of general health sciences efforts in the primary care area. It should be noted that the terms tertiary, secondary and primary care are planners' terms to describe the existing health care delivery system. They are not particularly useful terms in describing the health sciences educational programs. The committee found at the outset it was necessary to develop a glossary of terms for internal communication and these items are compiled as Appendix A-2.

Next, the individual units were asked to submit their ideas of an outreach primary health care unit. These individual reports are included as Appendix A-3. From the individual reports, a list of essentials of a primary care health clinic was developed. This list of essentials is from health sciences perspective and serves as a point of departure in our discussions with Metropolitan Health Board representatives.

The Metropolitan Health Board is going to play a vital role in site selection.

Once a site is designated, community representatives will be participants in determining the scope of services and other aspects of clinic design. The role of the community gives the promise of flexibility and innovation to the project. First, this report is the beginning of a new approach for the Health Sciences to delivery of primary care. Second, this proposal calls for the shape of primary care services to be an item negotiated with the people served by the center.

The final section contains the plan for implementation. Many issues remain. The purpose of this section is to indicate some important issues before the Metropolitan Health Board and before the Council of Health Sciences Deans and Directors.

Before proceeding on, the Committee would like to spell out some of the assumptions basic to this preliminary report.

1. This report is a preliminary effort by the University Health Sciences to define its role in primary health care through the development of a specific program.
2. The Committee has defined a primary health care model which includes primary medical care as a component.
3. An innovative clinic will best succeed with the cooperation and support of the Metropolitan Council, Metropolitan Health Board, Minnesota Department of Health, the Health Sciences Center and the community and individual to be served.
4. The project in challenging and testing establishment primary delivery patterns should be expected to generate a certain amount of creative tension between all parties concerned.

This report concludes the first phase of the planning effort. The Metropolitan Health Board will need to take the lead in defining areas of need and determining what communities would like to work with the health sciences.

Once site designation is accomplished, the next phase of planning can begin.

We have enjoyed this assignment. The problems encountered in working toward implementation represent, in microcosm, the paramount health delivery issues today: financing delivery and education, definition of primary care governance and public accountability, development of consumer control mechanisms and measurement of the health care delivered.

11. Primary Health Care and the University Health Sciences Center

The purpose of this section is to give a brief overview of status of primary health care in the Health Sciences Center. In most academic health centers the decision-making process for educational policy is better defined and understood than the health delivery decision-making process. University Hospitals is fortunate in that the creation of a Board of Governors and updating of medical staff by-laws provides the basis for a sound health delivery decision-making process. One of the modifications to the B-C proposal calls for the establishment of a new and innovative delivery model.

This modification is consistent with the Health Sciences Mission Statement adopted by the Board of Regents in 1971. The mission statement specifically addresses the issue of primary care.

Fundamental to the objective (educate health professionals) will be educational emphasis on patient care, the prevention of disease, and the maintenance of conditions of health. The Regents believe it is imperative that special and increased emphasis should be given to research and development of innovative systems for delivering optimum health care.

In fulfilling these missions the Regents expect to sponsor cooperative efforts in Minnesota with professional groups, hospitals, educational institutions and community organizations and all agencies concerned with health care.

Not only is the modification consistent with the mission statement, but the outreach clinic provides the University with an excellent opportunity to work with the planning agency in site selection. The role of the Metropolitan Health Board is crucial. No health provider has the indepth knowledge of areas of need and desires of the community that the planning agency possesses. Because of the visability of the outreach project, the findings relating to the innovative elements of the primary care clinic will be widely circulated in the community. It is important to acknowledge this project visability and to view it as an asset.

Before discussing how the Health Sciences units view a primary care model, it might be useful to review some of the educational-delivery efforts that the units are now engaged in. Perhaps the existing activities can best be reviewed by the following table:

TABLE 1

Primary Care Education - Service Models
University of Minnesota Health Sciences Center 1974

<u>UNIT</u>	<u>Within Health Sciences</u>	<u>Outside Health Sciences</u>
Dentistry	General Clinics Hygiene Clinics	Rural Dentists Office Dental Education Program
Medical	Cancer Detection Center See Hospital	Family Practice Clinics Faculty efforts at affiliated hospitals Rural Physician Associate
Nursing	Mid-Wifery Child Rearing - Child Bearing	Leukemia Death at Home
Pharmacy	Drug Abuse Patient Education	St. Paul Project
Public Health	Environmental Programs	Health Education Project Public Health Nursing
Hospital	Walk-In Clinic Home Health Care	Neighborhood Clinics Portion of Community Services
Veterinary Medicine	Small Animal Clinic	West Bank Clinic
Vice President's Office		C.U.H.C.C.

Table 1 indicates that the individual units already have a substantial investment in primary care programs.

Another method of assessing the applicability of existing primary care programs to the modification proposal is to emphasize the programs or portions thereof which may be transferable to a new model.

APPROPRIATE TO AN INNOVATIVE PRIMARY CARE MODEL

<u>Program</u>	<u>Basic Elements</u>	<u>Innovative Characteristics</u>
Community Clinics	Varying degrees of health sciences participation in care, administration and funding	Community Board Non-physician patient access
C.U.H.C.C.	Child Care Team Model	Community Advisory Group Health Team
Child Bearing - Child Rearing	Nurse Practitioner as primary provider	Patient participation and education
Human Sexuality	2-3 day Awareness Program	Participant Involvement One system access to Total Well Being
Public Health Nurse- Pediatric Practitioner Geriatric Practitioner	Model of maximum delegation in specific age grouping	Degree on Ind.
Clinical Pharmacist	Pharmacist-Patient contact Pharmacist Drug Monitoring	Patient Education
Health Program for Retired University Employees	Clearinghouse for coordinating care and providing if appropriate	Population Group other than care service
Well Child Clinic	Health Promotion	Patients seen with family in non-disease state
University Hospitals Walk in Clinic	Primary Medical care Team model	Providers work as team
Home Health Services	Nurse health maintenance in patients home	Off facility setting Nurse acts with delegated duties
Physicians Office Preceptorship	Student as participant in health team as defined level	Medical Student as other health professional level

Table 2 illustrates that the Health Sciences contain many programs dealing with new approaches to primary health care. In considering guidelines for a new delivery model, it is apparent that the Health Sciences are a rich resource for implementing the agreed upon program. It is not that the individual units aren't doing something in the area of primary health care, but rather that individual efforts are not coordinated in a model. Therefore health sciences students do not have access to a team experience in delivery of care.

The Committee has been fortunate in having the participation of several individuals who have started new delivery programs. These individuals have expressed an interest in participating in the new clinic. In addition, representatives of the Minnesota Department of Health have been meeting with the committee to explore the feasibility of a joint Health Department -- University Program.

In addition it should be recognized there are certain gaps to Table 2 in terms of some innovative features that should be considered. These features include:

1. Participation by community or community representatives in negotiations with providers on issues of scope and cost of services.
2. High volume model with maximum use of non-physician health professionals and maximum utilization of the physician as consultant - educator.
3. A measured attempt to involve the individual patient or family in the care process through meaningful health education.
4. The quantification for various levels of care and probability associations with various levels of cost.
5. The development of a reasonably complete primary health care model that would have general applicability for the State and region.
6. Total health responsibility for a defined population. This is essential to measure effects of a primary model over an extended period of time.

7. Collaboration with the Public Health system to build on the strengths of both the private delivery system and the public health evaluative and regulatory system.

8. A program with good visibility and commitments from the Health Sciences.

III. Essentials of a Primary Care Clinic from the Perspective of the University Health Sciences

Opportunity for Innovation

Apart from the obligations of the Unit B/C certificate of need commitments, the committee views the Primary Care Clinic (PCC) as an opportunity to innovate in the organization of health services and the utilization of health manpower. Primary care has been identified as a significant unmet need in the State of Minnesota. The Regents Mission Statement places with the University Health Sciences responsibility for production of health manpower to meet the health care delivery needs of the state. From this perspective, the PCC is not only a service endeavor, but also an opportunity to build alternative ways to deliver primary care. In pioneering primary care delivery alternatives, the UHSC makes the production of health manpower more responsive to the health needs of the state.

Health Team

Each unit has made significant strides forward to meet its responsibilities for innovative health manpower roles to better serve the health care delivery needs of the state. The Family Practice program, the Rural Physician Associate program and the emerging general practice track in Internal Medicine respond to clearly stated priorities of the Board of Regents, the State Legislature and the public at large. So, too, do the nurse partitioners--pediatric, adult, geriatric and nurse midwife; the dental health team--dentist together with dental hygienist and dental assistant; and the clinical pharmacist extend health manpower services to better serve primary care needs.

However, there are too few opportunities for innovative health manpower roles to interact. The University Health Sciences Center does not offer sufficient opportunity for health professionals from new delivery roles to practice together. Nor do health science students from different disciplines, pursuing careers as primary care servers, have sufficient opportunity to learn together. Assembling alternative models for delivery of primary care with alternative approaches to the primary care health team is an important goal.

Design of Services

The mix of health services and arrangements for coordination of services will be developed in conjunction with representatives of the community to be served. Different communities will have different health care needs and will present different primary care challenges.

However, the committee, on behalf of the University Health Sciences, does have responsibility to put forward a concept for a valid alternative model for delivery of primary care.

The committee proposes an approach to a primary care clinic that focuses on levels of care. The committee views primary care as having two essential aspects: health management services and health problem services. Traditional primary care services focus largely on the latter. The model proposed by the committee assigns importance to both. The committee recognizes that there is significant interface between health and illness care and that the boundaries of each will have to be determined through experience. In addition to health and illness services, there is a very significant set of health services that are a necessary supplement to both. The committee considers these three components of care--health management services, health problem services and

support services--essential for a primary care model that aspires to serve the health as well as illness needs of a community.

