

AN EVALUATIVE STUDY
OF THE
UNIVERSITY OF BRITISH COLUMBIA
STUDENT HEALTH SERVICE

by

JOSEPHINE MARY HANNAY R. N.
B. N. University of Manitoba, 1966

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF SCIENCE

in

THE FACULTY OF GRADUATE STUDIES
Department of Health Care and Epidemiology

We accept this thesis as conforming
to the required standard

THE UNIVERSITY OF BRITISH COLUMBIA
August, 1976

© Josephine Mary Hannay 1976

In presenting this thesis in partial fulfilment of the requirements for an advanced degree at the University of British Columbia, I agree that the Library shall make it freely available for reference and study.

I further agree that permission for extensive copying of this thesis for scholarly purposes may be granted by the Head of my Department or by his representatives. It is understood that copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Department of HEALTH CARE AND EPIDEMIOLOGY

The University of British Columbia
2075 Wesbrook Place
Vancouver, Canada
V6T 1W5

Date SEPTEMBER, 1976.

ABSTRACT

This study was conceived as a thesis in partial fulfilment of the requirements for a master's degree in Health Services Planning at the University of British Columbia. The growing demand for evaluation of health care programs constituted the rationale of the study. It appears that the current high level of interest in program evaluation in the health care field is due to two reasons: one, the health sector has become one of the largest segments of the economy and therefore its size demands formal evaluation; and two, the ultimate objectives of health are so complex that they present serious measurement problems for program administrators. In order to make intelligent decisions relative to the commitment of resources, programs designed to achieve these objectives must be evaluated. The program selected for this evaluative study was the University of British Columbia Student Health Service.

The study was designed in three phases: one, a background review and preparatory period; two, an on-site survey of all of the dimensions of the Health Service including its facilities, services, and supporting functions; and three, a written report of the findings and interpretation of the collected data with recommendations for change.

Based on the researcher's past experience in reviewing Canadian health care institutions for standards and practices, the method employed was an accreditation-type survey using documentary evidence, interviews, and observations. Evaluation of the Health Service facilities and functions was done in terms of the American College Health Association's Recommended Standards and Practices for a College Health Program. Data was collected to provide a comprehensive body of descriptive information concerning health services at the University, and interpreted to make recommendations for change in view of the variance between the Standards and the study findings. Consideration was given to the appropriateness of using American standards as well as to the achievement of them at U.B.C.

To the extent that pertinent differences existed between recommendations contained in the Standards and those thought to be applicable in Canada, recommendations or suggestions for change were adapted to suit the Canadian context. Generally, however, the areas of investigation were found to have the same concerns and problems.

It was concluded that the U.B.C. Health Service meets the Standards and Practices for a College Health Program recommended by the American College Health Association, and that the Standards can appropriately be applied to Canadian, as well as to American, student health services.

This study is intended as a planning document to have utility for the Health Service at U.B.C. and for future research in college health programs in Canada.

PREFACE

Because of the current high level of interest in the topic of health program evaluation, and the writer's view that continuing evaluation of all publicly-funded health programs should be required in order to assure a continued high standard of service, the U.B.C. Health Service was selected for the conduct of an evaluative study. No other assessment of its organization and operation has ever been carried out in the fifty-one years since its inception and the conditions under which it has been operating have changed during that time. Because of the apparent desire of the Health Service to seek improvement and an expressed willingness to cooperate with a study of its program, it is anticipated that recommendations for change will be well received by the Health Service.

Factual information on the characteristics and operations of the Health Service is presented in this thesis in such a manner that the solutions to problems or deficiencies are presumed to be self-evident. Statements of recommendation are made throughout the main text; those made in the concluding chapter originated either from the standards used to evaluate the Health Service or from the writer's experience and knowledge of the health care field gained as

a hospital consultant, administrator, teacher, and nurse. The statements on Ethical and Professional Relationships, supplemental to the Standards, have been applied in only two areas thought to be appropriate, Medical Records and Mental Health.

The voluminous amount of detail contained in the text which follows has been left in for several reasons. One, it is the only written account of the U.B.C. Health Service on record; two, the independent assessment of its programs may serve as a guide to the Health Service for reviewing its organization and operation internally; and three, the description of individual programs, services, and supporting functions may be used as a point of reference for developing programs.

TABLE OF CONTENTS

	<u>PAGE</u>
ABSTRACT	ii
PREFACE	v
TABLE OF CONTENTS	vii
LIST OF TABLES	x
ACKNOWLEDGEMENT	xi
DEDICATION	xii
 <u>PART I BACKGROUND OF THE STUDY</u>	 1
<u>CHAPTER</u>	
1 Introduction	2
2 Objectives, Design, and Methodology of the Study	7
2.1 Objectives of the Study	7
2.2 Design of the Study	8
2.3 Methodology of the Study	12
2.4 About the Standards	15
3 Review of the Literature	19
3.1 The Development of Organized Student Health Services	19
3.2 Other Developments	22
3.3 Program Evaluation	26
 <u>PART II CONTENTS OF THE STUDY</u>	 32
4 History and Background of the U.B.C. Health Service	33
5 General Information	56
5.1 The Institution	56
5.2 Composition of the Institutional Community	58
5.3 Organization and Administration	62

<u>CHAPTER</u>		<u>PAGE</u>
6	Health Programs: Services and Activities	66
	6.1 Outpatient Services	66
	6.2 Inpatient Services	79
	6.3 Records	94
	6.4 Laboratory Services	103
	6.5 Radiological Services	106
	6.6 Pharmacy (Medication Service)	113
	6.7 Dental Services	116
	6.8 Mental Health	122
	6.9 Athletic Medicine	134
	6.10 Rehabilitation/Physical Medicine	140
	6.11 Health Promotion/Preventive Medicine	148
	6.12 Occupational Health	152
	6.13 Environmental Health and Safety	153
	6.14 Provisions for Emergencies/Disasters	157
	6.15 Health Education	162
	6.16 Research	170
	6.17 Communications	171
	6.18 Extramural Resources	175
	6.19 Special Problems	178
7	Health Personnel: Qualifications, Duties, and Education	181
	7.1 Medical Staff	182
	7.2 Outpatient Department Staff	185
	7.3 Hospital Staff	186
	7.4 Nursing	188
	7.5 Other Professionals	190
	7.6 Secretarial/Clerical Staff	192
	7.7 Support Staff	194
8	Physical Plant	196
	8.1 Location	196
	8.2 Design and Construction	196
	8.3 Maintenance	199

<u>CHAPTER</u>		<u>PAGE</u>
9	Business Management	201
	9.1 Financing	201
	9.2 Budget Planning	204
	9.3 Business Procedures	210
	9.4 Personnel: Policies and Procedures	211
<u>PART III</u>	<u>CONCLUSIONS OF THE STUDY</u>	213
10	Summary and Recommendations	214
	10.1 Summary of Services	214
	10.2 Summary of Recommendations	217
	10.3 Implications for Planning	235
LITERATURE CITED		237
APPENDICES		241

LIST OF TABLES

<u>TABLE</u>		<u>PAGE</u>
Ia	Student Registration 1954-1960	52
Ib	Student Registration 1964-1970	52
II	Total Number of Visits to Health Service 1954-1975	53
III	Health Service Hospital Utilization 1954-1975	54
IV	Summary of Services 1954-1975	55
V	Total Enrolment 1969-1976	59
VI	Percent - Male and Female	60
VII	Patient Census April 28, 1976	83
VIII	Workload in Unit Values Per Month - Lab.	105
IX	Annual Workload in Unit Values - X-Ray	109
X	Psychiatric Service Census By Sex	128
XI	Psychiatric Service Census By Country of Birth	129
XII	Statement of U.B.C.'s Ancillary Operations for the Year Ending March, 1974	207

ACKNOWLEDGEMENT

Grateful appreciation is expressed to the following people for their assistance in the preparation and conduct of this study:

To my thesis committee: Dr. C.J.G. (Cort) MacKenzie, Head of the Department of Health Care and Epidemiology; Dr. Anne Crichton, Professor in the Division of Health Services Planning; and Mrs. Helen Elfert, Assistant Professor in the School of Nursing, University of British Columbia, for their advice and guidance.

To Dr. Michel Vernier, Chairman of the Division of Epidemiology and Biometry, for suggesting student health services as an area for study; to Dr. Archie Johnson, Director of the U.B.C. Health Service, and his staff whose cooperation made this study possible; and to all those who contributed to the accumulation of data.

To my friend, Carol Perch, who generously offered to type the first draft of the manuscript, and to my sister-in-law, Lynne Hannay, who diligently typed the final copy.

To my parents and friends for their encouragement; and to my husband, Rick, and my sons, Mark and John, for their patience and understanding through completion of my studies.

This work was supported in part by the Manitoba Health Services Commission whose assistance is gratefully acknowledged.

This study is dedicated to Miss
Muriel Upshall and others who
pioneered in the development
of student health services in
Canadian universities.

PART I

BACKGROUND OF THE STUDY

CHAPTER IINTRODUCTION

The methods by which the health services seek to attain their basic objectives - promotion of health and well-being, prevention of illness and disability, and care in the community - are changing and will continue to change as social conditions alter. Both government and voluntary organizations have planned and established programs to implement these objectives and the costs have been monumental. Economists have expressed concern about the escalation of health care costs because of their increasing share of the G.N.P. relative to other kinds of expenditures and because it is not clear that Canadians are deriving any greater benefits in terms of increased health, well-being, or productivity. This suggests that the industry is becoming increasingly inefficient at a rapid rate.^{1,2}

One expert³ claims that no nation, however affluent, can afford to apply all of the known scientific measures for relieving pain, preventing or curing illness, and postponing death; it is incumbent upon every society to economize in the use of scarce resources.

Thus, in terms of planning social change to better utilize our resources, it has been suggested that: "All social institutions or subsystems, whether medical, educational, religious, economic, or political, are required to provide "proof" of their legitimacy and effectiveness in order to justify society's continued support."⁴ The demand that some attempt be made to determine the effectiveness of public service and social action programs has become increasingly insistent. It is this renewed interest in a long neglected aspect of social research, the evaluation study, that provided the impetus for the current study.

In the determination of an appropriate health care program in which to conduct the study, concern over the adequacy of student health care prompted an in-depth evaluation of the U.B.C. Health Service. The university setting is particularly conducive to teaching this specific population about its responsibility for making provisions in the case of illness and for maintaining its own well-being. Moreover, the 15 - 24 age group, which comprises the majority of college students, was pointed out by the Royal Commission on Health Services⁵ to be the age group most profoundly affected by the social changes in our time.

It stated:

" ... Reference was made to the possible earlier physical maturity and generally later school-leaving age with a consequently later entry into the labour force but a tendency for earlier family formation. This goes hand in hand with improving economic levels of parents and more money available from public sources for continued education to fill the demand for higher educational levels in the present and future labour force. The responsibilities of the adolescent and his role in the community are thus reduced in some respects, while increased demands are made in others resulting in stresses which cannot fail to be reflected in the health status of this group." (5. - p. 313)

The university has a unique opportunity as well as an obligation to use this period of continuing change and remarkable flexibility in the lives of students to promote sound health concepts which form the basis for continuing environmental adaptation and provide stimulus for the most efficient utilization of our resources. But universities today face many of the same dilemmas as their off-campus counterparts. Rising costs are causing institutions to reevaluate the specific services provided as well as methods for financing the services. The evaluation of one aspect of the university program, the student health service, indicates the wide range of responsibility for health service programs in the institution and provides general knowledge for administrators and educators concerning health services in universities. Further, such

evaluation can provide guidelines for action by planners of other university or college health service facilities.

If new health knowledge is to be incorporated into health programs, current activities must be evaluated to determine what reallocation of resources is necessary, while new activities must be carefully planned and evaluated before they are put into practice.

Since its inception, the U.B.C. Health Service has seen many changes in the organization and methods of delivery of Canadian health care programs. As there are now health insurance plans covering almost all of the population's needs for medical services and hospital care, the role of the Health Service has had to change to meet new demands upon it. Student demands which have emerged in the last decade have been mainly in the areas of family planning, birth control, and counseling, particularly sex counseling, and psychiatric assessment regarding problems of adaptation to a changing society in which the work ethic is being challenged and the generation gap seems great to many in the student age group. Since universal hospital and medical insurance coverage is presumed to have resulted in more students seeking health care from private practitioners, and in better health generally, it appears that there is a shift toward more preventive practices taking

place in the Health Service which had its beginning as a Public Health Unit.

The Health Service has also seen a number of other health issues raised on the campus, such as the development of the Health Sciences Centre, a family practice teaching unit, and environmental surveillance and control of hazardous conditions. Whether the Health Service should have become involved in these developments concerning the health of the community as a whole, or remained as it has, a service unit, are questions that have had to be answered as the institution has been changing around the service. The underlying preventive aspects of the service, however, emphasize that the organization and functions of the programs require review to keep them up-to-date and effective.

The standards⁶ used to evaluate the Health Service were developed for American college health programs. One question which arises is whether these can appropriately be applied both to American and Canadian student health services since the Canadian context has been changing in a different manner from that of the United States. This thesis attempts to consider the appropriateness of the standards as well as the achievement of them at U.B.C.