Health Management Services

well baby/normal pediatric health care
 normal adult health care
 normal geriatric health care
 management of the normal pregnancy
 preventive dental health services

Health Problem Services

treatment of pediatric, adult and geriatric illness
 treatment of dental problems
 treatment of mental health problems

Support Services

health education resources
 clinical pharmacy services
 quality of care assessment resources
 nutrition resources

The organizational issues to be resolved through the process of implementation are method for first access to the patient, coordination of services and patient disposition. These are important variables in structuring a primary care model and possibly alternatives should be developed, implemented and assessed.

Consumer Role

In two important respects the consumer of health services has new responsibilities in health care delivery today.

First, the consumer is a member of his health care delivery team with obligations for health promotion and management of health problems. The consumer may require health education to be able to adequately meet these obligations.

Second, the consumer should be a participant in the development of policy for community-based health services.

f. Services

The premise for innovation with alternative models for delivery of primary care is that the health care delivery system requires an efficient, cost-effective primary care component. Accordingly, the committee proposes that a model developed be self-supporting once the user population is established. Nonetheless, it is clear that there will be additional costs that require funding. First, there will be start-up costs common to the initial phases of a new delivery program. Also, there will be costs related to evaluation and study to determine the viability of the model. Finally, there will be costs related to participation of students. Each of these should be clearly identified so as not to be inappropriately included as costs to the consumer. An adequate investment in primary care may well reduce the total health care costs for a community in the long run. Initially total cost could be expected to increase as unmet health needs are diagnosed and treated. Therefore, appropriate utilization of primary care services should maintain and promote a healthier user population and encourage early diagnosis and treatment. Evaluation of this set of propositions will require following the experience of participants through utilization of the spectrum of health services. Payment or capitation is one technique to assure provider awareness of health care utilization experience.

Allocating funds for the start-up, evaluation and education costs associated with development of an innovative primary care delivery model for health

sciences education is the responsibility of the Council of Deans and Directors and the Vice President for Health Sciences.

Method of payment of services by the consumer population has not been determined by the committee. While prepayment would be consistent with the health promotion/health management philosophy of the primary care model proposed, this is a decision that will have to be made in conjunction with the participating community.

Integrating the Spectrum of Health Services

Linkage of the primary care component of health services to the secondary-tertiary delivery system is essential to establish continuity of care for a community. The committee is aware that too often focus on one component of the spectrum of health services has created fragmentation rather than coordination of health resources.

Designation of Target Population and Site

The committee recognizes that the Metropolitan Health Board has responsibility for site selection. The committee would like to offer one observation on the developmental process to the Metropolitan Health Board for its deliberations. In the judgment of the committee, the ability of an experimental effort to significantly influence patterns for organization of health services is considerably greater if the innovative program is developed in conjunction with a mixed income-moderate risk target population rather than a low income-high risk group. From this perspective, the ideal location would be a mixed income area with a shortage of traditional primary care resources and a population that would welcome participating with the University in developing an innovative primary care program.

Education

An innovative delivery of care model is an important educational resource in two respects. It provides faculty the opportunity to test and validate new health manpower delivery roles. Also, it gives students exposure to alternative patterns for organization of health services.

The educational policy units of the separate Health Sciences units will necessarily determine the conditions of student participation in the primary care clinic. The model proposed by the committee would make available to the units clinical experience with the interdisciplinary health team and with primary care oriented toward health promotion and maintenance. However, in order to have student health team learning experiences at the health team service site, significant problems of coordinating the scheduling demands of the separate units will have to be resolved on a Health Sciences basis.

Student pressure for interdisciplinary learning experiences has been a significant force in bringing the Health Sciences to action on a clinic patterned on the health team concept. Also, educational opportunities in primary care were a central concern of the Metropolitan Health Board in establishing the B/C commitments. Nonetheless, a quality clinical education program requires a quality service program. The committee urges that adequate consideration be given to the point in the process of building an innovative delivery program at which a significant educational program can be launched without jeopardizing the viability of the service model.

IV. Community Role in Primary Care Clinic

The committee acknowledges the responsibility of the University Health Sciences to develop alternative approaches to the delivery of primary care. While a student-faculty committee can develop a conceptual framework for an innovative primary care model, it can only go so far. Much of the design and development of a specific primary care clinic should be worked out in partnership with the community to be served.

Having proposed a framework for a primary care clinic with this report, the committee looks to the Metropolitan Health Board for progress on site designation. The committee would like to recommend to the Health Board a bid system for site designation. Once parameters for a qualifying health scarcity area have been established and communities meeting those requirements identified, the Metropolitan Health Board could organize a bid system to determine community interest in participating with the University in developing a primary care clinic. This approach would be consistent with the committee's concept of the role of the community in developing a responsive model delivery program.

Once a target area is designated, a more detailed phase of planning can begin. A task force of the committee would work in conjunction with representative of the community to define health needs, health resources, design of the primary care clinic and linkages necessary to achieve comprehensive health services.

V. Plan for Implementation

Implementation of the primary care model proposed in this report has the advantage of the support of the Metropolitan Health Board in selecting a site based on need for health services and desire of the community to work together with the University. The next phase of clinic design and development will begin with designation of target population and site. Some critical decisions and possible target dates for the Metropolitan Health Board and the University Health Sciences are as follows:

Considerations for the Metropolitan Health Board

1. Area to be served:
 - a. As identified by staff study of Metropolitan Health Board.
 - b. Possible use of bid system to identify community interest in working with innovative University model.
2. Process for identifying the community group to represent the area to be served.
3. Review of University conceptual model to see if the model is consistent with the original B-C modifications.
4. Assist the community and University if grant request is appropriate.

Considerations for the University Health Sciences

1. Review and acceptance by the Health Sciences units of the concepts outlined in the preliminary report.
2. Designation of administrative authority and an operational committee.
3. Development of the educational component of the clinic.
4. Development of resources
 - a. Commitment of support by Health Sciences units and
 - b. Exploration on additional resources.
5. Agreement of conceptual issues, if any, that are essential for University Implementation of the primary care clinic.

The Committee urges swift action by the Metropolitan Health Board in site designation with September as the target date. The next phase of clinic planning, involving representatives of the community, the Metropolitan Health Board and the University Health Sciences, should strive for completion this fall.

Primary Care Report

Appendix A-1

B-C Certificate of Need Commitments

Appendix A-2

Glossary

Appendix A-3

Primary Care Recommendations by
Health Science Units

REPORT OF THE HUMAN RESOURCES DEPARTMENT

MEMORANDUM

March 13, 1974

TO: Metropolitan Council

SUBJECT: University of Minnesota Hospitals - B/C Project
Request to Extend a Certificate of Need for a Proposal to
Construct New Facilities to Replace and Expand the
Ambulatory Care Programs as Modified

At its meeting of March 14, 1974, the Human Resources Committee considered the record and recommendations of the Metropolitan Health Board regarding the certificate of need application from University of Minnesota Hospitals - B/C Project. The attached material contains the record of the review, including the findings and recommendations of the Metropolitan Health Board pursuant to the public hearing held on March 13, 1974.

The role of the Metropolitan Council and of its Human Resources Committee is to review and consider the record prepared by the Health Board and in conclusion to "determine in accordance with its rules and regulations whether to accept, reject or modify the recommendations of the Metropolitan Health Board." (SPA Certificate of Need Regulations - Section 207 (e)). In considering the record, the Council members may request clarification of the record. Such clarification may be requested only from the Hearing Officer, the applicant or other persons present and testifying at the hearing. Since the Health Board is the only authorized hearing body, the Council members cannot reopen the public hearing and take additional testimony.

Recommendation

The Human Resources Committee accepted the findings and recommendations of the Metropolitan Health Board and recommends that the Metropolitan Council forward the following recommendations to the State Board of Health:

1. That a Certificate of Need be recommended for approximately 62,891 net square feet of clinic space encompassing the 156 examination rooms or 10 clinic modules. This represents a reduction of 18,126 net square feet encompassing 72 examination rooms or 5 clinic modules.
2. That the University commit itself to the establishment of an Advisory Board whose responsibilities shall be to advise the administration of

University Hospitals regarding the delivery of health care services as these relate to residents of the metropolitan area. This Advisory Board would be appointed by the Board of Regents and would include a majority who are not providers of health care.

3.

That the University commits itself to expand the programmatic, fiscal, and faculty support now associated with the existing Community-University Health Care Clinic and to develop and support, within the parameters of quality education, at least one additional project to demonstrate the feasibility of urban, comprehensive, community-based health clinics for all age groups. Educational programs in both the existing CUHHC and the additional clinic will be designed as approved courses with credit for students who select this option from specialty areas other than Family Practice. These educational experiences will be available for all students.

4.

That the University agrees to locate the new comprehensive health clinic as noted in 2 above in consultation with the Metropolitan Health Board and with the approval of the Metropolitan Council, within the metropolitan area. The community served will be represented on the board governing such clinics, recognizing that responsibility for maintenance of high quality of service and training must rest with the University.

5.

The University endorses and supports the principle of health planning and pledges its support and cooperation with the Metropolitan Health Board; the University will fully cooperate in Health Manpower studies with other agencies and with the Metropolitan Health Board; the University will follow the policies of the Health Chapter of the Metropolitan Development Guide as a guide to our role in the delivery of health care to citizens of the metropolitan area, consistent with the education and research roles of the University; the University also pledges itself to the continued use of existing facilities (where such facilities meet the criteria of quality health care and the needs of the University's educational programs).

/tv
3.15.74

GLOSSARY

Health

Metropolitan Health Board IHO Committee

A condition of complete physical, mental and social well being, not simply the absence of disease or infirmity.

School of Nursing

Health is a process of moving toward maximum individual effectiveness. Optimal health is effective functioning within the individual and within the individual's environment as perceived both by the individual and the health professional. Hence, health is not just the absence of disease. It can occur even though a disease or disability is present.

Health Services Scarcity

Metropolitan Health Board

1. When there is a quantitative lack of resources in a defined and contiguous area.
2. If resources are adequate, the service may still be scarce because they are inaccessible to the target population.
3. If resources and services are adequate and accessible, scarcity may still result from ineffective utilization of services.

Primary Care

Metropolitan Development Guide

Primary care consists of 1) initial diagnosis, 2) basic treatment, 3) case management and referral, 4) screening and early detection of potential health problems, and 5) health education. Often referred to as entry care or

maintenance care, primary health care includes those services needed for preventing illness and care includes those services needed for preventing illness and for health evaluation and management on a continuing basis.

Hennepin County Health Care Coalition

Primary health care is a continuous, personal relationship with a provider who acts as an entry point into the health system. It is based on shared responsibility between the patient and the provider. It is offered in any but an in-patient setting and is readily accessible to terms of cost, location, communication and hours of operation. The services provided are relevant to the needs of the community served and include any (emphasis ours) of the following: prevention, health education, diagnosis, therapy and/or referral and maintenance of an optimal level of health, with an emphasis being given to educating patients and their families in order that they can identify and manage their own health problems and work toward achieving their own potential for personal growth.

Hennepin County Health Care Coalition - Senior Citizen Project

The general purpose of all health care is to maintain and improve physical and mental health. Primary health care is an aspect of any total health care system. Its defining characteristic is the manner in which services are delivered: primary care services are delivered to people while they continue to live in their own homes. In addition, the services must be directly available, that is not requiring the formal referral of one health professional to another. This does not exclude care received through referral but merely services available only through this process. In sum then, any health care service which is a potential entry point into the health care system and which does not involve institutionalization is primary health care.

Scope of Service

a. Services provided in the area of prevention of illness, including:

Assessment of individual health status (i.e. complete physical)

Screening

Health education

Periodic medical checkups

b. Services provided in the area of illness, treatment including but not limited to:

Medical (episodic, chronic and emergency)

Information and referral (examples are mental health and counseling on alcohol and drug addiction)

Secondary/Tertiary Care

Care requiring extensive facilities taking place in health institutions such as hospitals, multispecialty clinics, nursing homes, etc.

Appendix A-3

Primary Care Recommendations
by Health Science Units

MODEL FOR A FAMILY HEALTH CARE CENTER

Definition of Health

Health is a process of movement toward maximum human effectiveness, a process of becoming and growing. Optimal health, then, is effective functioning both within oneself and within one's environment as perceived both by the client and the professional. Seen in this sense, health cannot be the opposite of sickness. Therefore, health is not just the absence of disease. It can occur even though a disease or disability is present. Since health is a life process, the client has the ultimate responsibility for his/her own health decisions.

Basic Assumptions of Health Care

The nuclear family by itself is not able to provide support systems for itself to meet all demands placed on it.

Growth and development is a dynamic process with both predictable and unpredictable facets.

Each life stage of the individual and of the family involves a goal shift in life thrust. Effective intervention at these crisis-prone stages promotes growth and health.

A focus on illness does not necessarily bring with it a focus of health.

The life process is a series of decisions that must be made. Some decisions are potentially health and growth promoting and some are not.

To a large extent, people do have control over events and especially over the meaning which they attach to events.

It is possible for life to be lived largely through acting rather than through reacting, deliberately rather than accidentally.

Promotion of optimal health decreases the incidence of illness.

Basic Concepts of the Health Care Center

The health care center should be family centered, with provision for individual help and other small group support as necessary and appropriate.

A client can be, wants to be, and needs to be in control of his health process. Professionals in the center encourage and facilitate the efforts of the client to control his health process.

The professional has the opportunity to participate in the decision-making of the client. The client has the right to accept or reject services offered by the health professional.

Overall Goal of the Family Health Care Center

The overall goal of the health care center is to establish a setting in which basically healthy families can receive individualized health care given primarily by nurses. Special services such as for dental health care, and back-up services for illness-care will be provided.

Choice of Clinic Site: Considerations

1. The center should be located within a low-risk population.

Evaluation is necessary in any program for provision of services.

Too often experimental health-related programs have been tried on high-risk populations.

Low risk populations, because they have fewer medical problems, will have a greater readiness for health promotion services and can use them more fully.

The amount of education and illness-care necessary to get medically high-risk people to a point of using health promotive services is too costly in time and resources.

Evaluation of a new program is best done when fewer variables are involved. Focusing on a low-risk population will reduce the number of variables and enable effective evaluation of a new approach to health care.

Consumers are the major means of selling a new program.

Offering the new program to a low-risk population will decrease the chances of its being viewed as a second-class "welfare" program. It can be better judged for its potential as a model of health care usable throughout the state.

2. The center should be accessible.

The center must be easily accessible to clients with ample parking and proximity to public transportation.

The center should be in reasonable proximity to ancillary services.

The center should be accessible in distance for health science students and faculty.

Target Population

Families at all stages of development will be served. No restrictions, geographic or otherwise, will be imposed.

It is anticipated that initially most response from clients will come from families in the childbearing and childrearing years.

Nursing in the Health Care Center

The concept of health care to be provided in the center requires different kinds of expertise from the professional than is required in an illness-focused delivery system. Historically nursing has been involved in developing its expertise in delivering health care consistent with the concept described for the center, and consequently, nursing has a unique role to play. The nature of the contract between the nurse and the client differs from the contract that other professionals establish in the extent to which it focuses on health and wellness promotion, rather than dealing to as large an extent with illness and pathology. The goal of nursing is to facilitate the client's movement toward maximum human effectiveness as described in the definition of health given above. (Focus is on individuals and families rather than the focus on body systems characteristic of an illness model.) Therefore, the nurse seems the logical choice as the primary care-provider to basically healthy families, while use of other professionals to augment needs for illness-care and "speciality health care", such as dental hygiene, will make it possible to offer quite a comprehensive scope of health services.

Administrative Support for the Center

Overall Responsibilities:

The following elements are needed to support and sustain the practitioners of the Family Health Center:

1. Physical facilities and maintenance of same.
2. Technical equipment, laboratory services, and support personnel.
3. Record keeping and clerical services.
4. Personnel administration and services.
5. Patient care administration and services.
6. Education administration and services.
7. Research administration and services.

The aim of the Family Health Center is to provide the best, most complete health care possible at the lowest cost to the patient. Each category above will be analyzed and will be given the following considerations:

- a. Best quality, serviceability, convenience, and flexibility. A low priced item is of little use if it doesn't meet the needs or hold up under usage.
- b. In the case of buildings or equipment, whether usage justifies a capital outlay for purchase, or whether a lease or rental situation would better fit our needs.
- c. Personnel and Services would also be evaluated to determine whether to have our own people, or use available outside services. Whenever possible, if costs are comparable, x-ray and laboratory services, janitorial services and maintenance work, computer services etc. will be contracted out.

The Teaching Function of the Center

An important function of the center will be its usefulness in serving as a teaching model for students as a demonstrable alternative to an illness-care delivery system.

The Research Function of the Center

Another important function of the center will be health care research on this new model. Focus of study will be an evaluation and further development of concepts involved in providing health promotive services. Some examples of study questions include:

1. What components do consumers identify as being essential to any definition of personal health?
2. What are consumers expectations for the health care?
 - communication -- own participation (input)
 - teaching (internal-external control)
 - conduct of visit -- organization's philosophy
 - referral -- priorities
3. What are the factors affecting decision-making regarding the seeking of health care?
 - who to go to -- when (in life cycle; r/w disease,
 - where psych-soc.)
 - type of system
4. What steps are needed to implement a growth-oriented philosophy?
 - focus on health -- goal-setting and evaluation
5. What are the indicators of various stages of crisis?
6. What are components related to satisfaction with health care on the part of both consumers and professionals?

Description of Services

1. Resource Utilization - Social/Environmental Services, e.g., housing sanitation
 - Community resource counselling and referral
 - Practical services
 - Financial counselling and management
 - Housing, sanitation, etc.
2. Health Promotion - General
 - Individual and family assessment
 - Individual and family counselling

Communication - Help in establishing effective communication, i.e., open and honest sharing of feelings, goals, etc.,
 Focus may be on group (families, couples, support groups) or on a one-to-one basis.

Crisis Intervention - Help at the time of developmental and accidental life cycle interruptions, including support and help in dealing with fears and grief.

Goal Setting - Individual, family, or small group help in goal-setting and methods of goal achievement, aimed at growing and becoming as part of the health process as well as at specific perceived problems to be solved.

Physical Well-being - Screening and Health Promotive Teaching for optimal physical functioning (including dental care and other specialty focuses).

Health Education - Help in understanding one's own potential, growth needs, developmental tasks of individuals and families, and preparation for specific life experiences.