CHAPTER 2

OBJECTIVES, DESIGN, AND METHODOLOGY OF THE STUDY

2.1 Objectives of the Study

The broad purpose of this study is to further improvement of existing health programs and provide a point of reference for developing programs.

The primary objective is to evaluate a health care program with a view to providing consultative guidance in terms of specific recommendations for standards and practices.

The intermediate objective is to evaluate a well-developed student health service in the Canadian context.

The operational goals of the study are:

- i) to describe the development of organized student health services.
- ii) to objectively assess the scope (extent and kinds) of services presently provided at U.B.C.
- iii) to recommend ways to more effectively or efficiently coordinate the planning and provision of such services, including their coordination with other services.

- iv) to make suggestions for their future development with implications for planning.

2.2 Design of the Study

The study was designed in three phases: one, a background review and preparatory period; two, an on-site survey of all of the dimensions of the Health Service including its facilities, services, and supporting functions; and three, a written report of the findings and interpretation of the collected data with recommendations for change.

Several months were spent reviewing the literature in the areas of program evaluation and student health services. A search of the archives relative to the U.B.C. Health Service included annual reports dating back to 1955 and historical documents back to 1936. Health Service records were scanned in an attempt to produce patterns or trends but the method of filing and storing records in the Health Service precluded the orderly collection of baseline data. (This is one of the recommended areas for change.)

In preparing for the on-site survey contact was made by letter and telephone with the American College

Health Association in Evanston, Illinois, and with one of its standards officers at the University of California in Los Angeles. A copy of the standards used to evaluate college health programs and other relevant material were ordered but never received. The standards were subsequently borrowed from the Student Health Service at Simon Fraser University.

Preliminary discussions were held with the Director and Supervisor of the Health Service for permission to conduct the survey, and with the U.B.C. Registrar to verify the feasibility of doing the study. Others were contacted for the purpose of gathering relevant information in connection with the study. In alphabetical order, the following were the initial contacts made in the preparatory phase:

American College Health Association	- Evanston, Illinois
Miss K. Boyle	- Supervisor, U.B.C. Health Service
Miss Dora Hart	- Statistician, U.B.C. Office of Academic Planning
Dr. A.M. Johnson	- Director, U.B.C. Health Service
Mrs. Barbara Kelly	- Member, Management Committee, U.B.C. Health Sciences Centre
Mr. R.F. Kissner	- Co-author, S.F.U. Report on University Health Needs

Dr. E. Lipinsky	- Director, S.F.U. Student Health Service
Dr. Maurice Osborne Jr.	- Director, Student Health Service, U.C.L.A.
Mr. J.E.A. Parnall	- Registrar, U.B.C.
Miss A. Stalker	- Head, Occupational Therapy Department, U.B.C. Health Sciences Centre Psychiatric Unit
Miss E.M. Upshall	- Retired, Former Supervisor, U.B.C. Health Service

The second phase of the study comprised several weeks to conduct the on-site review of the Health Service facilities and functions. In the course of the survey, interviews and discussions took place with members of the medical, nursing, and support staffs, and others concerned with the delivery of student health services on the U.B.C. campus. Contacts were made with the following people, listed in alphabetical order. Except where otherwise noted, all are Health Service personnel.

Mrs. P. Barnes	- Secretary to the Director
Mrs. Belward	- Senior Office Clerk
Dr. M. Beiser	- Consultant Psychiatrist
Mr. A. Boschalk	- Area Supervisor, Operations and Maintenance Division, Department of Physical Plant, U.B.C.
Miss K. Boyle	- Supervisor
Dr. C.A. Brumwell	- Assistant Director

Mrs. S. Chambers	- Clinic Nurse and Inservice Education Coordinator
Mr. H.A. Crawford	- Fire Prevention Officer, University Endowment Lands Fire Department
Miss A. Fell	- Clinic Nurse
Dr. D. Goresky	- Physician
Miss M. Harrison	- X-Ray Technician
Dr. A.M. Johnson	- Director
Mrs. P. Jones	- Head Nurse, Hospital
Dr. M. Kwan	- Psychiatric Resident
Mrs. C. Longstaff	- Clinic Nurse
Mrs. E. McVey	- Clinic Nurse
Dr. S.E. Marks	- Counsellor, Faculty of Education, U.B.C.
Mrs. P. Miller	- Pharmacist, U.B.C. Community Health Centre
Mrs. P. Morley	- Housekeeping Assistant
Mrs. J. Morrey	- Clinic Nurse
Dr. R.K.L. Percival-Smith	- Physician
Dr. J. MacRobinson	- Chairman, Division of Public Health Practice, U.B.C.
Dr. C.J. Schwarz	- Chief Psychiatrist, St. Paul's Hospital; Former Consultant Psychiatrist, U.B.C. Health Service
Mrs. J. Sutton	- Laboratory Technician
Mrs. Taylor	- Medical Record Librarian, Vancouver General Hospital
Mr. H. Tumaitis	- Physiotherapist
Dr. E.W. Vogt	- Vice-President, Faculty and Student Affairs, U.B.C.
Dr. M. Williamson	- Director of Continuing Education, Faculty of Dentistry, U.B.C.

Brief contact was also made with all Health Service clerical personnel, the janitor, and members of the Hospital nursing staff.

Several more weeks were required for the collation and interpretation of the collected data and findings of the survey, and for completion of the written report to conclude phase three of the study.

2.3 Methodology of the Study

Based on the researcher's past experience in reviewing Canadian health care institutions for standards and practices, the method used for this study was an accreditation-type survey using documentary evidence, interviews, and observations. Evaluation of the Health Service facilities and functions was done in terms of a set of recommended standards and practices for a college health program. Data was collected to provide a comprehensive body of descriptive information concerning health services in the university, and interpreted to make recommendations for change in view of the variance between recommended standards and actual findings.

The method used was generally patterned on that of Knutson's⁷ critical review in the evaluation of program

progress. This approach provides guidelines for the conduct of program activities and is especially useful to those responsible for on-going public health programs. It's principles and techniques can also be applied during the process of program planning and development to improve the quality of decisions made. It requires critical appraisal involving the systematic application of the best available techniques and approaches for the purpose of ferreting out program weaknesses and detecting ways of reorienting efforts along more profitable lines. It is a means of identifying barriers that lie ahead and of finding ways of removing them before they disrupt the program. Some of the methods which may be applied for this purpose are discussions, interviews, questionnaires, statistical data, or any other available techniques of evaluation. The critical factor is not the technique to use but the kinds of questions to explore. During the operational phase of a program, objective measures of evaluation such as observational studies or surveys may be used to yield information useful in guiding the program.

Using the prescribed standards, some of the issues explored in this critical review were the following:

- Have the needs, wants, or concerns the program is intended to serve been adequately identified?
- Has the public to be served been represented in defining the needs?
- Have the objectives of the program been specifically defined and written down?
- Are they part of the overall objectives and philosophy of the institution?
- Are they kept current by being directly related to existing concerns, and are they understood and accepted?
- Are the methods and approaches employed in the program adequate for the purposes of the program?
- Are significant barriers to success identified and corrective actions taken?
- What is it that has made the program succeed or fail? Or what did it accomplish in terms of originally unforeseen objectives? To what extent has the community's total problem been solved by this program? Or is it directed only to a minority?
- Can the same end result be achieved at a lower cost?
- What changes in techniques or methods could have improved its effectiveness?
- How do the services under study compare with local or national standards?

To the extent that valid and reliable answers were obtained to these questions of progress evaluation and the results of this evaluation applied, the likelihood of program success is considered to be increased.

2.4 About the Standards

The instrument used to evaluate the Health Service was the Recommended Standards and Practices for a College Health Program⁶, hereinafter referred to as the Standards.

The Standards were first published by the American College Health Association, and revised in 1969. They define the scope of well-developed college health programs and the importance of coordination among the program components, and they present general guidelines for evaluating the quality of specific services.

Because of the many variables of size, location, composition of student body, and institutional goals and resources among the wide variety of colleges and universities, specific numerical standards, such as the ratio of physicians to students, the number of beds and the cost of the program, have been omitted from the revised Standards. Rather, reliance has been placed upon the statement of goals

and objectives for comprehensive health programs for the academic community. In this context it is considered that the Standards apply to Canadian university health services.

The Standards subscribe to the following:

Goals of a comprehensive health program for the academic community:

- "1. To promote and maintain those conditions which will permit and encourage each individual to realize optimum physical, emotional, intellectual, and social well-being.
 2. To control those factors in the community and its environment which may compromise this well-being.
 3. To guide the individual in the acceptance of health as a positive value in life.
 4. To stimulate the capacity of the individual to make healthful adaptations to the environment."
- (6. - p. 1)

Objectives of a comprehensive health program for the academic community:

- "1. Organizing staff and facilities for:
 - (a) Prevention of health hazards and problems for all members of the academic community (including identification and recognition of potential problems prior to their development).
 - (b) Early recognition of developing problems (including, in the clinical area, presymptom diagnosis of potential illness and use of screening procedures).
 - (c) Prompt and effective remedial action in the presence of recognized health problems (for instance, high-quality care, readily

available under conditions which encourage timely and appropriate use).

- (d) Rehabilitation of all members of the community who have health handicaps, acute or chronic, to maximum attainable restoration of well-being and function.
 - (e) Education of members of the community for healthful living, including concern for both individual and community well-being. This is to encompass development of both content and methods for health education.
 - (f) Control of environmental factors influencing health. This should include the elimination or control of noxious or harmful elements (physical and emotional) and the insurance of a creative climate which encourages development of health and well-being.
2. Encouraging use of resources under conditions which promote their effectiveness.
 3. Promoting participation among components of the community (students, faculty, staff, administration, health services) in the interest of developing goals and objectives and of sharing satisfactions and problems, including the development of ethical standards for relationships which recognize the need to handle certain types of information with discretion and confidentiality.
 4. Recognition of the importance of the performance of research for its dynamic influence on the health program.
 5. Continuous program evaluation, including specific attention to high quality.
 6. Coordinating the health resources of the institution with those of the community beyond.
 7. Developing and promoting health career opportunities." (6. - p.p. 1 - 2)

The Standards reflect an active response to change in educational goals and methods and to changing concepts and rising aspirations for health in the United States. Not only did the Standards become the basis for considerable improvement in existing health programs and a point of reference for developing programs, but they became the structure for evaluating and certifying college health programs by the American College Health Association.

Acknowledging the difference in the funding mechanisms between American and Canadian health care programs, consideration of our national Medicare plan suggests many implications for utilization of the Health Service which are discussed in the report of the survey. To the extent that pertinent differences existed between recommendations contained in the Standards and those thought to be applicable in Canada, recommendations or suggestions for change have been adapted to suit the Canadian context. Generally, however, the areas of investigation were found to have the same concerns and problems.

CHAPTER 3REVIEW OF THE LITERATURE3.1 The Development of Organized Student Health Services^{8,9,10}

The beginnings of student health services in North America were concerned with methods of mass physical education patterned on those already popular in Germany and Scandinavia. Intercollegiate and, later, intramural sports were offshoots of physical education and important components of student health. These were introduced at Harvard University as early as 1825; by 1860 most American colleges had gymnasias and the relevant equipment. Amherst was the first American college to broaden the concept of physical education and personal hygiene by developing such a department in 1859. Emphasis was given to the elements of environmental hygiene. These growing concerns with physical welfare were the forerunners of what is today called health education.

Medical service in the form of limited care and infirmaries for sick students was the last cornerstone to be introduced for the promotion and maintenance of student health. In some colleges this was organized by the students

themselves but, in most, health services originated with one of the other programs. Only in a few organizations were health services introduced as an overall plan.

Epidemics of communicable diseases in colleges hastened the development of student health services in the United States in the early part of this century, sometimes referred to as the Sanitation Era. In addition, the poor physical standards of Americans in the First World War stimulated considerable interest in student health and, subsequently, in health promotion in the post-war period, the results of which were the extension of existing services.

Second World War experience with physical fitness programs further accentuated the necessity of correlating all of the elements of physical education, personal hygiene, and medical service to maintain satisfactory standards of health and functional performance. To the present day it is advocated that any factors affecting the physical or mental health of college students falls within the province of the student health service.

Although almost a century later, British student health services followed the same course as in American universities through an initial interest in physical education and training. Even before the advent of the

National Health Service in Great Britain in 1948, a report on its medical schools¹¹ recommended a properly organized student health service in which treatment was not to be included but which was to be mainly preventive in character, free and available to all students and staff. Illness found among students was to be dealt with by the insuring public agency, the National Health Service.

Mair⁸, who produced the first comprehensive account of student health services in Great Britain, found that between 12 and 15% of all university students failed to graduate. He pointed out that academic life predisposes to the creation of strains which can lead to examination failure, partly explained by the psychological and emotional trauma which may affect students when they leave the security and protection of home and school. Overseas students were found to be even more isolated from their familiar background thereby constituting a special problem relative to mental health. However, the value of compulsory routine medical examinations and procedures such as mass miniature radiography were questioned, and various ways in which student health services could be improved were suggested.

Generally, it was found that the cost of university education was such that Britain, with its limited resources, could not afford to waste human intellect,

particularly if such waste originated from social and psychological factors which could be prevented by appropriate health services. It was thus concluded that there was an urgent and pressing need for an appraisal of student health services, where they existed.