3. Childbearing Care

- pregnancy testing
- prenatal care
- intrapartum care (limited home, Center, selected hospital)
- postpartum -- home follow-up
- family planning

4. Childrearing care

- growth and development assessment
- nutrition assessment
- physical parameters
 - hematocrit
 - urinalysis
 - vision and hearing
 - physical exam
- episodic care within medical and Center guidelines

5. Adult Physical Health Care

- physical parameters
 - hematocrit
 - urinalysis
 - vision and hearing, if indicated
 - physical examination including yearly GYN exam for females
- episodic care within medical and Center guidelines

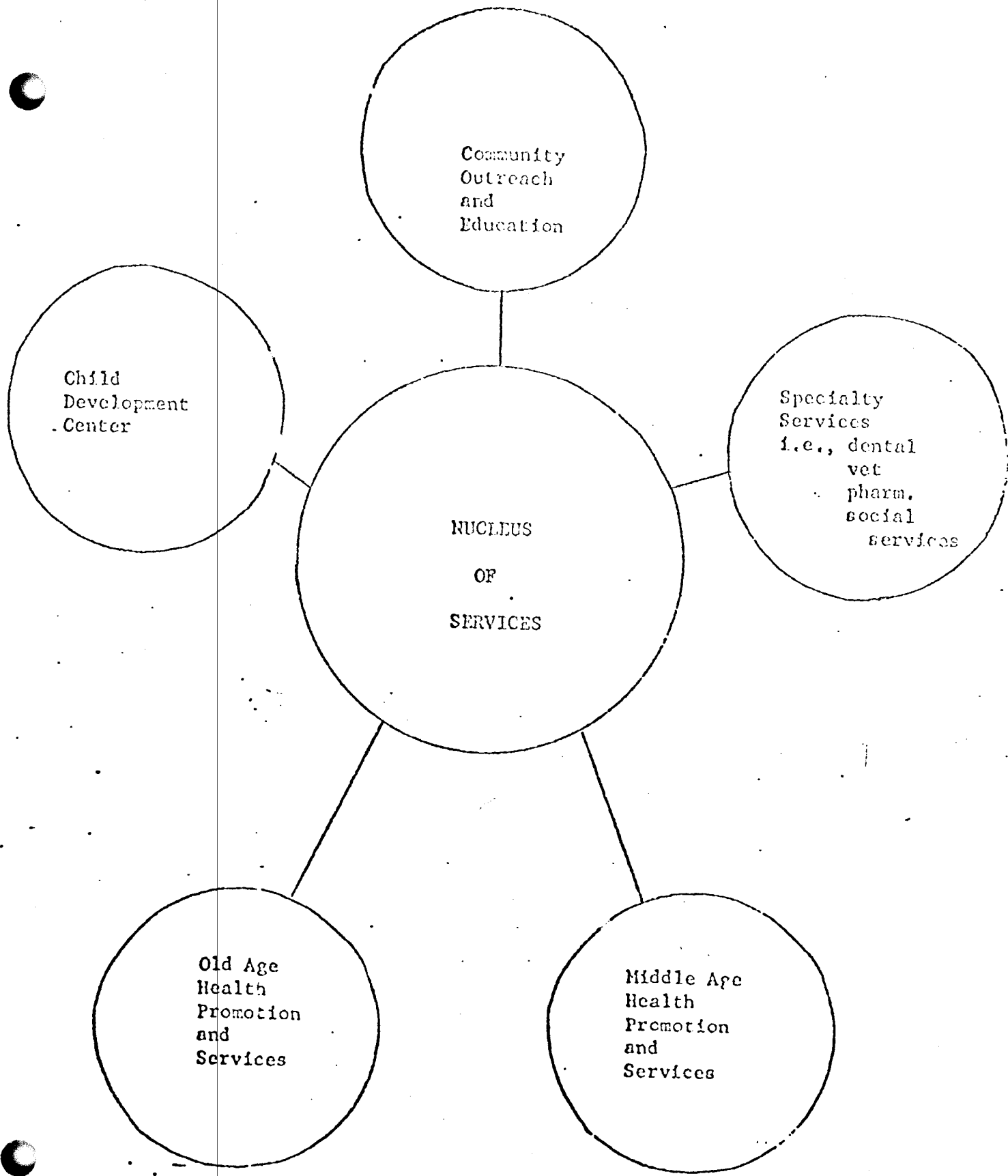
6. Child care facilities

- staff
- clients

Projected staffing for nucleus of services:

- 2 nurse generalists
- 1 pediatric nurse practitioner
- 1 center manager/administrator
- 2 or 3 secretarial/support personnel
- 1 social worker
- 1 dental (part time?)
- 1 pharmacist (part time?)

- 2 nurse midwives
- 1 adult and geriatric practitioner
- 1 laboratory technician
- consultants on staff:
 - 1 obstetrician
 - 1 pediatrician
 - 1 internist
- 1 psychiatric mental health nurse



Community
Outreach
and
Education

Child
Development
Center

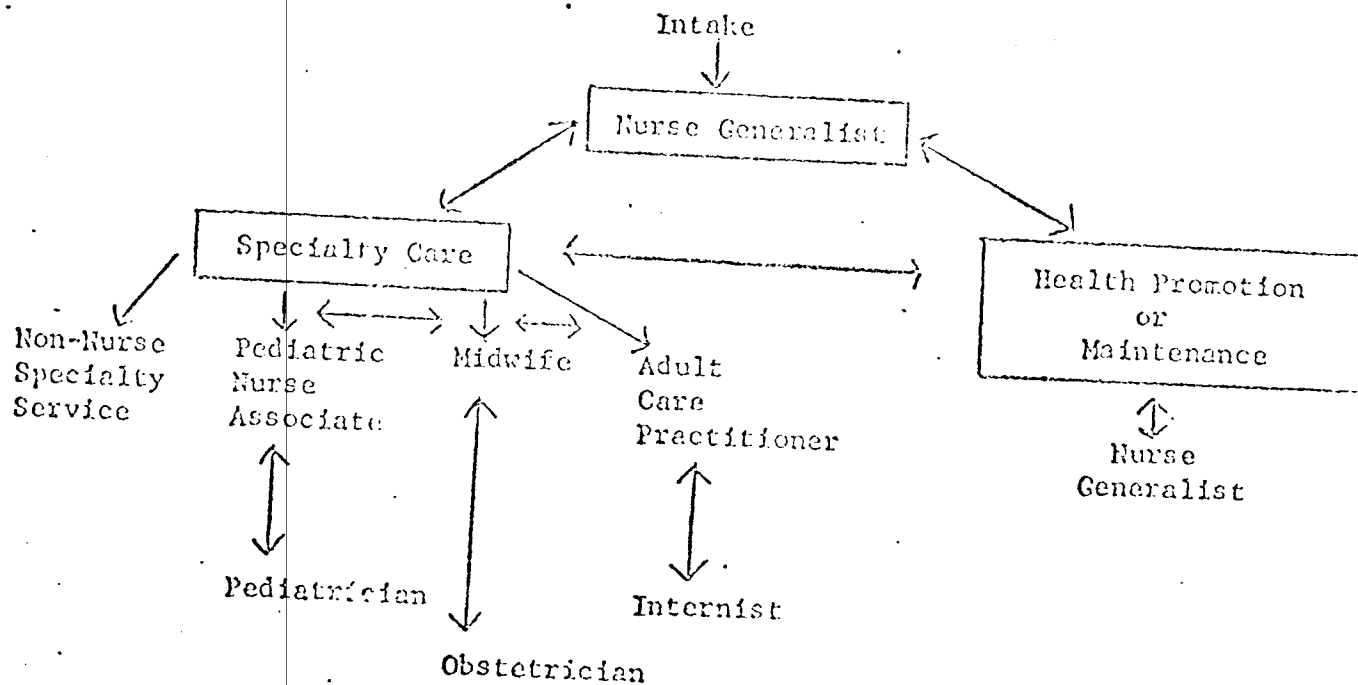
Specialty
Services
i.e., dental
vet
pharm.
social
services

NUCLEUS
OF
SERVICES

Old Age
Health
Promotion
and
Services

Middle Age
Health
Promotion
and
Services

CLIENT FLOW-CHART



5/29/74 SW:rs

A PROPOSAL FOR A PRIMARY CARE CLINIC ASSOCIATED WITH THE UNIVERSITY HOSPITALS

INTRODUCTION

Two major problems exist in the delivery of medical care. One is the maldistribution of physicians. The other is the inability of many individuals to have ready access to the health care system. It is proposed that the University Hospital establish an outreach clinic which would provide medical care to an underserved area. Such a clinic would serve as a model for students of the health sciences.

LOCATION

The clinic should be located in an area where (1) There exists a shortage of physicians (2) There is a desire on the part of the community for expanded medical service (3) The income of the residents is low to medium and (4) The local physicians are not opposed to establishment of the clinic. A nearby rural location is preferred.

ADMINISTRATION OF THE CLINIC

The present screening clinic in the Emergency Room can serve as a model. The clinic would serve as an arm of the University Hospital and an administrator of the hospital would be responsible for the business matters of the clinic including financing, maintenance of the building, personnel management, supplies, collection of fees and insurance. A physician would be appointed to take responsibility for the medical care. He would be responsible to the hospital for administration and to the Department of Medicine for the professional aspects of his work. He would be paid by the hospital.

The functioning of the clinic would be overseen by an Advisory Committee. This committee would include the responsible physician, the responsible administrator, a nurse clinician and representatives of the community served.

BUILDING AND EQUIPMENT

A suitable building would have to be purchased, rented or constructed. The number of examining rooms needed would depend on the size of the population served. A small X-ray machine should be installed and a small laboratory as well.

Primary Care Proposal.....2

FUNCTION OF THE CLINIC

The function of the clinic would fall into three categories.

(1) Immediate availability of medical care to the residents of the area (2) Provision of continuity of care for those residents with chronic illnesses (3) Preventive care including well baby care, prenatal care for pregnant women and family planning.

In the management of acute problems the clinic personnel would examine and screen the patients. Those requiring major diagnostic or therapeutic measures would be referred to the Emergency Room of the hospital. Minor illnesses and injuries would be handled in the clinic.

Patients with chronic illnesses would receive long term care in the clinic. If major diagnostic facilities were needed, those at the University Hospital would be used. Consultations would also be obtained from the University Hospitals.

The staffing of the clinic would be similar to the present screening clinic in the Emergency Room. Initially one full time internist and two nurse clinicians would serve as the professional staff. A consultant in Pediatrics would be necessary. The number required to staff the clinic on a long term basis will depend on the size of the population served.

The clinic should provide service 24 hours a day and seven days a week. Evening clinic hours should be available. When the clinic is not open a hot line should allow the patients to communicate with the Emergency Room. Some ready form of transportation such as a mini-bus should be used to transport patients and personnel.

Consideration should be given to the practicality of a small pharmacy and a dental clinic.

TENTATIVE TIMETABLE

June 1 - August 1: Marketing survey and discussion with community representatives and with the medical society.

August 1 - October 15: Location and construction or renovation of building. Recruitment of personnel and provision of supplies equipment.

October 15: Opening of clinic

UNIVERSITY OF MINNESOTA
SCHOOL OF PUBLIC HEALTH

Proposal for Health Sciences Primary Care Center

A. Basic Assumptions

The Health Sciences must attend to health needs of:

1. The normative and/or high-risk population, in order to fully demonstrate our abilities and capacities, and to meet our commitment to deliver primary care.
2. The specific service and administrative model will be dictated by the locale, size, and needs of target population.
3. There is an educational component that could be developed when the service model has been designed.

B. Components of University Primary Care Center

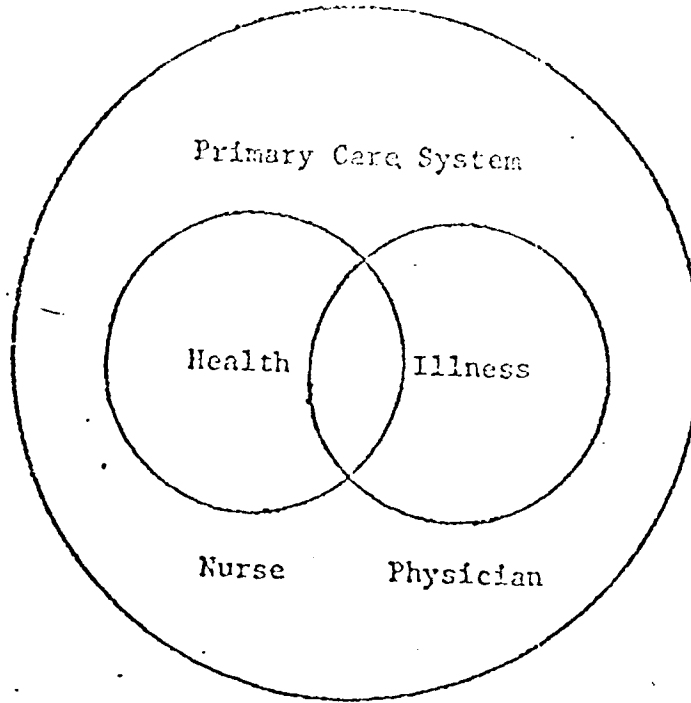
1. Any Health Sciences sponsored community clinic should have as its major focus the delivery of primary care. Primary care includes the 3 phases of:
 - a. acute episodic illness
 - b. comprehensive management of chronic illness
 - c. health maintenance
 - 1) early detection
 - 2) prevention
 - 3) education

Often referred to as entry care or maintenance, primary care includes those services needed for preventing illness and for health evaluation and management on a continuing and coordinated basis. (1)

2. From the School of Public Health's perspective, and equally important, the second component of primary care must be preventive care.

Preventive care must be more readily available and the consumer made aware of need for prevention and offered assistance in seeking the service. Medical service is now demanded on the following priority scale: 1) demand due to emergency, life-threatening situations, 2) demand for treatment of less serious conditions (acute or chronic illness), 3) demand for services to detect developing problems. Demand appears to be based on evidence of immediate or obvious benefit or change. We need to develop incentives for people to seek and use preventive and curative care properly. (2)

3. Primary Care Schema



Dynamic, not static system

C. Primary Care Center Services

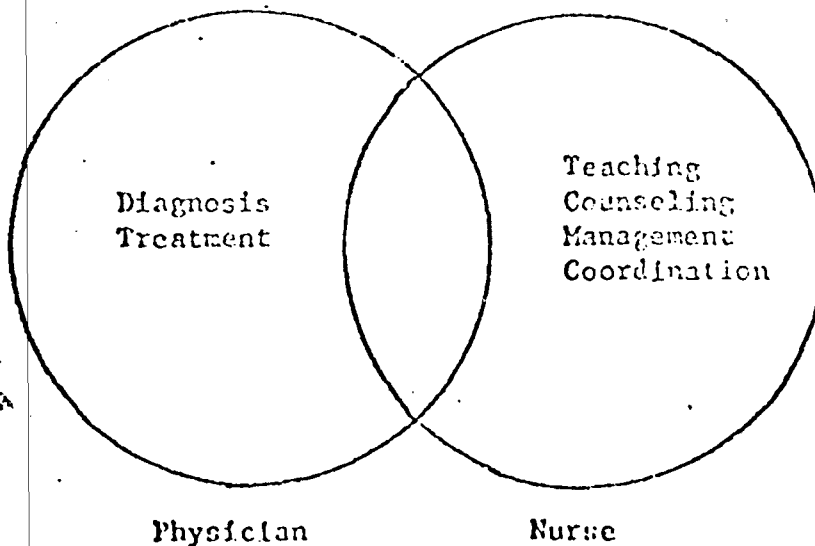
The following services may be provided (depending upon the setting and population):

1. Preventive and health maintenance, acute and chronic illness and rehabilitative services in general adult medicine, pediatrics and obstetrics-gynecology; dental services; and resources for working with health related social, economic, legal and environmental problems. These are illustrations of the health services which may be needed.
2. Have a systematic mechanism for identifying all important health problems prospectively, i.e. prior and acute crises where practical or when the target population has been identified, epidemiological techniques can be used to identify high-risk individuals/groups.
3. Offer individual/family a long-term personal association with one or a small number of providers who would plan with the patient the care needed and provide and coordinate that care.

The primary care services would be provided by a team composed of a physician, nurse midwife, pediatric nurse practitioner and adult nurse practitioner. The nurses and physician interchange in providing primary care. The nursing responsibilities should be to:

- a. evaluate health status and needs of individuals/families
- b. manage symptoms and problems in context of a collaborative relationship with physician
- c. assume responsibility for health maintenance and prevention
- d. coordinate other needed services to patient/family

Complementary Roles of Nurse and Physician



4. Have collaborative referral services available when needed for these services not provided on site. Other health science disciplines would be on staff or serve as consultants as needed.
5. Share program planning with consumer groups.

(1) Metropolitan Development Guide Health Policy Plan, Program, February 28, 1974, pg. 7.

(2) Ibid, pg. 13.

A Primary Care Community Clinic Outreach Proposal

-University Hospitals-

I. Background

The University of Minnesota Health Sciences, as the result of modifications for the extension of the Certificate of Need for Unit D/C, has agreed to develop a community clinic, in conjunction with the Metropolitan Health Board, to serve an area of need. While this agreement represents both a mandate to, and obligation for, the Health Sciences; University Hospitals feels it is critical to recognize that such an agreement is clearly called for and encouraged by the Mission statement for the Health Sciences.

"There should be a continuing dialogue with the community, in order that the Health Sciences may outline possibilities, methods and practicability of meeting the health needs expressed by the public sector."

Just as input from the public sector is encouraged, so too does the Mission Statement call for outreach, primary care, and cooperative activity.

"Fundamental to the objective (educate health professionals) will be educational emphasis on patient care, the prevention of disease, and the maintenance of conditions of health.

The Regents believe it is imperative that special and increased emphasis should be given to research and development of innovative systems for delivering optimum health care.

In fulfilling these missions the Regents expect to sponsor cooperative efforts in Minnesota with professional groups, hospitals, educational institutions and community organizations and all agencies concerned with health care."

In order to fulfill these elements of the Mission Statement all units of the Health Sciences have been actively involved in a variety of such efforts.

University Hospitals, for example, has provided assistance to a variety of community clinics, been the site for innovative primary care clinics, pro-

vided and supported cooperative efforts such as the Minnesota Regional Hearing Center and the Community Services Program.

The proposal (s) and suggestions contained in the following document should therefore not be viewed as applicable or appropriate only for this one effort. It is our hope that many of the ideas, concerns, issues, and suggestions provided will be the basis for ongoing dialogue and action whether they are actively incorporated in the B-C outreach clinic or not.

II. Primary Care

In seeking to develop a primary care clinic the Health Sciences must first attempt to clarify and deal with the concept of "Primary Care". Although there are many definitions available none have been universally accepted nor suitable for utilization by all elements of the health care delivery system. Probably the most relevant definitions at this particular time are:

A) The Metropolitan Development Guide definition -

"Primary care consists of 1) initial diagnosis, 2) basic treatment, 3) case management and referral, 4) screening and early detection of potential health problems, and 5) health education. Often referred to as entry care or maintenance care, primary health care includes those services needed for preventing illness and for health evaluation and management on a continuing basis."

B) The Hennepin County Health Care Coalition Definition -

"Primary health care is a continuous, personal relationship with a provider who acts as an entry point into the health system. It is based on shared responsibility between the patient and the provider. It is offered in any but an in-patient setting and is readily accessible in terms of cost, location, communication and hours of operation. The services provided are relevant to the needs of the community served and include any (emphasis ours) of the following: prevention, health education, diagnosis, therapy and/or referral and maintenance of an optimal level of health, with an emphasis being given to educating patients and their families in order that they can identify and manage their own health problems and work toward achieving their own potential for personal growth."

As extensive as these definitions are, they are often inadequate for an organization actively seeking to implement a "Primary Care" program. This inadequacy results fundamentally from the need when defining primary care to also

define what is not primary care. To this end, and to provide a basis for model development, the University Hospitals proposes the following typology:

- 1) Primary Illness Care - includes both acute and chronic minimal care needs. This area is what the majority of the non-hospital health system (private M.D., clinics, etc.) is organized to provide.
- 2) Primary Health Care - Is in addition to and possibly in conjunction with illness care. Health is viewed as the total quality of life and this category would therefore include such things as counseling, legal advice, sex education, etc.
- 3) Secondary and Tertiary Illness Care - This area of activity requires extensive facilities and is represented by our large health institutions such as hospitals, multispecialty clinics, etc.
- 4) Secondary and Tertiary Health Care - This area would focus on long-term quality of life issues such as nursing homes, family counseling, etc.