At the present time all student health services appear to fit into some definite area of a basic program which developed not by planning, but through trial and error in response to specific needs for the promotion and maintenance of the health of students.

3.2 Other Developments

In 1920 representatives from fifty-three colleges and universities in the United States formed the American Student Health Association whose name was changed in 1948 to the American College Health Association, hereinafter referred to as the A.C.H.A. Article II of the Association's Constitution describes its purpose as follows:

"The purpose of this Association is the establishment of an official and authorized organization through which educational institutions may work for the promotion of health, the prevention of disease, and the care of illness in college and¹² university students."

A fifty-year history of the A.C.H.A. (1920-1970) was produced by Boynton¹³, a former president of the Association, and appears in the June 1971 issue of The Journal of the American College Health Association. The Journal of the A.C.H.A., so renamed in 1962, has been the official publication of the Association since 1958 when it originated as a bulletin called Student Medicine.

The U.B.C. Health Service is a member of the Pacific Coast College Health Association, an affiliate of the A.C.H.A., the Director of the service being an individual member of the A.C.H.A. The purpose of this affiliate Association, described in Article II of its Constitution and By-Laws, is as follows:

"The purpose of this Association is to provide in the Pacific Basin an organization in which institutions of higher education, other organizations and interested individuals may work together to promote health in its broadest aspects for students and all other members of the college community."¹⁴

No reference can be found in the literature pertaining to the Canadian counterpart of the A.C.H.A., The Canadian Association of College Health Services. It is held to be an informal organization which conducts annual meetings of student health services personnel from across Canada for the purpose of exchanging ideas and information.

A five-year Medline search of bibliographic citations relating to student health services, conducted for this study by the U.B.C.'s Woodward Biomedical Library, revealed only one reference specifically indexed as Canadian. This was a three-year study of the utilization of health services at Dalhousie University in Halifax from 1969 to 1972.¹⁵ More than one-half of the 248 citations generated by the search were from The Journal of the American College Health Association, the primary source of information pertaining to student health services in North America. No corresponding publication was found to be produced by the Canadian Association.

Approximately 86 references in the search were concerned with psychiatric problems, mental health, clinical psychology, or psychological counseling of students. Other references related to drug abuse, sex counseling, birth control and/or abortion, and a substantial number to dental services, clinical studies and attitudinal surveys. Very few references pertained to the organization, operation, or evaluation of student health services per se, although the need for, and lack of, evaluation is stressed throughout the literature.

Only one other Canadian study was found in the literature. It was the 1967 Report on Health and Psychiatric

Services on Canadian Campuses produced for The Canadian Union of Students by a former Consultant Psychiatrist at the U.B.C. Health Service.¹⁶ This document records that the oldest student health service in Canada was established at Mount St. Bernard College in Nova Scotia in the year 1884. Three other Canadian campuses were reported to have had student health services for over fifty years. It was found that health services were provided on 77.5% of Canadian university campuses, 38.8% with infirmary facilities, and 44.9% provided psychiatric services.

One local study¹⁷ was discovered to have been conducted in 1971 by two students at the Simon Fraser University on an Opportunities for Youth grant. Although not published, a copy of the study was obtained for reference from one of the students involved in the project which was primarily designed to promote the development of student health services at that university.

Another local health survey¹⁸ in 1971 found that students at both colleges and universities in British Columbia reported little concern about physical health but placed more emphasis on situational, psychological, and emotional concerns. The survey thus concluded that the priorities of a college health service should be an

efficient program to deal with minor emergencies, and consultative resources to assist students in coping with their financial, academic/career and emotional/social problems.

Finally, a recent survey¹⁹ of mental health and related facilities on the U.B.C. campus suggested that the obtaining of specified information through evaluation procedures would help the health care administrator to have a clearer basis for making decisions for program changes, and that the accountability demonstrated in all functions of the campus services surveyed should be one of the most important factors for continued support of programs and expansion and change within the programs. The findings of the current study endorse the conclusions and recommendations of that survey.

3.3 Program Evaluation

Discussions of evaluation in the health care literature comprise a very broad range of elements: concepts; general issues; principles; methods; indices; and specific studies. But reviews of programs in many areas have revealed a paucity of both conceptualization and scientific research on the effectiveness of most program activities.

Deniston et al.^{20,21} differentiated between program effectiveness and program efficiency in evaluating the performance of a program, that is, to what extent were objectives attained as a result of activities (program effectiveness) and at what cost (program efficiency).

Roemer²² presented a survey of the literature addressed to the various problems encountered in evaluating health service programs and suggested a framework for analysis of the evaluation of various systems or subsystems of health organizations.

His framework was based on the premise that a program can be evaluated in the context of short, intermediate, or long-term horizons and that several phenomena within each level may be defined and measured.

MacMahon et al.,²³ Knutson,⁷ Levey and Loomba,²⁴ and various other authors have described what they consider to be the necessary principles or steps in the process of evaluation. James²⁵ developed four categories for evaluating public health programs. Methods of health care evaluation have been compiled in a book of readings and exercises, published at McMaster University.²⁶

Schulberg and his colleagues²⁷ endorsed Knutson's organizational and personally-oriented reasons for evaluation, supporting the view that the purpose of evaluation

is related to the subsequent utilization of the findings. They classified program evaluation models into two categories, the goal-attainment and systems models, and they discussed the characteristics and limitations of each as they affect the implementation of program research findings.

Evidence that evaluation research is closely related to program planning can be found in James' description of a circular evaluation process in the goal-attainment model. Etzioni²⁸ found that the systems model establishes the degree to which a program realizes its goals under a given set of conditions, that is, a balanced distribution of resources among all organizational objectives, not simply the satisfaction of any one goal. Thus the systems model requires considerable knowledge of the way in which an organization functions. One advantage is that much more collected data is included in the analysis than is possible in classical research design; another is its ability to offer the program administrator guidance for implementing change.

Schulberg and Baker²⁹ suggested that organizations should establish planning divisions to assist the feedback of research findings to the program administrator and to insure translation of research into practice. It was thought that feedback can be enhanced by the design

of evaluation procedures which appropriately fit the scheduled decision-making needs of an organization, and which have data available at a time when they can be used for planning.

In terms of practical input, it was generally found that evaluation in the health field has been conducted in the sense of comparing achievements with goals established in the planning phase. Action research which contributes much to program progress was not found to substitute for controlled studies which measure program achievement, but long-range controlled studies, on the other hand, did not yield early feedback. Indeed, it has been found necessary to first determine which method will best serve the purposes defined.

Both Suchman⁴ and Herzog³⁰ have aimed for a more meaningful definition of evaluation and a more useful system for classifying, comparing, and making more cumulative the many evaluation studies in public service and social action programs.

Tripodi³¹ and his colleagues utilized a range of sources in the development of evaluation guidelines and suggested the use of Herzog's "do's and don'ts" of research to provide a good, general point of view for conducting evaluative studies. They also found to be

valuable Suchman's consideration of the strengths and weaknesses of various designs used in evaluative research. His rejection of one correct design for experimental research emphasized that "the wide range of existing evaluation studies needs systematic classification according to significant criteria of content and method." (4. - p.7)

But Knutson,⁷ Reinke,³² and others, have contended that health care programs are not like laboratory experiments; they seldom start and end at specific predetermined points. Baselines and final measurements cannot be clear-cut, nor can measurements be completely independent when the process of interviewing or collecting data is in itself an educational process which may influence and even change the behavior of program personnel. Indeed, the task of increasing the probability of more efficient and effective health services presents a real challenge to program planning, development and evaluation.

Wessen³³ has suggested that the activity of evaluation should be part of administrative routine in a well-run organization. However, the process of evaluation is often problematic and requires careful analysis and formulation of methodology for its conduct. Particularly important is the task of developing more sensitive

measures of the relative effectiveness of health services. Although excellent designs for such research have evolved in clinical tests and trials, such methods have not yet frequently been applied to the effectiveness of whole programs. One of the difficulties is to specify precisely what should be the target outcomes against which success or failure should be measured. Another is to create a setting controlled enough that the effects of a specific program can be separated from incidental effects. Still another is the difficulty and expense of maintaining follow-up over the period necessary to demonstrate program effects. In addition, there is the need to validly interpret and successfully apply the findings of evaluation.

Wessen³³ noted that perhaps the principal impediment to the implementation of evaluation is beyond the sphere of scientific technique. It may lie in the reluctance of persons and organizations to face the criticism which may be implied in impartial evaluation. But, when an evaluative study is conducted, it can lead to further research questions which may uncover new insights of real importance for the advancement of professional theory and practice.

PART II

CONTENTS OF THE STUDY

CHAPTER 4HISTORY AND BACKGROUND OF THE
U.B.C. HEALTH SERVICE

The information acquired for this chapter was obtained from two sources: one was the original historical reports and papers³⁴ documented by Miss E.M. Upshall, P.H.N., Nursing Supervisor of the Health Service from 1936 to December, 1971; the other was the Annual Reports of the Health Service³⁵ from 1954-55 to 1974-75. Reports could not be located for the years 1958-59, 1960 through 1964, and 1970-71. Information for 1970-71 was found, however, in the comparative analysis of statistics in the 1971-72 report.

Because of the vast amount of historical data found in the reports and papers, the selected highlights have been summarized by date to present an overview of developments and trends in the Health Service over the years. These are presented in a point-like manner, followed by four tables depicting annual registration, Health Service visits, Hospital utilization, and a summary of services.

HISTORICAL SUMMARY:

- 1915 - Inception of the University of British Columbia.
 (This date was actually documented as 1912 but the
 U.B.C. Calendar states it to be 1915.)

- Medical Director of the Vancouver School Board appointed to examine University students. Examinations were performed in the evening at the Vancouver General Hospital O.P.D. until 1936. Students examined were all new U.B.C. registrants, women participating in the major athletics, and students whose physical condition had been unsatisfactory in the previous year.
- 1925
- U.B.C. moved to its present West Point Grey campus.
 - Winter session student population: 1984, summer session: 394.
 - Student Health Service commenced with the appointment of a Medical Health Officer by an Order-in-Council.
- 1927
- Provincial Board of Health appointed first Public Health Nurse for the University area, following a measles epidemic.
 - Provision of a three-room office in the Auditorium building allowed for the continuous operation of a full-time Health Unit on the campus, essentially a preventive and diagnostic service with no provision for sick students.
 - Promotion and maintenance of the health of the students through:
 - health appraisal of all new students
 - encouragement to consult with private physicians for early advice and treatment of defects found

- prevention and control of communicable diseases through immunization and general sanitation
 - emergency first-aid treatment and general health advice.
 - formal health teaching
- 1928-29 - 77.7% of students reported to have been vaccinated for smallpox at some time during their lives.
- 1929-30 - Point Grey Reserve became known as the University Endowment Lands (U.E.L.).
- 1932 - Epidemic of smallpox in Vancouver; extra vaccinations given.
- 1935-36 - Physical Education organized on a voluntary basis at U.B.C. in response to "the need of the student body for a systematic physical activity program". Emphasis was on intramural athletics as the geographical location of U.B.C. precluded major intercollegiate competition.
- 1936 - Metropolitan Health Committee, organized by the Provincial M.H.O., provided a generalized public health program for Greater Vancouver and benefits of extra services and facilities of the larger organization for the University area.
- Appointment of Miss Upshall as Public Health Nurse; retired 1971.
 - Introduction of clerical and other additional staff to the Health Service.

- 1936-37 - Tuberculosis occupied first place as cause of death of college-age persons; project planned for early diagnosis and treatment - 24 cases of active pulmonary T.B. discovered at U.B.C. between 1937 and 1945, but rate of infection down.
- Serious attention given to infectious diseases; failure to report to nurse resulted in exclusion from the University.
- Student population: 2,216.
- 1938 - Psychiatric consultative service commenced with an average of one visit per patient.
- 1939-1945 - Second World War.
- 1941-42 - T.A.B.T. vaccine given to all Bacteriology students studying the Typhoid organism.
- 1945 - Health Service expanded to a converted army hut with increased space and personnel.
- Two-year compulsory Physical Education required in order to graduate; medical recheck required in second year to determine physical capacity for the program.
- Expansion of campus eating establishments and temporary buildings.
- Increased Health Service responsibility for campus sanitation, for example, physical examination of food handlers.

- Formation of President's Committee on Student Health Service and Health Education, with representation from all other interested departments.
- Health Service acted as Liaison Officer between the medical departments of D.V.A. and students on grants. Treatments given under instructions of D.V.A. medical staff (e.g. anti-allergen and penicillen); same policy for students under care of private physicians.

1946

- Smallpox scare in Vancouver; extra vaccination clinics held.

1947

- All students participating in competitive sports required to have a yearly medical examination; referred to family physicians for necessary treatment of defects found.
- Follow-up of defects by tickler-file method, using a form sent to students asking them to report back to Health Service.
- Student population: 8,600, more than double 1945 census due to D.V.A. credits.
- Review of ten years since 1937 revealed:
 - total number of physical examinations increased 350%.
 - total number of physical examinations of new students, excluding ex-service members, increased 188%

- total number of visits to the Health Service increased 517%.
- total number of consultations by the M.H.O. increased 70%.
- medical examination results were used as an index of student health and to determine trends such as increase in height of male students.
- A.C.H.A.'s Third National Conference on Health in Colleges, at which U.B.C.'s Dean of Medicine was a committee chairman, urgently recommended the provision of dental diagnostic and therapeutic services. It stated: "The importance of this care was proved during World War II and warrants this recommendation." The unit record system also recommended for all student Health Services.

1950

- U.B.C., McGill, Toronto, and one other Canadian university belonged to the American College Health Association.
- T.B. program appeared to be one of the best on the continent; 6,149 chest x-rays taken during the previous session with nine newly diagnosed cases of pulmonary T.B.
- Smallpox vaccination compulsory; 93.6% of new students already vaccinated on entry to University, with immunization and follow-up done during the year.

- T.A.B.T. given to all first-year Bacteriology students.
- 1951
- Health Service moved to present location in Wesbrook Building, with introduction of therapeutic service, clinical lab and x-ray unit.
 - Hospital opened; isolation of communicable diseases considered important in the prevention of epidemics in the dorms and residences.
- 1952
- U.E.L. public health service, exclusive of the University campus, transferred to Unit #3 of the Metropolitan Health Committee.
 - Hospital included in B.C. Hospital Insurance plan, allowing the admission of non-students.
 - Provincial Board of Health Survey Chest Unit incorporated into x-ray unit to service West Point Grey as well as U.B.C.
- 1955-56
- Health patterns showed an increase in respiratory infections (the largest group of conditions seen) and skin conditions, a decrease in the number of accidents reported, and T.B. still of concern with 3,128 chest x-rays taken and 21 students under regular surveillance. There were 11 non-student Hospital deaths.
 - Revaccinations for smallpox were the greatest number of immunizations given; others were for typhoid, scarlet fever, staph., allergies, and cholera; B.C.G. still being done.

- Three home visits made, one to a Rural Youth Training School.
 - 480 doses of antibiotics given.
- 1957-58
- Epidemic of Asiatic influenza in Sept./Oct., 1957, caused marked increase in the percentage of respiratory diseases dealt with.
 - All other disease categories showed a decrease from other years, indicating no major health problems.
 - Summer school enrolment increased 93.7% which considerably increased Health Service attendance.
 - Students given option of having University entrance medical examinations by family physicians.
 - Disease statistics excluded outpatients under M.S.I. or private care.
 - Salk vaccine made available by Provincial Health Department for mass polio vaccination clinics.
 - 2,872 chest x-rays taken, including all contacts of five cases of active pulmonary T.B. discovered in one faculty; four admitted to the sanatorium, 73 under regular surveillance.
 - Department of Bacteriology began provision of antibiotic sensitivity service with 66 cases.
 - 31 home visits made, including dorms and residences.
 - 10 students admitted to Hospital for psychiatric treatment; 12 staff admissions.

- Expansion of psychiatric service planned.
 - Director participated in Medical Service and Administration section of A.C.H.A. Annual Meeting; reported valuable material applicable to U.B.C. operation gained from U.S. Health Service Directors.
 - Nursing Supervisor reappointed Treasurer of Canadian Public Health Association, B.C. Branch.
- 1959-60
- Expansion of psychiatric service by formation of Division of Psychiatry to handle the wide range of student problems presenting in the emotional and psychiatric fields.
 - Analysis of decreased student absences from classes confirmed general good health of students reported by decreased Health Service attendance, except for psychiatric service.
 - 9 off-campus deaths, one suicide; one student who died of a heart attack while skiing had been restricted in physical activity by the Health Service.
 - 954 chest x-rays taken, 1 active case of pulmonary T.B. admitted to sanatorium.
 - Policy changes included:
 - routine chest survey x-rays on new students discontinued because of recent concern with radiation exposure; only those with positive tuberculin tests x-rayed.

- Health Service excuses for absence from P.E. classes no longer required, with a resultant decrease in P.E. student visits.
- Requirement for readmission to class slip following 3 days absence due to illness changed to one week; resulted in decrease of 'new visits' by nearly 50%.
- Medical care and investigation given increased attention in workload; more space and staff required with increasing student enrolment.

The chart in Appendix Ia presents a comparison of student registrations and total visits for illness or observation, for the years 1945 to 1960. Appendix Ib presents the same comparison for the years 1960 to 1970.

- Health Service reported to be gaining recognition as progressive department; University of Melbourne patterning health program after U.B.C.'s; Director invited to speak on U.B.C. Health Service at the British Student Health Officers' Association annual conference.
- First A.C.H.A. annual meeting in Canada; Director participated in both business and clinical sessions at Toronto.

- 1964-65
- Introduction of physiotherapy service.
 - Present Assistant Director, interested in preventive and curative athletic medicine, visited that department at Harvard University.

- Plans made to conduct comprehensive initial examination including E.K.G., of P.E. Majors; delayed because of space and staff shortage.
 - Clinic started for students with emotional problems related to adjustment at the University; expansion of clinic planned.
 - Total O.P.D. student attendance unchanged although U.B.C. registration increased.
 - Student admissions to Hospital decreased, non-student admissions increased.
 - Medical Services Plan announced by Provincial Government; increase in students covered by some form of pre-paid medical care (M.S.I.). Consideration given to billing insurance schemes for services rendered to student patients, and a fee for those with no comprehensive coverage.
- 1965-66
- Total visits and numbers reporting increased; 50% more new patients seen by psychiatrists than in previous year. Need to expand psychiatric service projected.
 - Student admissions to Hospital increased; non-student admissions decreased.
 - Influenza epidemic reported in Feb./March, 1966.
 - Continuing informal discussions on life problems held in student residences; increased liaison with other departments.

- Present Nursing Supervisor attended course on New Perspectives in College Health Nursing in Colorado.
- Consultant Psychiatrist attended annual A.C.H.A. meeting in California; Survey of Health and Psychiatric Services on Canadian Campuses conducted for the C.U.S.
- New Physiotherapy Department opened in the War Memorial Gymnasium with a full-time therapist.
- All students notified with spring marks of end of M.S.I. contract with U.B.C.; B.C.M.P. offered comprehensive coverage at lower rate.

- 1966-67
- Federal Medicare announced for July 1968; fee-for-service to be charged for medical care provided at July 1, 1967. Concern expressed regarding utilization of Health Service by students who might opt for private medical care.
 - 3-month eligibility for B.C. Hospital Insurance not applicable to those in province as students only; University Health and Accident Plan available for foreign students.
 - Increased emphasis on psychiatric service, essentially a short-term procedure; 51 students admitted to Hospital for psychiatric treatment; problem of L.S.D. complications subsiding but increased attention to marijuana use expected;

talks on drug abuse given by staff to student groups, on and off campus; continuing informal discussions in male and female residences primarily concerned sex education; regular meetings held with Counseling Service and, occasionally, Housing Administration; budget requested for clinical psychologist (nursing counselor or psychiatric social worker).

- First organizational meetings (Toronto and Washington) of Canadian Association of College Health Services, a united effort toward uniformity in the method of providing health services in Canada.
- 1967-68
- Medicare in B.C. July, 1968; acquisition of coverage encouraged by staff; fee-for-service operation required more clerical work.
 - First compulsory health and hospital insurance introduced for non-B.C. residents by Board of Governors' ruling.
 - Need to expand service forecast although workload remained constant.
 - Compulsory entrance physical examination no longer required (because of Medicare), but suggested as valuable.
 - Intake of psychiatric service levelled off with estimated 2% of student population treated during previous six years but 5% requiring help; increase

in private psychiatrists and referrals due to medical insurance coverage; weekly meetings held with other campus counseling services for increased understanding of student problems, non-breach of confidence seen in interdisciplinary approach; 73 admissions to Health Service Hospital, 4 transfers to V.G.H. Psychiatric Unit; Consultant Psychiatrist participated in Federal/Provincial conferences on drug abuse.

- Good attendance at informal sex education sessions.
- First meeting of Health Service Directors of all B.C. universities for the purpose of developing one common medical history record to facilitate transfer of students; annual meetings planned.
- 1968 - Health Sciences Centre Psychiatric Unit opened on campus.
- 1968-69 - Increased student registration did not show corresponding increase in Health Service workload; more students thought to be consulting private physicians because of universal health insurance, but only 90% of student population appeared to have adequate medical coverage.
- Entrance physical examinations abandoned.

A graphical picture of the number of students receiving medical examinations for the years 1928, 1938, and

1944 through 1956, is presented in Appendix IIa. The same chart for the years 1945 through 1960 is shown in Appendix IIb. Appendix III shows the number of new students who submitted required medical folders at enrolment for the years 1958 through 1969, including the number of physical examinations performed by the Health Service and by private doctors. The last year reflects the discontinuation of entrance physicals.

- Operation Doorstep: voluntary chest x-ray and lab. test in place of compulsory tuberculin test; only 6% of students found to have positive tuberculins and no new cases of T.B. found in two years.
- Orthopedic and Dermatology clinics commenced.
- Psychiatric service continued to be responsible for about 2% of the student population; 51 students admitted to the Hospital, 7 to other psychiatric units; 2 students were known to have committed suicide with 2 others unconfirmed, considered low by statistics of studies done elsewhere.

- 1969-70
- Overall average increase of 20% in clinic workload with an increase of 40% in allergy injections given; problems felt in space being used to maximum.
 - Dermatology and Orthopedic clinics reported successful with a 25% increase in attendance; Gynecology clinic planned.

- Student days in Hospital declining despite increasing enrolment; healthier population assumed responsible as well as higher academic entrance requirements of University.
- Liaison with Director of Housing, as large part of Health Service work associated with students living in residences.
- No major changes in psychiatric service; psychotherapy sessions increasing.
- 10 student deaths reported, the last year to be included in annual reports.

1971

- Community Health Centre opened on campus.

1971-72

- Miss Upshall retired; Miss Boyle appointed Nursing Supervisor.
- Fourth full-time physician appointed.
- Statistical reporting changed significantly; faculty and staff attendance at Community Health Centre reflected in figures.
- Health Service seeing students only, but continued as a campus emergency center because of lab. and x-ray facilities.
- Patrol vehicles acting as campus ambulances.
- Hospital workload unchanged but fewer student patient days.
- No major health problems or epidemics.

- O.P.D. painted and some new furnishings purchased.
- Very few students considered not adequately protected by health insurance; compulsory hospital and medical insurance for non-Canadian students (in order to complete registration at University) considered effective regulation for protecting students financially in case of illness.
- Live-in Resident on-call service for Hospital discontinued.

1972-73

- Workload unchanged; little evidence of drug abuse observed; incidence of venereal disease reported low while other segments of the community had a marked increase; new specialist clinic services planned with input from staff members.
- Hospital Head Nurse retired; succeeded by present Head Nurse, experienced in Intensive Care.
- Mental Health Unit opened in space vacated by the Department of Health Care and Epidemiology; space in O.P.D. eased by move of psychiatric service.

1973-74

- Statistics showed a 10% overall increase in clinic visits, with a 22% increase in treatments and counseling by nurses, thought to be better use of their training and professional skills.

- Space problems expressed; special clinics included two Ophthalmology and one Ear, Nose, Throat clinic per week; special equipment required for clinics said to preclude other use of space; but more complete medical care aimed for.
 - Psychiatric service showed slight increase over previous year.
 - Hospital increase in patient days due to non-students; student admissions unchanged.
 - Hospital redecorated; some beds replaced.
 - Disease classifications relatively unchanged in order of genito-urinary, allergies and miscellaneous, bones and accidents, skin conditions, and eye, ear, nose and throat categories; general pattern of student use of Health Service maintained.
- 1974-75
- Overall statistics comparable to previous years' experience; 33% increase in treatments and counseling by nurses; strain on space and personnel reported due to crowded facilities and special clinics; winter session enrolment: 22,035.
 - New x-ray equipment installed; survey chest unit not retained with resultant decrease in number of films taken; T.B. screening service provided by mobile unit from Willow Chest Center.

- Length-of-stay in Hospital shortened; alternatives and plans discussed to more effectively use the Hospital.
- Consultant Psychiatrist, Dr. Schwarz, resigned after 11 years, to become Head of Psychiatry at St. Paul's Hospital; successor experienced in crosscultural and social psychiatry.
- Mature approach of students to drug usage noted in contrast to previous years, particularly their reluctance to take antibiotics, aspirin, and tranquillizers.
- Annual conference of Pacific Coast College Health Association held in Vancouver, co-hosted by U.B.C., Simon Fraser, University of Victoria, B.C.I.T., and Vancouver Community College.

Tables Ia and Ib give the U.B.C. student registration for the years 1954 - 1960 and 1964 - 1970. As mentioned previously, no reports were located for 1960 through 1964. Annual enrolment since 1970 in Chapter 5, on the institutional community, is from a different source and therefore not included here.

TABLE IaSTUDENT REGISTRATION 1954 - 1960

YEAR	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60
WINTER SESSION	5,914	6,403	7,699	8,986	NO	10,642
SUMMER SESSION	1,161	1,420	1,810	3,507	FIGURES	3,828
TOTAL	7,075	7,823	9,509	12,493	AVAIL- ABLE	14,470

TABLE IbSTUDENT REGISTRATION 1964 - 1970

YEAR	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70
WINTER SESSION	15,489	16,337	17,219	18,426	21,717	22,382
SUMMER SESSION	6,220	6,230	5,943	5,216	5,664	5,627
TOTAL	21,709	22,567	23,162	23,642	27,381	28,009

SOURCE: Health Service Annual Reports.