Each of the areas in this typology require extensive definition and boundary determination. However, even at this time it provides a basis for clarifying what the Outreach clinic should and should not do - namely its focus should be primary illness and health care with appropriate links to secondary and tertiary illness and health care resources.

III. Proposals

The University Hospitals, in considering various models for the clinic under discussion has reached the conclusion that a wide variety of organizational and delivery forms could fulfill the mandate of both the Mission Statement and the Metropolitan Health Board agreement. For purposes of brevity and clarity, however, we would at this time like to present two models which represent the broad diversity possible.

Model I - A Modular Primary Illness and Health Care Model

In brief - Model I envisions a central clinic core providing primary illness care through physician, nursing and other professional health personnel. Such a core is deemed necessary in order to provide an ongoing range of services, a financial base, and adequate personnel. It is then foreseen that activities related to primary health care could be developed on a modular basis with the possibility of integration with other modules as well as the core. Such modules would be either temporary or long-term in nature and would seek independent financial resources after an initial "start-up" period.

This model is the result of attempting to recognize and deal with the multitude of issues surrounding the establishment of a new service or program by the University. To clarify these considerations and the Model itself these issues and our recommendations are stated below:

1) Organization

Issue - What type of operational and policy organizational structure is both feasible and desirable?

Recommendation - On the basis of experience with our present ambulatory services the University Hospitals feels it is obligatory that the clinic have a single organizational focus within the Health Sciences which is responsible for the operation, stability, and financing of the clinic.

2) Financing

Issue - How will the functions of the clinic be financed?

Recommendation - Any innovative or new program should have the capability of perpetuating its services within the restraints of financing mechanisms available, if it is in fact to be an operational model with widespread applicability. It is therefore recommended that:

- a) A central core of services be provided (primary illness care) which is currently reimbursable through existing financial

mechanisms. These core services should be independent financially within a predetermined time limit with start-up costs provided by either grant or the organizational unit being terminated at that date.

- b) Other services should be added on a modular basis (primary health care). Funding can range from a total grant or subsidy method to fee-for-service. However, the clinic operation itself should not place itself in a financially unstable situation if other sources are not available to supplement modular services.

3) Location

Issue - What should the criteria be for determining a location for the outreach clinic?

Recommendation - The University Hospitals suggest that two criteria be utilized in determining location:

- a) The clinic's education function - on the assumption that health sciences students will be actively involved in the clinic the location should be within the immediate proximity of the University for easy transport and communication.
- b) The clinic referral patterns- on the assumption that the University Hospitals will provide the backup for Secondary and Tertiary Illness Care the clinic should be located within the immediate proximity of the University.

4) Population

Issue - What type of population should the clinic serve?

Recommendation - Whatever population is served the clinic should be designed for that population's needs. While University Hospitals does not recommend a specific population profile it suggests strongly that if

a clinic is designed to serve a low-risk population in terms of services and personnel it should, in fact, be located in a low-risk population area.

5) Staffing

Issue - What staffing patterns should the clinic provide and/or promote?

Recommendation - While a final determination of staffing requirements will depend on both the core and modular services provided the following recommendations are made:

- a) For financial, legal, and other considerations a physician must be responsible for medical activities.
- b) Personnel should be chosen at the level of competence necessary to provide quality primary health care to patients.
- c) Personnel must be responsible to the clinic and view that area of activity as central. . (It should be noted that this may require fundamental changes in the present criteria used for promotion and hiring with the University for certain types of personnel such as physicians.)

6) Services

Issue - What range of services should be provided?

Recommendation - Core services should include all primary illness care normally provided within pediatrics, internal medicine, and OB-Gyn or conversely by Family Practice. Such services could be provided by either physician or appropriate personnel. For example, a nurse practitioner - physician team could collaborate as the primary providers of care.

Primary Health Services should be those approved by the policy board as viewed by the community served as appropriate primary health services.

Issue - How would this clinic be integrated or utilized by the units and multidisciplinary programs of the Health Sciences?

Recommendation - University Hospitals foresees a dual educational role for the clinic:

- a) As a model of a delivery system encompassing both primary illness and health care through interdisciplinary professional groupings.
- b) As an educational clinical setting. For example, nursing students could observe and participate in the role function of the nurse in primary health care (i.e. nurse midwife, etc.)

In sum, Model I represents the end product of resolution to the various issues which must be dealt with in reference to establishment of any new service program. It is presented in a very broad form and includes the following elements:

- 1) A Clinic operated by a single unit of the health sciences with governance by a joint clinic, health sciences, community board.
- 2) The provision of a core of primary illness services to the population served.
- 3) The provision of primary health services through modular attachment of such services to the clinic core.
- 4) Located within the immediate proximity of the University.
- 5) That services and population needs be in juxtaposition.
- 6) That the core services be self-financing on an ongoing basis and modular services have adequate financing for their duration.
- 7) That the physician be responsible for all medical activities but emphasis be placed on non-physician personnel. Non-medical activities would be the responsibility of appropriate non-physician personnel within the constraints of legal and financial requirements.

Finally, it must be emphasized that Model I is only considered acceptable as an innovative and fruitful activity by the Health Sciences if both primary illness and health care services are provided. The stress on primary illness care as the core services is not because of any degree of "bottomness" or "more importance". Rather, it is to provide a sound organizational, financial, and service base which will attract clientele through providing commonly sought services.

Model II - A Primary Health Education Center

This model differs radically from the previous proposal in that it is not a clinic at all. Essentially, it is a proposal to develop a mechanism for supplementing and supporting all present primary illness and health care activities through an innovative health education center. It is University Hospitals belief that this Model, like Model I, represents a mechanism by which both the agreement with the Metropolitan Health Board and the ongoing charge of the Health Sciences Mission Statement can be fulfilled.

Model II is based on a two-fold recognition that:

- 1) Primary health education has been at best, almost totally ignored by the primary care community and is thus one of the most neglected and concomitantly open areas in primary care delivery.
- 2) That the University not only have the obligation to be innovative and seek to fulfill unmet needs but that it is not the intent of the University to set up a competitive system with that which presently exists.

On the basis of these points it is University Hospital's recommendation that the establishment of a Primary Health Education Center or Library be considered for the mandated primary outreach program. The University would assume responsibility within such a center for the following:

- A. Selection of areas of prevention and pathology (i.e. both primary illness and health care) where the greatest need for coordinated consumer education programs exist.
- B. Develop tapes, brochures, pamphlets, materials and other information which could be used by all existing elements of the delivery system to relate information to patients.
- C. Establishment of methods by which such materials could be made available to patients. Such a system would include relating to a variety of primary

care settings, initially in the Metropolitan area, and eventually throughout the state.

D. Assuming such a program is financially viable and self-supporting.

From a practical standpoint the system might be as follows:

"The University would, using the resources available in the Health Sciences, develop consumer oriented background information on prevention and pathology. The Department of Internal Medicine, for instance, would be the prime source for information on pulmonary diseases and the prevention of pulmonary problems. Assume a patient came to a community clinic or physician office and either evinced a pulmonary problem or was a heavy smoker or in some way indicated to an attending physician that education in the pulmonary area was required as a part of the treatment mode. The physician could recommend and prescribe that the patient go to an individual center or perhaps even take home materials on functions of the lung, diseases of the lung, information on smoking and its effects. This basic background would help the patient relate to the appropriate health professional knowledgeably at the time the professional has to work with an individual patient. Once this methodology had been established in a small number of primary care centers, it would be possible to sell the program to other primary care settings, or perhaps to make a nominal patient charge so that eventually it could be self supporting."

The benefits of Model II would be multiple. First, it is a program which can be of benefit to the entire state and possibly nation in addition to the Metropolitan area. Second, it would clearly fulfill an area of unmet primary care need. Third, it would not be competitive with the existing health system but it would provide the University an opportunity to serve the educational needs of that system. Finally, such a center could maximally utilize University resources as well as maximize the recipient population.

IV Summary

The foregoing document has attempted to stress the point that above and beyond the mandate resulting from the Unit B-C modifications the outreach effort now under consideration must and is relevant to the Health Sciences Mission. The

two models proposed are radically different and serve to illustrate the wide range of directions such efforts can take place within.

It is hoped, in addition, that the Model proposals have served to identify the wide variety of key issues which must be dealt with before a final proposal can be agreed upon. Such considerations are essential to assuring not only a viable and needed effort but one which is acceptable, feasible, and appropriate.

"A PROPOSAL FOR THE DENTAL ASPECT OF A PRIMARY CARE CLINIC"

The School of Dentistry advocates that any Primary Care Center should provide comprehensive dental care to those individuals in an underserved area who are unable to avail themselves of treatment from the private sector.

The size, layout and environment should allow for flexibility in experimenting with new systems of dental health care delivery. In order to be a practicable and worthwhile learning experience for the students, who will rotate through the clinic, it should afford them the opportunity of experience in a realistic total health care group practice environment and should be available to a minimum of four dental students.

Facilities should allow a prevention program to be developed with the use of participatory dental and dental hygiene students. These students should have a learning experience in diagnostic, treatment planning, preventive, restorative and surgical services and should be afforded a socio-psychological experience with patients using the center.

It is hoped that complete families might become involved with resultant treatment planning, treatment and follow-up programs developed for all participating patients.

Mary Jo Anderson
CHHP

This document represents my personal views concerning the model for a new clinic and what I would like to see happen educationally within the model developed. I believe that when this committee resolves the differences of opinion and a model is finally developed, it will closely resemble CUMCC with slight alterations made to accommodate suggested improvements, eg. adult care. Any model less advanced than CUMCC would certainly be a step backwards in the field of health care delivery.