The following table indicates the number of student visits to the Health Service during the late fifties, over the sixties, and into the seventies. The remarkable increase in 1971-72 is thought to be due to the change in method of statistical reporting.

TABLE II
TOTAL NUMBER OF VISITS
TO HEALTH SERVICE 1954 - 1975

1954-55	1955-56	1956-57	1957-58	1958-59	1959-60
23,244	23,956	32,676	37,827	MISSING	30,364
1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
29,808	31,628	35,868	37,228	36,778	32,108
1969-70	1970-71	1971-72	1972-73	1973-74	1974-75
38,620	MISSING	51,308	52,069	56,979	56,741

SOURCE: Health Service Annual Reports.

The next two tables give a very general overview of the Hospital utilization and a summary of services for the years 1954-1975. The introduction of a physiotherapy service can be seen in corresponding figures for 1964-65 and later, in Table IV. The change in statistical reporting in 1971-72 is reflected in the figures for treatments and consultations with nurses, and in the absence of other figures since that time.

TABLE III HEALTH SERVICE HOSPITAL UTILIZATION 1954 - 1975

YEAR	1954 -55	1955 -56	1956 -57	1957 -58	1959 -60	1964 -65	1965 -66	1966 -67	1967 -68	1968 -69	1969 -70	1970 -71	1971 -72	1972 -73	1973 -74	1974 -75
NUMBER OF ADMISSIONS	818	825	807	919	731	812	862	694	677	599	585	602	531	535	559	552
NUMBER OF STUDENT ADMISSIONS	503	533	481	642	457	509	608	447	465	407	365	426	327	327	275	320
NUMBER OF PATIENT DAYS	5647	6029	5835	6574	5539	5450	4901	4652	4526	4255	4045	3680	3921	3959	5477	4036
AVERAGE NUMBER OF DAYS PER PATIENT	6.8	7.3	7.1	6.7	8.8	6.57	5.74	7.84	6.76	7.04	6.89	6.15	7.26	7.69	10.05	7.91
AVERAGE NUMBER OF PATIENTS PER DAY	15.4	16.4	16.0	18.0	15.1	15.2	13.4	12.7	12.3	11.6	11.0	10.0	10.7	9.8	15.0	11.1

SOURCE: Health Service Annual Reports.

TABLE IV SUMMARY OF SERVICES 1954 - 1975

YEAR	NO.OF CONSULT'S WITH H.S. PHYSICIANS	NO.OF NEW STU- DENTS EXAMINED BY H.S. PHYSICIAN	NO.OF NEW STU- DENTS EXAMINED BY FAMILY PHYSICIAN	NO.OF TREAT- MENTS & CONSULT'S WITH NURSES	NO.OF STUDENTS REFERRED TO DENT- ISTS & OUTSIDE DOCTORS	NO.OF STUDENTS REC'VING CONSULT'S WITH PSY- CHIATRISTS	NO.OF STUDENT CONSULT'S WITH PSY- CHIATRISTS	NO.OF LAB & X-RAY PROCE- DURES	NO.OF PHYSI- OTHER- APY TREAT- MENTS	NO.OF DOSES OF IMM- UNIZA- TIONS GIVEN
1954 -55	4,996			12,332	990	26		11,334	125	1,709
1955 -56	5,549	2,114	19	13,670	985	54		12,667	38	1,866
1956 -57	6,714	2,870		10,535	713	31	108	15,337	212	9,835
1957 -58	6,546	2,078	1,217	13,385	483	47	178	15,406	238	6,158
1959 -60	6,940	891	2,530	11,556	618	124	1,123	10,367	237	4,895
1964 -65	13,282	61	4,673	18,553	774	253	1,075	12,209	559	4,842
1965 -66	14,674	170	4,356	19,038	829	284	1,626	11,922	1,250	4,741
1966 -67	14,353	372	5,073	18,648	822	355	2,479	12,386	1,246	5,372
1967 -68	13,451	219	4,762	20,463	704	372	2,239	10,771	1,338	5,019
1968 -69	14,237	115	3,051	18,560	350	383	1,938	9,158	1,134	4,385
1969 -70	16,709	222	3,079	22,756	842	427	2,809	14,367	1,268	4,636
1970 -71	16,707						2,331	12,621	1,264	5,356
1971 -72	18,730			5,687		394	2,482	11,405	1,696	3,902
1972 -73	18,047			6,635		343	2,672	12,692	1,849	4,233
1973 -74	19,773			8,099		341	2,803	13,841	1,637	4,315
1974 -75	19,266			10,866		357	1,907	12,404	1,618	4,781

CHAPTER 5

GENERAL INFORMATION

5.1 The Institution

The University of British Columbia opened in the autumn of 1915 in temporary quarters on part of the site of the General Hospital in the City of Vancouver. After several years' delay caused by the First World War, the University commenced work on its permanent campus in Point Grey at the beginning of the 1925-26 session.

The University operates under the authority of the Universities Act of the Province of British Columbia (B.C.R.S. 1974, C 157). It is composed of a Chancellor, a Convocation, a Board of Governors, a Senate, and the Faculties. It has in its own right and name the power to grant degrees established in accordance with the provisions of the Universities Act.

The Board of Governors is composed of fifteen members including the Chancellor, the President, two faculty members, eight persons appointed by the Lieutenant-Governor-in-Council, two of whom are nominees

of the Alumni Association, two members of the Student Association, and one full-time employee of the University who is not a faculty member.

The University is deemed to be non-sectarian and non-political in principle. Its goals and objectives are considered to be embodied in the following excerpt from the Universities Act:

"Each university shall, so far as and to the full extent which its resources from time to time permit . . . (a) establish and maintain colleges, schools, institutes, faculties, departments, chairs, and courses of instruction; (b) provide instruction in all branches of knowledge; (c) establish facilities for the pursuit of original research in all branches of knowledge; (d) establish fellowships, scholarships, exhibitions, bursaries, prizes, rewards, and pecuniary and other aids to facilitate or encourage proficiency in the subjects taught in the university and original research in all branches of knowledge; (e) provide a program of continuing education in all academic and cultural fields throughout the Province; and (f) generally promote and carry on the work of a university in all its branches, through the co-operative effort of the board, senate, and other constituent parts of the university."

(36 - p. 9)

Instruction is offered in each of twelve faculties and eight schools. Graduate work is offered by the Faculty of Graduate Studies including the School of Community and Regional Planning and the Institutes of Animal Resource Ecology, Applied Mathematics and Statistics, Astronomy and Space Science, Industrial Relations, International Relations, and Oceanography.

It can be seen that the interests and activities of the institutional community are broad and diverse, thus precluding the cohesiveness of smaller colleges and universities. The seaport location of U.B.C. also has an effect in the enrolment of students from the Pacific Rim countries and Great Britain, as well as from across Canada and the United States, all of whom have an influence on the programs and activities of the Health Service which was developed to provide health care to all students who seek or require it.

5.2 Composition of the Institutional Community

A continuing census of students is available from the Office of Academic Planning, which is considered essential for the development of an appropriate health program. The census provides information concerning the total number of students, male and female, full-time, part-time, and extension credit, graduate and undergraduate, senior citizens, and foreign students. Other pertinent data relate to enrolment of all students by age and sex, faculty and year level, age of students entering for the first time, registration by country of citizenship, and foreign students by type of visa. No profile of financial resources is available but

information concerning predominant and minority social backgrounds can be determined from the census statistics. Such data should be reviewed annually by the Health Service in an attempt to project a student body increase or decrease, trends, and possible areas that would require the planning or expansion of new and existing services.

The following tables briefly enumerate the student population for the years 1969 - 1976. It should be noted that the source of these figures is different from the source of figures quoted in the previous chapter.

<u>TABLE V : TOTAL ENROLMENT 1969-1976</u>			
<u>Calendar Year</u>	<u>Male</u>	<u>Female</u>	<u>Total*</u>
1969-70	13,000	7,767	20,767
1970-71	13,027	7,910	20,937
1971-72	12,247	7,579	19,826
1972-73	11,817	7,349	19,166
1973-74	12,050	8,050	20,100
1974-75	13,028	9,007	22,035
1975-76	13,253	9,726	22,979

* Full-time and part-time, not including extension credit and correspondence.

<u>TABLE VI : PERCENT - MALE AND FEMALE</u>			
<u>Calendar Year</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
1969-70	62.6%	37.4%	100.0%
1970-71	62.2	37.8	100.0
1971-72	61.8	38.2	100.0
1972-73	61.7	38.3	100.0
1973-74	60.0	40.0	100.0
1974-75	59.1	40.9	100.0
1975-76	57.7	42.3	100.0

Source: Office of Academic Planning

It is noted that the percentage of female students (graduate and undergraduate), is increasing steadily.

A three-year summary of ages of all students and percent of total is found in the appendices as Appendix IV. A review of other data on enrolment for the years 1971 - 1976 shows that, for each year, the majority of students are between the ages of 18 and 22 years (58% in 1975-76). The greatest number of students for any age in 1975-76 was 19 years, the youngest high number in five years. In previous years the greatest numbers were 20 and 21 years of age. It appears that a younger student body, and an increasing female popu-

lation, could have many implications for the Health Service programs provided.

Appendix V, Age of Students Entering for the First Time 1975-76, shows the greatest number of first enrollees to be 18 years of age, 47% of those being female. The total number of close to 7,000 new students, or nearly one-third of the total enrolment, indicates an area of interest to the Health Service in terms of screening for health problems and for health education.

Other available statistics from the Office of Academic Planning record that, of the 22,979 students enrolled in 1975-76, 19,272 (83.86%) were Canadian, 2,848 (12.39%) were immigrant students, and 572 (2.48%) were foreign students on a student visa (76% of those being graduate students). Visitors, diplomatic and other students made up the total registration.

Total international students for 1975-76 numbered 3,889 with 1,385 from Third World Countries. Figures dating back to 1957-58 are available for registration by continent and country of citizenship. Discrepancies in total figures are thought to be due to differences in statistical print-out information.

Special programs for screening, disease detection, and special services, are recommended as appropriate

for large groups of international students where indicated.

Information could not be obtained on the number of married and single students, nor on the number of faculty and employees which make up the total institutional community. The latter group is not considered of consequence to the Health Service whose primary concern is the student population.

5.3 Organization and Administration

The By-Laws of the University Health Service Hospital provide a clear statement of the institution's responsibility in the area of student health. The By-Laws are attached in full as Appendix VI of this report.

The eight sections of the By-Laws have been detailed as: Definitions; Board of Management; Officers of the Board; Committees of the Board; Director; Audit of Accounts; Medical Staff; and Amendments. The Articles of each section are outlined in Appendix VI. Approval was given to the By-Laws by the Board of Governors on December 1st, 1952.

In order for this policy statement to serve as a guide for the development of operating policies for the health program, it should be reviewed and revised from time to time.

No such statement is known to exist for the Health Service Outpatient Department, hereinafter referred to as the O.P.D. It is recommended in the Standards that reasonably detailed policy statements should be developed to include the three main program areas: personal health service; environmental surveillance and control; and health education. It is further recommended that the policy statements should be formulated with the assistance of students, faculty, and administration, prior to approval by the administration and the governing board of the institution. One or more committees of students, faculty, administration, staff and representatives of the governing board, as well as the possible inclusion of members of local medical and health-related organizations, can serve as a review and advisory mechanism through which the health needs of the community can be identified and recommendations concerning the health program can be made periodically, at least annually. It is recommended that the Health Service Director should serve in an advisory capacity on any such review committee. Broad support for the program can further be achieved through continual liaison with the health services of similar local institutions, particularly Simon Fraser University.

At the present time, the Health Service Director is responsible to the Vice-President in charge of Faculty and Student Affairs whose span of control appears so broad as to allow only diluted concern for each of his areas of responsibility. This is incompatible with a level of administration which will guarantee continual vigilance over the requirements of the Health Service and provide realistic support for all program components.

The Director reports briefly to the Board of Management each month as a perfunctory duty. It appears that very little communication between the Health Service and the administration either exists or is encouraged; the Health Service prefers to remain autonomous. It is recommended, however, that the open lines of communication, universally espoused as a measure of good management, are essential to the Director in carrying out his delegated authority to make professional appointments, to establish Health Service functions and activities, and to develop the health program as a support for the entire community.

The Standards recommend that the Director accept as one of his primary responsibilities the promotion of complete cooperation and coordination among the various departments, offices, individuals, and other resources,

both on and off the campus, which can make a contribution to the total health program. It is considered imperative, therefore, for the Director to produce regular reports concerning the activities and services of the Health Service, and to ensure circulation of such reports to all department of the institution concerned with the health of the campus community.

CHAPTER 6HEALTH PROGRAMS: SERVICES AND ACTIVITIES6.1 Outpatient Services

A. OBJECTIVES

Briefly stated, the purpose of the Health Service is to provide for the health needs of the students during their time on campus. Nearly complete outpatient care is available as a direct service of the health program through the provision of preventive, diagnostic, therapeutic and some rehabilitative services.