If such a model is employed, it is implied that a team approach to health care delivery will be implemented and I view this as extremely valuable. The basic assumption underlying my belief is that the best way to solve problems in health care delivery is by the team approach--input from the various disciplines to gain a complete picture of the patient (client) and avoid oversights and duplications in care planning and implementation. I believe that education of young professionals is our most valuable method of changing the current system of widely scattered, disorganized care to a comprehensive team effort. Only if we can teach students the advantages of the team approach as part of their curricula, will they be able to adopt such a philosophy of practice when they begin work following graduation.

None of the models thus far presented has addressed, even superficially, the educational aspect of the clinic. Token comments have been made and I cite as examples:

"...an educational component that could be developed when service model has been designed". (School of Public Health Proposal)

"Such a clinic would serve as a model for students of the Health Sciences". (Proposal as presented by Dr. Richard Ebert)

In reality, such a clinic could serve not only as a model, but an ideal environment within which to develop the team concept.

I see potential for learning experiences in the following areas:

I. Provision of alternative to traditional curriculum

I perceive medicine to be the field most highly pre-occupied with quality and value of experience and I present the following as an example designed specifically for medical students--the other schools would develop specific programs for their students along these same lines.

- A. Medicine: In consultation with Medical Director, select a patient(s) with arthritis, hypertension, diabetes, bronchitis or other chronic condition. Study patient's medical course from nutritional, psycho-social, economic and environmental aspects. Determine patients perception of own condition--ongoing follow-up, home visits, etc., and written report. This experience could also include physical examinations and management of acute situations, eg. minor lacerations.
- B. Dentistry: Spend time in department making assessment of personal hygiene performance with hygienist, oral health education projects
- C. Lab: Brief orientation, routine screening, diabetes, etc.
- D. Nursing: accompany nurse on home visits, observe PNA--see what she's capable of accomplishing in terms of client care, participation in family planning clinics.
- E. Pharmacy: Involvement in selection of drugs by multi-disciplinary team, study patient medication records, drug interactions, observe patient drug therapy consultations, and interaction with pharmacy staff when schedule permits.
- F. Other areas to be explored: Nutrition, Patient Relations, Transportation Services, Administration, Training of community residents as health care aides, Community Health Education, Social Work, Research.

Such an experience would be valuable in terms of team development, exposure to common community health problems rarely seen at University of Minnesota Hospitals and perhaps if students were to make a written evaluation of their experience and recommendations to clinic and coordinators it might further advance their educational development.

II. Valuable opportunity for developing team concept in approaching health care delivery--involvement of students in various disciplines. Related to this team concept, the student will also:

- A. Gain experiential learning of how group functions.
- B. Gain experiential learning of how he, himself, functions in a group.
- C. Gain greater awareness of the other health disciplines and of what each can and cannot contribute.
- D. Be better prepared to make the decision on whether or not to be involved with a team approach to health care in future employment.

III. Each participating health science program, through students and coordinators, will gain increased awareness of the interdisciplinary nature of much of present day health care.

Certainly what we do not need is another clinic where each school can send students haphazardly for specific highly limited experiences. That situation already exists, and it does not offer students the opportunity to gain a new perspective on health care delivery.

What I would like to insure by design is that students working in the clinic will spend a specific amount of time per week with a specific case(s) and one of the primary providers of care (physician, nurse, community health worker, or other). Time will be set aside to discuss what each discipline can offer the client, and to develop a comprehensive care plan. Using such a method students would begin to overcome some of the barriers to interdisciplinary communication.

In summary, I recommend that if we accept the validity of the team approach to health care delivery, and the validity of utilization of this clinic as an alternative educational experience, this committee should seriously consider meeting with the Health Science Educational Policy Committee which at this time is interested in developing such an interdisciplinary educational program.

Submitted by
Mary Jo Anderson
Health Sciences Administrative
Extern
CHIP

MJA:bb

THE CLINICAL PHARMACIST IN AN INTERPROFESSIONAL GROUP PRACTICE

The essence of any clinical practice is patient care. Clinical medicine involves taking care of patients and their diagnosis; clinical pharmacy is taking care of patients and their treatment.

The attempt to list the responsibilities of a clinical pharmacist in a primary health care clinic, utilizing interdisciplinary groups, will hopefully seed the idea and then develop into concrete responsibilities which will have been compiled from the ideas of the various disciplines, as they interact with the clinical pharmacist. The responsibilities of the clinical pharmacist should be the results of specific problems and interactions in specific clinics and should not be established until such environmental factors are considered.

In reviewing the specific needs and desires of the Community University Health Care Center, the following is offered as the Pharmacy Unit role.

Pharmacy involvement would be patient oriented rather than drug oriented. The primary concern of the pharmacist would be the evaluation of the indications, actions and effectiveness of drugs in patients. This eliminates some of the primary traditional tasks that have been performed by the majority of pharmacists in the past. The function of preparation of pre-made medicines from prescriptions would be altered, utilizing the patient's chart rather than the prescription, and also this process would utilize technicians for the tasks of typing, filling and general administrative work. This would be done under the supervision of the pharmacist. The primary use of the pharmacist in such a clinic would be to monitor and

evaluate patients diagnosed with acute or chronic illness, who require prolonged usage of medication. Such patients usually have many medication problems and require frequent evaluation. In such an evaluating system, if work-ups or examinations are required, the nurse-practitioner would be utilized. The physician would receive the evaluations and suggestions and then exert his or her expertise as to the overall plan of care. Such a plan utilizes the knowledge of the team with enough organization to minimize time and to allow checks on all disciplines concerned.

The second primary area of pharmacy involvement would be in education. Since such a clinic will be utilized for education, the pharmacist would be expected to devise a system or systems for the adequate training of all disciplines in the area of pharmacology, pharmacokinetics, biopharmaceutics, etc. The patient would also be taught on an individual basis as to the reasons they will be taking a drug or drugs for their specific diseases.

This presentation is only a small part of the total involvement desired by pharmacy on the health care team. The responsibilities listed were applied only to the interactions between the pharmacist, the physician and the nurse, but the basic idea can be incorporated into all other disciplines as well. Again, I state, responsibilities are situation dependent, and the establishment of protocol can only be realized after the team has worked together in an individual setting. It is hoped that all health professionals will seek out the clinical pharmacist and utilize his expertise, as he will seek out and utilize the expertise of his fellow health professionals.

Combined Preliminary Bibliography - July 26, 1974

- Anderson, Cerisse, "Health Care Center Serves Children of Low-Income Families," The Minnesota Daily, May 15, 1974, P. 1, Cols. 1-5.
- Aradin, Carolyn R., "Development of a Family Health Service," Journal of Nursing Administration, pp. 45-51 (January-February, 1974).
- Baily, Richard M., "Economies of Scale in Outpatient Medical Practice," A Paper Delivered at the Secretary's Conference on Group Practice, The Center for Continuing Education, University of Chicago, October 19-21, 1967.
- Bates B: Doctor and nurse: changing roles and relations. NEJM 283: 129-134, 1970.
- Baumann, Barbara, "Diversities in Conceptions of Health and Physical Fitness," Journal of Health and Human Behavior, Vol. 2 (1971), 39-46.
- B/C Implementation Committee Meeting Summary, May 6, 1974 with attachments: "Statement On the Mission of the Health Sciences, : University of Minnesota; "Access to Primary Care," Robert Wood Johnson Foundation.
- B/C Implementation Committee Meeting Summary, May 9, 1974.
- B/C Implementation Committee Meeting Summary, May 16, 1974.
- B/C Implementation Committee Report, July 1, 1974.
- Bellin, Seymour S., Ph. D., Geiger, H. J., and Gibson, Count D., M. D., "Impact of Ambulatory-Health-Care Services on the Demand for Hospital Beds," The New England Journal of Medicine, vol. 280, pp. 808-812, (April 10, 1969).
- Beloff, Jerome S., M. D., and Weinerman, E. Richard, M. D., "Yale Studies in Family Health Care," J.A.M.A., vol. 199, pp. 383-389 (February 6, 1967).
- "Beltrami Health Center to Add New Service: Well Adult Clinic to Aid Prevention," Minneapolis Argus, Wed., June 26, 1974, Vol. 91, #52.
- Beyers, Charlotte K., "Can Health Habits Really be Changed", Prism, pp. 13-17, 66-67 (May, 1974).
- Bloom S: The Medical Center as a Social system, Psychosocial Aspects of Medical Training. Edited by RH Coombs, CE Vincent. Springfield, Illinois, Charles C. Thomas Publishers, 1971, pp. 429-448.
- Bosch S., Banta D.: Prepaid group practice. JAMA 212:2101-2104 (June 22) 1970.