Individual objectives are documented for both outpatient and inpatient services and are relatively interchangeable. Those pertaining to the ambulatory care unit are the following:*

1. To provide a Public Health Unit on campus with particular supervision of communicable diseases and sanitation.
2. To provide outpatient services, including emergency service, minor surgery and follow-up care.
3. To maintain adequate facilities for diagnosis and treatment.

4. To assist with student adjustment and counseling problems.
5. To seek and maintain the confidence of the students so that they will be encouraged to present and discuss their most sensitive problems.
6. To teach and promote good health habits.
7. To help the student attend his classes with as little time loss as possible in order to achieve his academic goals.
8. To train all personnel in the area of student health and welfare.
9. To assist in research activities when requested to do so, for example by supplying material for viral studies, particularly mononucleosis.
10. To help integrate the health program with the central administration and other departments, thus providing a service to both the student body and the University.

*(Adapted from the Health Service Administrative Manual.)

These objectives comply with the Standards in that the O.P.D. serves both clinical and educational functions. In successfully applying the objectives of high quality clinical services, the Standards add that patients expect and deserve courteous reception and acceptance; expeditious and accurate diagnosis; prompt, effective and humane treatment; and an appropriate explanation of

their health problems. Whereas students' expectations concerning health and medical care are rising, it is recommended that every opportunity be exploited to pursue effective health education.

B. SCOPE AND AVAILABILITY

There is a clear statement defining those members of the institutional community who are eligible for care, including special circumstances which may apply. The statement is contained in both the U.B.C. Calendar and the Health Service brochure issued to all new registrants. The facility is available to all students who take three or more units during either the winter or summer session.

Students registering for the first time at the University and taking three or more units are required to submit a medical questionnaire on an approved form (see Appendix VII) before registration can be completed. The necessary forms are provided by the Health Service at the time of acceptance. The University reserves the right to request that a student have a medical examination if circumstances warrant it and registration may be cancelled for students who do not comply with this request.

Graduate students studying on campus and all

students registered at Summer School are eligible for necessary care at the Health Service. However, investigation of pre-existing conditions which do not interfere with current academic work is not undertaken during the short summer session. Routine medical examinations are not provided except in special circumstances which may apply to the faculties of Medicine, Dentistry, and Nursing, or to athletic programs. For detailed information relating to student eligibility for hospital and medical insurance coverage, foreign students, etc., please refer to Chapter 9, Business Management.

The spouse and children or dependents of a student may receive health care at the Family Practice Unit in the James Mather Building on campus. The Unit also provides service to faculty and staff members.

The hours of operation of the Health Service are 8:15 a.m. - 4:15 p.m., Monday to Friday, during the eight-month winter session, and 8:00 a.m. - 4:00 p.m. on the weekdays during the four-month summer session. The Hospital staff handles all emergencies and outpatient complaints after hours and on weekends. Medical service is provided at all times, using the pocket paging system if necessary. When a member of the Health Service medical staff is not on call, arrangements are made with a local private physician to cover the service.

Outpatients are seen either by appointment or on a walk-in basis since a great number of health problems of young adults are unpredictable and sudden in origin. Generally, outpatient appointments and clinic hours are arranged so that students' loss of class time is minimized. It was pointed out in more than one instance that evening clinics would be convenient for both students and staff. It was also reported that a proposal relating to evening clinics was presented to the University administration and approved, but subsequently rejected by the R.N.A. B.C. for reasons not understood. It is recommended that extended service hours for such needs as considered appropriate by the staff, for example immunizations or V.D. control, be pursued.

C. PROGRAM

It is estimated that between 125 and 200 students are seen daily at the Health Service during the winter session. Services offered are preventive, diagnostic, and therapeutic. The following are available:

1. Preventive Services:

- periodic health evaluation of individual or specialized groups where indicated, including athletes

and those where medical histories make such examinations advisable

- provision of immunizations for the prevention of specific diseases
- Tuberculin tests and Schick tests as indicated
- pap smears for cervical cancer
- control of epidemic diseases on the campus as advised by the Board of Health of the Province of B.C.
- mental health facilities to cope with maladjustments and emotional problems which, if not recognized and treated early, may give rise to more serious disturbances in the future.

2. Diagnostic Services:

- Medical consultation
- Clinical laboratory procedures by a registered technician
- Radiography procedures by a registered technician under the supervision of a Consultant Radiologist

3. Therapeutic Services:

- Medical treatment and nursing care for both ambulatory and hospital patients
- Psychiatric assessment and treatment
- Physiotherapy
- Drugs and medications provided for inpatients, or

prescribed for outpatients and purchased at the Community Health Centre Pharmacy, or at a private drugstore.

Special weekly clinics held during the winter session are the following:

- Refraction clinic - attended by a refractionist and an ophthalmologist from the Vancouver General Hospital.
- Orthopedic clinic - attended by an orthopedic specialist and the physiotherapist, primarily for athletic injuries.
- Ophthalmology clinic - attended by an ophthalmologist from a private clinic, sometimes with a medical resident.
- Gynecology clinic - attended by a female gynecologist.
- E.E.N.T. clinic - attended by a specialist and, at times, a resident.
- Dermatology clinic - attended by a dermatologist and two residents. Presenting problems are generally acne, yeast, fungus, and pityriasis rosea. (One sample jar of ointment is given free of charge, others are charged for since the Health Service must pay for the medications supplied.)

All visits to special clinics are by appointment as they are held only on designated days.

Specialists are paid on a fee-per-time basis usually by the half-day. Regular clinics conducted by the Health Service medical staff include a weekly gynecology clinic with three physicians and the Nurses' Aide in attendance, and twice-weekly sessions for the purpose of birth control orientations and vaginal examinations. Generally four pelvic examinations and a one-hour lecture/demonstration can be performed in the two-hour clinic period.

The birth control orientation session is usually attended by younger students who are using control methods for the first time. Many bring friends of both sexes so the lecture hours are flexibly designed to suit the group attending. Lectures are given by two female physicians on the various methods of birth control; condoms and I.U.D.'s are displayed and discussed. Older students who may have longstanding untreated problems can be seen privately. Although not publicized, the sessions are reported to be known by word-of-mouth and well attended.

The main thrust of the O.P.D. service is considered to be birth control and athletic injuries, these two areas reportedly requiring the major portion of medical attention. Thus it was suggested that more emphasis is being placed on student education and pre-

ventive practices rather than on crisis intervention. Obesity and nutrition were also cited as examples of concern in the area of prevention through student education.

It appears that there is a shift toward more public health practice taking place in the Health Service which had its origin as a Public Health Unit. This movement is thought to be due to the changing nature of social problems or to the changing needs and expectations of the consumers of the service. It is recommended, therefore, that the structure and functions of the programs be reviewed and changed accordingly in order to keep them effective, timely and streamlined.

Also, reasons for the decreasing student utilization and occupancy rate of the Hospital are not known although it is speculated that more students may be receiving treatment from private practitioners or may be in better health generally. Both of these aspects may be attributed to universal hospital and medical insurance coverage. Perhaps it can be assumed that an increase in the preventive aspects is, in part, responsible for the decreased hospitalization of student patients. In any case, it is recommended that every patient contact should be recognized and used as an opportunity for education of the student concerning the implications of his particular

problem, either physical or emotional, for individual and community health.

D. RECORDS

Appropriate records are kept of all outpatient services. Individual health records include a notation of each visit to the clinic, a brief but pertinent history, physical findings, reports of special examinations and consultations to substantiate the recorded diagnosis, and a record of all treatments and medications.

Cumulative statistical data are maintained to produce an annual report of program activities but these have been limited in recent years. It is recommended that statistical reports be kept of all services, including patient identification and diagnosis, the number of patients seen by nurses, physicians and other therapists, the date and time of service, and other pertinent information which can be used in periodic evaluations of the department to analyze the effectiveness of services, to determine budget requirements, and to plan future services. It is further recommended that indexing of records be undertaken. Additional details and recommendations concerning this area are found in the section on Records.

E. PERSONNEL

The O.P.D. appears to be staffed with sufficient personnel to assure student subscribers of receiving reasonably prompt and efficient care. The total staff complement is reported on in Chapter 7, Health Personnel.

It was observed that, in addition to assisting the physicians with treatments during regular clinic hours, each R.N. is assigned to a specific specialty clinic. Each also has a particular function to perform such as ordering, stocking supplies, cleaning, and immunizing. One nurse is responsible for the triage function of screening patients and assigning them to different rooms and doctors. Because many of the nurses are long-term employees, it is suggested that some interchange of duties would provide a variety of functions for each to perform thereby lessening the possibility of monotonous routine. In addition, it is recommended that many of the custodial functions being performed by the professional staff should be delegated to the Nurses' Aide whose duties include some that are considered to be nursing functions, for example ear syringing and changing dressings. If the workload is not sufficient to fully occupy Registered Nurses, consideration should be given to the employment of an L.P.N. or another Nurses' Aide when a position on

the nursing staff becomes vacant. While such a change may appear unfavourable to the department at present, the development and review of job descriptions for each position should provide evidence of any need for change.

Converse to the recommendation to vary the R.N. functions and responsibilities, it is recommended that one person be delegated the responsibility and authority to fully develop an effective inservice education program for the growth and development of the total staff, including the Hospital. This position is thought to require constancy in order to be effective and satisfying.

F. FACILITIES

The Health Service is centrally located in the West Wing of the three-storey Westbrook Building. The O.P.D. comprises the main floor, and the Hospital the third floor. Part of the School of Nursing is located on the second floor. The diagram of the O.P.D. in Appendix VIII provides a visual understanding of the layout. There are 6,500 square feet of space in each of the two sections of the Health Service excluding the separate Mental Health Unit.

The functional activities assigned to each room are outlined briefly below.

Rooms 106 and 108	Storage and Janitor's Closet
Rooms 110 and 110A	Staff Lounge (Containing Storage of Medical Records) and Washroom
Room 112	Supervisor's Office
Room 114	Main Reception Desk, Medical Records/ Business Office, and Patients' Waiting Room
Rooms 116 & 116A	E.E.N.T. Rooms
Room 116B	Laboratory
Room 116C	X-Ray Corridor (Film Filing & Storage)
Room 116D	X-Ray Reading Room and Technician's Office
Room 118	Radiography Room
Room 118A	Film Developing Room
Room 118B	X-Ray Change Room
Room 120 & 124	Female Examination and Treatment Rooms
Room 122	Connecting Change and Washroom
Room 126, 128 & 130	Male Examination and Treatment Suite
Room 132	Orthopedic Treatment Room (For Back Ailments & Injuries)
Room 134	General Treatment Room (For Casts, Dressings, Hot Soaks, Ear Syringing, Removal of Warts, Drainage of Cysts, etc.) All "dirty" cases are treated in this room which contains multiple supplies. It is cleaned between cases but not fumigated.*
Room 136	Treatment Room for the Administration of Anti-Allergens (Antigen Serum is Refrigerated in the Room)
Room 138	Immunization Room where Clinics are held three times weekly (Biological Supplies are Refrigerated in the Room)
Room 140	Minor Surgery Room
Room 142	Assistant Director's Office
Room 144	Director's Office
Room 146	Medical Secretary's Office
Room 148	Nurses' Aide's Clean-Up and Storage Room

- * It is recommended that Room 134 be fumigated after treatment of all "dirty" cases and that supplies in the room be kept to a minimum.

While at times the workload would appear to exceed the space allocations, the department comprises all of the requirements for the delivery of comprehensive student health care with the exception of dental services. The location of the Mental Health Unit in quarters on the third floor is separate from the medical clinic as recommended in the Standards.

The possible relocation of the Health Service is discussed in Chapter 8, Physical Plant. In the event of a move it is recommended that planning for new quarters include a detailed analysis of the functions and services to be provided, projected patient loads, estimated patterns of use, traffic flow, and staffing patterns for both regular and special services.

6.2 Inpatient Services

A. OBJECTIVES

The following objectives were approved by the U.B.C. Board of Directors in consultation with the members of its medical and administrative staff.

- "1. To provide good hospital service at minimum expense to the patient.
2. To provide good medical and nursing care.
3. To accomodate the patient comfortably in cheerful attractive surroundings.
4. To maintain adequate facilities for diagnosis and treatment.
5. To provide good food services.
6. To train all personnel in the field of student health and welfare.
7. To provide a Public Health Unit on campus with particular supervision of communicable diseases, supervision of sanitation.
8. To teach and promote good health habits.
9. To assist with student adjustment and counseling problems.
10. To provide outpatient services, including emergency service, minor surgery and follow-up care.
11. To assist in research activities when requested to do so - by supplying material for viral studies (particularly for infectious mononucleosis).
12. To seek and maintain the confidence of the students. If it is not obtained then the Health Service will cease to be of any use, as the students will not go to it for advice and help which may be seriously required.
13. To help integrate the Health Services with the Administration and all departments of the University, thus providing a service to both the student body and the Administration.
14. To help the student attend his classes with as little time loss as possible." 37

As stated in the previous section, these objectives are interchangeable with the objectives of the outpatient services.

In general, it is recommended that the provision of bed care on campus proves advantageous where it can be

done economically. It is well recognized, however, that the poor utilization of the U.B.C. Health Service Hospital in recent years (see Chapter 4) indicates that its operation is prohibitively expensive. Serious consideration should be given to closing the facility and arranging a channel of admission to community hospitals. For students living on campus, a residence infirmary could be established as an outreach service to provide intermediate or tertiary levels of care comparable to that which they might receive at home. Such care could apply, for instance, to students with communicable health problems for which brief isolation is needed, but for which isolation in a general hospital could not be justified. Others could continue to attend classes during convalescence and return to full academic activity with less of a handicap than would be likely if they were receiving continuing care in a community hospital some distance from the campus. Furthermore, student illnesses often occur in repetitive seasonal epidemics which can provide waves of patients who cannot be accommodated in the acute-care institutions.

While it was not generally known to the Health Service staff, some suggestion was made that the Hospital might be closed during the 1976 summer session as a cost-saving measure. Such a move would have many implications,

not the least of which would be the possible lay-off of several staff members, unless they elected for a leave-of-absence concurrent with their annual vacation to cover the period of closure. A second vital implication would be the possibility of re-funding being disallowed by the British Columbia Hospital Insurance Service (B.C.H.I.S.) at the designated time of re-opening the unit.

B. SCOPE OF SERVICES

The accepted level of bedcare provided by the Hospital is general medical care without surgery in a 26-bed ward. At the time of the on-site survey, the patient census was seven, with only one student patient. The census was reported to be about sixteen to eighteen during the winter session. Private patients of community doctors have been granted admission for some years now in an attempt to offset the low occupancy rate, especially in the summer months. Patients are not admitted under the age of fourteen years; it was once attempted but proved impractical. The following table describes the patient census at the time of the review.

TABLE VII: PATIENT CENSUS APRIL 28, 1976

<u>Age of Patient</u>	<u>Admission Diagnosis</u>	<u>Date of Admission</u>	<u>Attending Physician</u>	<u>Type of Accommodation</u>
23 yrs.	Post-Mononucleosis	26/4/76	Health Service	Single Room
39 yrs.	Lumbar Disc Degeneration	26/4/76	Private*	Single Room
88 yrs.	Back Pain	18/4/76	Private	Double Occupancy
78 yrs.	Phlebitis Left Leg	21/4/76	Private	Double Occupancy
27 yrs.	Lumbar Disc Degeneration	22/4/76	Private*	Multi-Bed Room
30 yrs.	Low Back Pain, Not Yet Diagnosed	23/4/76	Private	Multi-Bed Room
34 yrs.	Lumbar Disc Degeneration	11/12/75	Private*	Multi-Bed Room

Source: U.B.C. Health Service Hospital

* The three patients with Lumbar Disc Degeneration were all admitted under the care of the same physician, who visits the ward only once a week. This physician was

also one of two doctors attending the patient with low back pain, not yet diagnosed. Written histories were not completed for this doctor's patients.

All admissions were within ten days of the date of the on-site review with the exception of the patient who had been admitted nearly five months before. The B.C.H.I.S. was reported to be aware of this long-stay patient but was continuing to pay the acute-care per diem rate. The only student was the 23 year-old patient with post-mononucleosis. An eighth patient was admitted during the review with a diagnosis of congestive heart failure; he was reported to have had previous admissions to the Hospital with the same diagnosis.

The possible closure of the Hospital is discussed elsewhere in this paper. Reference is also made in other sections to the responsibility of the medical staff to their patients, the institution, and the funding agency, the B.C.H.I.S.

Neither medical nor paramedical students rotate through the Hospital. In view of the shortage of clinical training facilities for the various professions, it is considered practical that such use could be made of the Health Service. A medical student could perform physical examinations, write up histories, assist in prescribing

treatment, and follow up patients for private as well as for Health Service physicians.

It appears that a significant number of outpatients present themselves at the Hospital during the evening and night shifts and on weekends. Some students may be seeking first-aid treatment only; others with complaints of abdominal pain, nausea and vomiting, chest pain or sudden onset of headache, etc., are requested to remain in Hospital overnight for observation. Refusals to remain are recorded, as are notifications of the doctor on call. In the case of a difficult patient, the campus patrol or R.C.M.P. are alerted.

A log book is kept of all outpatients seen at the Hospital after hours and contains such pertinent information as date and time, name and address, marital status, age, complaint and treatment rendered, disposition of case, means of transport (i.e. patrol or cab), and initials of the attending nurse or doctor. In the event of legal inquiries, full signatures should be written in place of initials.

It is recommended that statistics be computed and analyzed regarding the number of patients seen after clinic hours, the types of complaints and the treatment given, with a view to planning extended hours or special evening clinics. If the outpatient case-load increases

the demand on the Hospital staff to a notable degree, such as leaving the Hospital patients without R.N. coverage for any length of time, then planning to meet that workload should be the responsibility of the Health Service.

A recent audit of narcotic and controlled drugs was conducted by the Narcotics Control Division. While it was the only such inspection in three years, the report was satisfactory. Counter boxes are now used for narcotics and controlled drugs. Many of the other medications used for inpatients are kept in ward stock so as to eliminate the necessity and cost of individual prescribing and packaging.

Communication with the Pharmacist is reported to be good, assistance having been given in the preparation of ward policies relating to drugs and medications. For example, whereas certain patients (menopausal, asthmatic, etc.) formerly kept and used their own medications at the bedside (hormones, diuretics, tranquilizers, etc.), this practice is no longer permitted. All necessary medications are provided for Hospital patients either from the ward stock or from the Pharmacy. Some sample medications such as Frosst 222's, antihistamines, and Gravol, are available to give to outpatients in the evening, during the hours that the clinic is closed; or prescriptions may

be given out by the doctor on call.

Patients with symptoms of venereal disease may be started on treatment as indicated in which case instructions are given with the medications. Usually, however, these patients are referred to the Division of V.D. Control at 828 West 10th Avenue, Vancouver.

C. GENERAL OBSERVATIONS

The use of the kardex system is a recent innovation; nursing care plans are now being undertaken. Individual charts and a mobile chart carrier are also recent additions.

An emergency box containing an Ambu-bag inhalator, resuscitator, oxygen masks, and disposable syringes, has been set up with instruction on its use given to the staff by the Head Nurse. Other disposable equipment is gradually being introduced where its need and economy are indicated, for instance, in the care of patients in isolation.

The present isolation technique involves scrubbing and gowning in the separation room, autoclaving dishes and utensils, fumigating the room after discharge of the patient, and the use of certain disposable supplies. The Head Nurse indicated the need for specific written guide-

lines for isolation procedures to be used for each contagious disease. A procedure manual and a medical manual have been initiated by the Head Nurse; both appear to be useful guides to patient care. A rare case of sickle cell anemia was reported to have been picked up because of diagnostic information outlined in the medical manual.

Psychiatric ward rounds are conducted weekly with the Chief Psychiatrist. General clinics, with doctors presenting their patients to the staff, were abandoned because of the small number of staff on duty or able to attend. Hospital inservice education includes all Health Service personnel.

As noted elsewhere in this paper, the services of a consultant dietitian would be beneficial for patients with special dietary needs, such as those with diabetes, ulcerative colitis, or obesity, as well as for the supervision of the food service.

D. FACILITIES

The diagram attached as Appendix IX provides a visual blueprint of the ward layout.

The Hospital bed count is as follows:

3	-	2 - bed rooms	=	6 beds
1	-	4 - bed room	=	4 beds
1	-	5 - bed room	=	5 beds
1	-	6 - bed room	=	6 beds
4	-	single rooms (isolation)	=	4 beds
1	-	extra bed set up in one of the single rooms	=	1 bed*
TOTAL BEDS				<u>26</u>

* The extra bed set up in a single room should not be included in the official bed count and the number of rated beds should, therefore, be only 25. All are considered standard beds on a per diem rate basis.

The Hospital unit appears to be conveniently laid out as seen in the Diagram. On the west side of the corridor, Rooms 330 and 334 and Rooms 348 and 352 are the four isolation units, each containing a sink, toilet and shower, with separation rooms connecting each set of two rooms. The nurses' station, ward pharmacy, kitchenette, linen cupboard, supply room and hopper room are located midway down the west side of the corridor. Room 354 has been assigned as an office for a private physician in return for his on-call service during the evening and weekend shifts. He was reported to see private

patients in the office during his time on duty, which is considered to be an acceptable practice if Hospital staff and supplies are not utilized. Room 356 is the emergency first-aid and treatment room where gynecology clinics are conducted. Room 358 is assigned as an office for the full-time staff doctor, whose responsibilities include the gynecology clinics. The room had once been used as sleeping quarters for the on-call medical residents, but this practice was discontinued in 1972.

All of the multiple-bed rooms are located on the east side of the corridor as are the patients' lounge and bathrooms, staff lounge, two small storage rooms (one for supplies, one for flower-arranging), janitor's closet, main linen supply and storage (for both the Hospital and the O.P.D.), and main ward kitchen. The patients' lounge opens onto a spacious outdoor balcony. In all, the Hospital appears to be generously laid out, recently decorated, and well maintained. It is unfortunate that it is so poorly utilized.

Subject to the closing of the Hospital, only a few recommendations can be made relative to the physical facilities. One is that, as far as possible, clean and dirty supplies should be kept separated. The ideal situation would be to have a "dirty" utility room separate from the clean supply room. The room designated for

flower-arranging could be cleaned out and utilized as such, since the activity of cutting and watering flowers is no longer performed. However, as the autoclave and boiler are located in the single supply room, sterilized bundles and equipment should be carefully stored, dated, and periodically tested to maintain their sterility.

Second, disposable shower curtains should be used in the single rooms when patients are hospitalized for isolation. For the small number of such patients being admitted, the sterility factor far outweighs any economies that might be realized by using washable curtains.

Third, the portable oxygen tanks which are maintained by the Physical Plant, should be properly stored in a metal-lined locked room on the outside of the building. The present storage of tanks in the janitor's closet, with exposure to sunlight and possible collision, is considered dangerous in terms of the possibility of combustion or explosion.

Fourth, a dishwasher should be obtained (by purchase or donation) for the main ward kitchen where dishes are washed and dried by hand. This practice is not considered as satisfactory as the modern method whereby dishes and utensils are sterilized in a dishwasher if the proper temperature and water pressure are maintained. Considering the consistently low patient census a domestic machine would

probably suffice.

E. NURSING STAFF

The total Hospital staff is enumerated in Chapter 7, Health Personnel.

The Head Nurse seems well qualified for her position, having previously held the position of Assistant Supervisor of the Intensive Care Unit and Coronary Care Unit at the Vancouver General Hospital. Many of the recent and on-going changes instituted by her appear to be innovative and well-organized. Support and assistance for necessary changes must be forthcoming from those ultimately responsible for the Health Service, or monotonous inactivity may result in the loss of valuable personnel.

Of the five R.N.'s, one is the Head Nurse and one the permanent night nurse, leaving three to rotate from days to evening shifts. This rotation means that the three R.N.'s (as well as the three L.P.N.'s) are working one week of evening duty to two weeks of days with only one in four weekends off. While this is not the most desirable rotation compared with the straight Monday-to-Friday day shift worked by the O.P.D. staff, it is considered better than rotating to the night shift as well as to days and evenings.

In accordance with the Standards there is a registered nurse on duty in the Hospital at all times. There is also either an L.P.N. or Nurses' Aide working under her direct supervision. Briefly, the rotation is:

2 R.N.'s (including H.N.)	and 1 L.P.N.	- DAYS
1 R.N.	and 1 L.P.N.	- EVENINGS
1 R.N.	and 1 Nurses' Aide	- NIGHTS

The L.P.N.'s carry out patient treatments but do not give medications. Formerly, they were not giving any patient care which is considered to be a waste of nursing ability. A list of prescribed approved duties should be obtained from the L.P.N. Association. Bedside and unit cleaning is done by the night Nurses' Aide and evening L.P.N. which is acceptable if patient care is not neglected. It is questionable that certain of the housekeeper's duties, such as mending curtains and cultivating flowers for the balcony planters, are fully time-consuming if still valid. A review and up-dating of job specifications would seem to be in order.

F. RECORDS

The admitting clerk, whose time is shared with the Mental Health Unit, had secretarial training prior to

her on-the-job training regarding medical records. In addition to keeping the records, she also keeps statistical accounts such as the day-to-day census provided by the Head Nurse and compiled into monthly reports for the Health Service Director.

It is recommended that statistical reports describing Hospital utilization should be continued. Any special predominance of student illness or causes of disability should be summarized and reported. "All diagnoses should be kept according to a generally accepted system of nomenclature, preferably the International Classification of Diseases, Adapted." (Standards Pg. 11)

It was noted that one private physician provided no medical history and no signed orders on one of his long-stay patients. This is not an acceptable practice and should be questioned by both the Health Service Director and the British Columbia Hospital Insurance Service which provided the acute-care per diem rate for close to a five-month period.

6.3 RECORDS

A preliminary health record (see Appendix VII) is required of all students enrolled for three units or more, as part of the registration procedure. The infor-

mation contained therein is confidential and cannot be released from the Health Service without the written permission of the student concerned. Examination by a physician is not compulsory for University entrance but is strongly recommended. While special exceptions outlined in the U.B.C. Calendar previously applied to the faculties of Medicine, Nursing, Dentistry and Physical Education, such entrance examinations are no longer mandatory.