- Brody, Howard, "The Systems View of Man: Implications for Medicine, Science, and Ethics," Perspectives in Biology and Medicine, Autumn, 1973, 71-92.
- Burgess, Ann Wolbert and Lynda Lytle Holmstrom. "Crisis and Counseling Requests of Rape Victims," Nursing Research, May-June, 1974, Vol. 23, No. 3, 196-202.
- Cochrane CM: Successful medical trainees and practitioners, Psychosocial Aspects of Medical Training. Edited by RH Coombs, CE Vincent. Springfield, Illinois, Charles C. Thomas Publishers, 1971, -- 168-190.
- Community University Health Care Center report on B/C modification requirements.
- Defoe, Edward C., Jr., M. D. "Establishing a Community Health Service," Presented to the Section on Public Health Pediatrics, American Academy of Pediatrics, October 18, 1969.
- Densen, Green, Moskowitz, Sack, Scheff, Starfield, Taw, Trump, and Zawatsky, "Primary Medical Care for an Urban Population: A Survey of Present and Potential Utilization," Baltimore Journal of Medical Education, vol. 43, p. 1,245 (December, 1968).
- Dugdale, A. E., "The 'Built-in Failure Rate' of Immunization at Infant-Health Clinics," The Lancet, pp. 409-411 (February 22, 1974).
- "Early and Periodic Screening Diagnosis and Treatment (EPSDT)," Report of the Massachusetts Department of Public Health, The New England Journal of Medicine, vol. 290, p. 1,087 (May 9, 1974).
- Engel, George. "A Life Setting Conducive to Illness: The Giving Up---Given Up Complex," Annals of Internal Medicine, vol. 69, No. 2, August, 1968, 293-299.
- Evans L.J., The Crisis in Medical Education. Ann Arbor, Michigan, University of Michigan Press, 1964.
- Folwick, Orlin, "Paradise Lost-Again?", The Minnesota Daily, April 23, 1974, p. 7, cols. 1-5.
- Funkenstein DH: Medical students, medical schools, and society during three eras, Psychosocial Aspects of Medical Training. Edited RH Coombs, CE Vincent. Springfield, Illinois, Charles C. Thomas Publishers, 1971, pp. 220-281.
- "Good Habits Called Key to Healthy Life in a College Survey," The New York Times, May 6, 1974, p. ?, col.?
- Gough H: The recruitment and selection of medical students, Psychosocial Aspects of Medical Training. Edited by RH Coombs, CE Vincent. Springfield, Illinois, Charles C. Thomas Publishers, 1971, pp. 5-43.

- Greenberg R, Loda F, Pickard G, et al: Primary Child Health Care By Family Nurse Practitioners. Clin. Research 21:114, 1973.
- Hadley, Betty Jo. "Current Concepts of Wellness and Illness: Their Relevance For Nursing," Image (Magazine of Sigma Theta Tau, National Honor Society for Nursing), Vol. 6, No. 2, 1974 21-27.
- Haggerty, Robert J. M. D., "The University and Primary Medical Care," The New England Journal of Medicine, vol. 281, pp. 416-422 (August 21, 1969).
- Hanson, Michael E., "The Pharmacy Service in a Childrens and Youth Project," Paper prepared as a Public Health course requirement at the University of Minnesota, Spring Quarter, 1971.
- Henderson, Cynthis, "Can Nursing Care Hasten Recovery?" American Journal of Nursing, June, 1964, Vol. 64, No. 6, 81-86.
- Hoke, Robert. "Promotive Medicine and the Phenomenon of Health," Archives of Environmental Health, February, 1968, Vol. 16, 269-278.
- Hoxsie, Russell S., M. D., "A Time for Study and the Need for Change," The New England Journal of Medicine, vol. 280, pp. 1,099-1,101 (May 15, 1969).
- Illich, Ivan, "Medical Nemesis," The Lancet, pp. 918-921 (May 11, 1974).
- Johnson, Shiela K., "Health Maintenance: It Works," The New York Times Magazine, pp. 34-36, 38, 40, 42, 44, 50, 52, 54 (April 28, 1974).
- Jourard, Sidney. "Roles that Sicken and Transactions that Heal," The Canadian Nurse, July, 1961, 628-634.
- Jourard, Sidney. "To Whom Can a Nurse Give Personalized Care?" American Journal of Nursing, March, 1961, 86-88.
- Kendall PL: Medical specialization: trends and contributing factors, Psychosocial Aspects of Medical Training. Edited by RH Coombs, Ce Vincent. Springfield, Illinois, Charles C. Thomas Publishers, 1971, p. 469.
- Kinlein, M. Lucille. "Independent Nurse Practitioner", Nursing Outlook, Jan. 1972, Vol. 20, No. 1, 22-31.
- Kohrman AF: Clinical experience matched to student readiness, The Changing Medical Curriculum. Edited by VW Lippard, E. Purcell. New York, Josiah Macy Jr. Foundation, 1972.
- Lewis, Charles E., M. D., and Resnik, Barbara A., "Nurse Clinics and Progressive Ambulatory Patient Care," The New England Journal of Med., vol. 277, pp. 1,236-1,241 (December 7, 1967).

- Malcolm, Nancy S. "Toward Health Through Growth, "Current Concepts in Clinical Nursing", C. V. Mosby Co., 1973, 259-265.
- Mechanic, D: Social changes affecting medical training and practice, Psychosocial Aspects of Medical Training. Edited by RH Coombs, CE Vincent. Springfield, Illinois, Charles C. Thomas Publishers, 1971, pp 525-546.
- Milton, John, "B/C Need: A Critical Examination," The Minnesota Daily, April 23, 1974, p. 7, cols. 1-5.
- Milton, John, "The Taj Mahal Syndrome," The Minnesota Daily, April 22, 1974, p. 7, cols. 1-5.
- Morris, J. N., and Warren, M. D., "Where Are the Teachers of Community Medicine?", The Lancet, pp. 249-252 (February 1, 1969).
- Murray, B. Louise. "A Case for Independent Group Nursing Practice," Nursing Outlook, Jan., 1972, Vol. 20, No. 1, 60-63.
- National League for Nursing, Council of Hospital and Related Institutional Nursing Services, Hospital Care in the 70's...Forces for Change. Papers presented at the Second Annual Meeting of the National League for Nursing - American Hospital Association held at New York, N.Y. on June 20-22, 1972.
- "Ohio Third-Graders Get Medical Tests," The New York Times, May 6, 1974 p. ?, col. ?.
- "Outline for Outreach-Primary Care Report," University of Minnesota Health Sciences Primary Care Report.
- Paterson, Patricia K., and Bergman, Abraham B., M. D., "Time-Motion Study of Six Pediatric Office Assistants," The New England Journal of Medicine, vol. 281, pp. 274 (October 2, 1969).
- Pellingrino EC: Closing the profession gap, Educating Personnel for the Allied Health Professions and Services: Administrative Considerations. Edited by EJ McTernan, RO Hawkins Jr. St. Louis, Missouri, C.V. Mosby Co., 1972.
- "Prevention - Is it Health's Riddle?", Perspective, vol. 9, pp. 15-23 (Second Quarter, 1974).
- Primary care in the academic health centers; A report of a survey by the Association of American Colleges (unpublished).
- Reader, George G., M.D. "Promotion of Health-Maintenance Programs," New York State Journal of Medicine, vol. 59, pp. 2,345-2, 348 (June 15, 1959).
- Roemer, Milton I., M.D. and Dubois, Donald M., Dr. P.H., "Medical Costs in Relation to the Organization of Ambulatory Care," The New England Journal of Medicine, vol. 280, pp. 988-993 (May 1, 1969).

- Sackett DL, Spitzer WO, Best M, et al: The Burlington randomized trial of the nurse practitioner: health outcomes of patients. Annals of Internal Med 80:2, Feb 1974.
- Sarosi, Grace M. "On the Nature of Nursing and the Phenomenon of Man's Health," Nursing Science, August, 1965, 298-306.
- "Screening and the Practice of Medicine," The Lancet, pp. 83-84 (July 8, 1967).
- Schmeck, Harold M. Jr., "Declines in Deaths From Nine Leading Diseases Show a Surprising Trend," The New York Times, May 6, 1974, p. 62M, cols. 1-8.
- Seigel, Max H., "Health-Test Lag Found in Schools," The New York Times, May 6, 1974, p. ?, cols.?.
- Siegel, Hildegard. "The Universe of Health: A Conceptualization," Nursing Forum, Vol. X, #1, 1971, 32-35.
- Siegel, Hildegard. "To Your Health - Whatever That May Mean," Nursing Forum, Vol. XII, #3, 1973, 280-289
- Simon, Ann. "A Satisfied Patient Views Nurse-Midwifery", Bulletin of Nurse-Midwives, May, 1972, Vol. XVII, No. 2, 41-45.
- Snyder DS: The relationship of students' experiences before and during medical school to their conceptions of professional responsibility. J Med Educ 42:213-218, 1967.
- Stein, Leonard I., M. D. "The Doctor-Nurse Came," Submitted for Publication, December 13, 1966.
- Stoeckle, John D., M. D. and Candib, Lucy M., "The Neighborhood Health Center-Reform Ideas of Yesterday and Today," The New England Journal of Medicine, vol. 280, pp. 1,385-1, 391 (June 19, 1969).
- van Steenwyk, John, "Implementing Programs for Preventive Health Care Services," Blue Cross Reports, Research Series 2, November, 1969.
- Vassallo, Catherine, "A Concept of Health", Nursing Science, August, 1965, 236-242.
- Westerman, John H. "The Shifting Emphasis in the Delivery of Health Care," 1-8.
- Colwill, Jack M. "The Shifting Emphasis in the Delivery of Health Care. . . Viewpoint of a Physician," 9-19.
- Little, Dolores E. "Health Providers - New Patterns: Role of the Nurse", 18 (sic) -21.
- Cumbie, Charlotte. "The Shifting Emphasis in the Delivery of Health Care. . . Viewpoint of a Nurse," 32-35.

White Kerr L., M.D. "Primary Medical Care for Families-Organization and evaluation," The New England Journal of Medicine, vol. 277, pp. 847-852 (October 19, 1967).

White, Martin K., M. D., Albert, Joel J., M.D., and Kosa, John, Ph. D., "Hard-to-Reach Families in a Comprehensive Care Program," J.A.M.A., vol. 201, pp. 801-806 (September 11, 1967).

Williams, Greer, "Needed: A New Strategy for Health Promotion," The New England Journal of Medicine, vol. 279, pp. 1,031-1,035 (November 8, 1968).

Wise HB, et al: The family health worker. American Journal of Public Health 58:1828-1838, October, 1968.

Zola, Irving Kenneth. "Pathways to the Doctor - From Person to Patient." Social Science and Medicine, 1973, Vol. 7, 677-689.