No student is refused admission to the University because of a physical or emotional handicap, provided the condition is under adequate medical care. Knowledge of such health problems may even be used to aid the student in successfully adapting to the physical and academic requirements of the institution. The primary purpose for gathering information concerning a student's past medical history and current health status, is to provide a background for health care which the student may require while he is attending the University. In addition, such information can be used as a basis for research, epidemiological studies, and so forth.

A blanket permission for treatment at the Health Service and for necessary referrals to private physicians and other community facilities, is signed by the student and endorsed by his parent or legal guardian. The treatment permitted and outlined in the student record includes

routine health examinations, immunizations, diagnostic procedures, and treatment of illness and/or injuries.

In the event of contention over the propriety of specific services, however, such permission granted in advance would not be considered "informed consent". It is recommended, therefore, that clearly defined policies be established regarding such contentious areas as psychiatric treatment, birth control, abortion, surgical procedures, hospital admission, legal consent for underage patients, confidentiality of records, privilege of communications, reportable conditions, and the administration of drugs and blood transfusions.

The Standards recommend that a unit record system be developed with entrance health information initiating the patient's record which is then maintained as a cumulative chronicle of his medical history while attending the University. All visits to the Health Service and all significant health services rendered elsewhere on campus should be recorded. It is recommended that the following be included:

- A record of all outpatient visits, and whether the student is seen by a nurse, physician, or other therapist.
- All diagnostic tests and procedures.
- All consultations performed at the Health Service or for which a report is available.

- All therapeutic and rehabilitative procedures.
- All inpatient visits.
- All significant services.
- An attempt should be made to include a record of services rendered by off-campus agencies in order to provide some measure of follow-up for the student concerned.

Inpatient records should be substantially more complete than recorded outpatient data and must include information concerning the present illness, physical examination, past medical history, family and social history, and reports of all supporting diagnostic examinations. An admission diagnosis and proposed plan of treatment should be stated clearly. All doctors' orders should be written and signed by the attending physician, or if given by telephone and signed by the nurse, should be countersigned by the doctor as soon as possible. Progress notes and reports of special examinations should be initialed or signed by the attending physician and a final diagnosis must be given upon disposition of the patient and before the chart is filed. As noted in the previous section, the private physician not fulfilling his professional obligation relative to medical records is accountable to the Director of the Health Service and to the B.C.H.I.S. whose joint responsibility is to require complete record-keeping on all patients admitted to the Hospital. Failure to comply with this re-

quirement in a general public hospital would likely result in the suspension of admitting privileges for the doctor concerned.

The manner in which the outpatient medical records are stored in the staff lounge of the O.P.D. is not considered satisfactory in terms of maintaining strict confidentiality at all times. While it is recognized that storage space is at a premium, it is recommended that all medical records be kept in a secure location to which access is controlled and from which unauthorized personnel are excluded. The employment of at least a part-time or consultant record librarian is discussed in Chapter 7, Health Personnel.

In keeping with the Standards, the detailed records of mental health consultations and other emotional problems are maintained in separate health records which are kept under stringent surveillance and accessible only to members of the Mental Health Unit. Only an unobtrusive note is made in the general health record that additional information is available in the Mental Health Unit file.

It is recommended that there be written directions specifying the method by which medical records will be processed, to whom they may be made available, and the conditions under which information from the records may be communicated to third parties. To reiterate, no information

.

is released from the Health Service without the written permission of the student concerned. In the case of minor students, it is advisable to have the additional consent of parents before information is released, especially in those situations involving possible legal action.

The length of time medical records should be kept depends upon their usefulness for medical or legal reasons and upon the provincial statute of limitations. The Health Service Director advised that the B.C. provincial regulations are followed, that is, six years for outpatient records and ten years for Hospital records. In fact, these regulations have been ten years for primary records and six years for secondary records. However, recent changes in the Limitations Act and subsequent implications for the Hospitals Act have prompted requests from health care organizations to the Government for clarification of the regulations but no firm decision has been made to date in this regard. It is considered advisable, therefore, to keep all primary records, both inpatient and outpatient, for a minimum of ten years, or until definitive regulations have been set down.

In addition to the cumulative personal health records, statistical records are kept of services, and annual reports are prepared for review by the central administration. Statistical record keeping has been notably

limited in recent years and, therefore, it is recommended that a more detailed method of keeping statistics be re-instituted. Such records are considered invaluable for reporting and analyzing services rendered, making projections for future services, planning educational programs and staffing patterns, and most importantly, for forecasting student needs and demands in terms of health care. They are also vitally important in explaining past expenditures and in supporting requests for future services and programs.

The Standards recommend that every health service keep a diagnostic index, preferably coded according to the International Classification of Diseases, for all outpatients, and that an active coded diagnostic index should be made mandatory for all inpatient services. Furthermore, larger institutions such as U.B.C., which have access to computer services, are advised to develop a system for automatic processing of this information. The implementation of such a system does not seem unreasonable for the Health Service and should be given serious consideration, particularly in view of the possibility of incorporation of the Health Service into a new acute-care Hospital on the campus. Diagnostic indexes, including readily retrievable laboratory and x-ray information, should be reviewed regularly, analyzing for trends, unusual episodes of illness, and frequency of problems relative to young adults.

ETHICAL & PROFESSIONAL STANDARDS

As recommended, it appears that every effort is made to maintain the student's routine record free of information which might be used to his disadvantage. The Standards recommend separate confidential files for potentially compromising data such as psychiatric reports, counselling data, results of psychological testing, medical information relating to venereal disease, pregnancy, or drug usage, and police reports. Inpatient records containing such data should be removed from routine filing procedures on completion of treatment and stored in confidential files.

In the event of the development of computerized student records, and particularly, of centralized data banks, in a new campus Hospital, it is recommended that experts be consulted in the design of such systems for delineation and resolution of problems of confidentiality. Awareness of the problems which can arise permits the system to be designed in a manner which meets both the administrative needs of the University and the confidentiality of Health Service records.

In the case of student absences, the Health Service does not have the authority to provide excuses for missed examinations, but will make recommendations

to the Registrar and the Dean of the appropriate faculty who in turn make the final decisions. A medical certificate, signed either by a Health Service physician or the student's attending doctor, is required for absence from December or April examinations, but is not given by the Health Service for absence due to illness from classes, lectures, or labs. On return to classes, the students are expected to notify their instructors of any absence due to illness. If an instructor wishes medical investigation to substantiate a student's reasons, he can contact the Health Service; a physician will then consult the student to determine reasons for absence, if the student has not already been seen at the center about a specific illness. In no circumstance, however, is specific or detailed information concerning complaints or diagnosis, provided to faculty, administrators, or even parents, without the express permission of the patient involved. It is considered appropriate and sufficient for the Health Service to simply verify a health problem responsible for a student's absence from class or for other delays in meeting academic obligations.

Reference was made to "The Buckley Amendment" (the Family Educational Rights and Privacy Act of 1975) which, in the United States is concerned with educational records, their privacy, and the rights of students to

challenge them for allegedly incorrect items. Exempted from the provisions of "The Buckley Amendment", and supported by the Recommended Standards of the American College Health Association, are records on students 18 or older, or students in institutions of post-secondary education, when such records are maintained by certain health professionals, are used only for medical care, and are not available to anyone other than those providing such care. If these conditions are not met, health records become educational records in the sense of becoming subject to the provisions of the legislation. It has been recommended, however, that only in an extremely rare occurrence, such as when a patient is truly homicidal or suicidal and refusing treatment, should the confidentiality of records be voided.

6.4 LABORATORY SERVICES

Prior to the development of laboratory facilities in the Health Sciences Centre Psychiatric Unit, the Health Service laboratory provided service to faculty and staff members as well as to students. However, patients seen at the Family Practice Unit now have their lab work done at the Health Sciences Centre.

The Health Service department is staffed by a licensed Registered Technologist (Medical Laboratory) who

was trained at the B.C.I.T. and the Vancouver General Hospital. The facilities consist of one room adjacent to the main reception area/waiting room, and very basic equipment as only simple procedures are performed in the department. All supplies are ordered by the Technologist which she assumes are included in the annual departmental budget. Cost-consciousness is considered to be enhanced where staff members are involved in the preparation of such budgets.

The common tests performed are in the areas of hematology, urinalysis, microbiology, and clinical chemistry. The repertory of laboratory evaluations includes the following tests:

- Hemoglobin Estimation
- White Blood Count
- Differential and Sedimentation Rate
- Blood Glucose Determination
- Platelets and Eosinophile Count
- Red Cell Morphology
- Routine Urinalysis
- Pregnancy Testing
- Mononucleosis Testing
- E.C.G.
- Yeast and Trichomonas Smears
- Collection of blood specimens for tests ordered to be sent to the laboratory at the Vancouver General Hospital.

All specimens sent out are delivered by the U.B.C. transportation service, pap smears being sent to the Cytology Lab and V.D.R.L.'s to the Provincial Laboratory.

The annual workload for the last four years is shown in the following figures which were available only from 1972. It should be noted that unit values are far greater than numbers of procedures performed. Combined lab and x-ray procedures from 1954 are depicted in Table IV, Chapter 4.

<p style="text-align: center;"><u>TABLE VIII</u> <u>WORKLOAD IN UNIT VALUES PER MONTH - LAB</u></p>					
MONTH	1972	1973	1974	1975	1976**
Jan..	11,217	12,006	13,744	16,236	13,352
Feb.	8,863	9,574	13,540	13,499	11,887
Mar.	8,587	11,963	14,216	13,310	13,140
Apr.	5,475	7,652	8,948	9,829	
May	4,067	3,963	8,155	3,701	
June	2,486	4,192	6,071	4,086	
July	4,282	6,715	6,731	6,305	
Aug.	4,615	6,598	6,910	4,476	
Sept.	9,550	12,514	15,717*	12,035	
Oct.	11,268	15,711	17,130*	15,015	
Nov.	8,437	13,810	13,991*	11,052	
Dec.	6,551	4,349	9,671	5,494	
TOTAL	85,398	109,047	134,824	115,038	-

Source: Health Service Laboratory Records.

- * There was a reported measles epidemic during the three months indicated in 1974, although it was still the busiest year in four, even accounting for the epidemic.
- ** The figures are incomplete for 1976 since the on-site collection of data took place in April.

While it can be seen that the workload is increasing each year, a breakdown of the figures into actual tests performed would be valuable in determining exactly what the demand was. A log book and records are kept of all determinations and filed in the patient's chart. A system for the retrieval of data from lab reports, as with all clinical records, is recommended for reviewing the overall work of the laboratory, for supporting the review of clinical services, and for conducting research.

6.5 RADIOLOGICAL SERVICES

This department is operated primarily to serve students at the University, either as outpatients or as patients in the Health Service Hospital. They may be referred either by their own private doctor or by one of the Health Service physicians. The department also provides radiological services to the Health Sciences Centre Psychiatric Unit and the Family Practice Unit, and is to be used in future by the Extended Care Unit being constructed

on the campus. As a convenience to them, service is given to employees of the University and, on occasion, to patients who have no connection with the University.

All outpatient appointments are made by the office; instructions and medications are given by the clerical staff, or by a nurse when necessary. Hospital appointments are made directly by the x-ray department on receipt of a requisition or, in emergencies, by phone. All patients must have a U.B.C. requisition; referral slips from private physicians are attached to the requisitions.

Special examinations which require preparation of the patient and which are carried out only at specified times are:

- Intravenous Pyelogram (I.V.P.)
- Gall Bladder (G.B. or Cholecystogram)
- Stomach and Duodenum (S. & D., Barium Meal, Upper G.I. Tract, or Barium Swallow)*
- Oesophagus (Same as for S. & D.)*
- Colon (Large Bowel or Barium Enema)*
- *Fluoroscopy

Special instructions regarding times, appointments, or requirements for these and other examinations are available in the department in printed form.

Survey chest plates are taken at a weekly clinic or by appointment; as many as twenty can be booked for one

clinic period. For other x-rays, one-half hour is allowed for single examinations and longer for multiple exams. Re-appointments for radiological reports are made with physicians for four working days after x-ray examinations are carried out.

In order of the greatest to the least number of procedures performed, the following examinations indicate the type of cases treated:

- | | |
|-----------------|-------------------------|
| - Extremities | |
| - Chests | |
| - Skulls | } About the Same Number |
| - Spines | |
| - Special Views | |
| - I.V.P. | } Minimal Number |
| - Abdomen | |
| - G.B. | |
| - S. & D. | |
| - Fluoroscopy | |
| - Esophagus | |
| - Colon | |
| - Small Bowel | |

The annual workload since 1965 is shown in the following table.

<u>TABLE IX</u> <u>ANNUAL WORK LOAD IN UNIT VALUES - X-RAY</u>						
YEAR	1965	1966	1967	1968	1969	1970
UNITS	1,453	1,459	1,394	1,443	1,600	1,873
AVERAGE UNITS PER WORKING DAY						
AMOUNT BILLED	\$17,251	16,992	15,705	16,052	19,092	22,293
YEAR	1971	1972	1973	1974	1975	
UNITS	2,036	2,020	2,018	2,154	2,220	
AVERAGE UNITS PER WORKING DAY			8.04*	8.4	8.8**	
AMOUNT BILLED	\$23,832	23,497	23,552	25,891	25,903	

SOURCE: Health Service Radiology Records

* Average during the winter session January, February, March/October, November, December, 1973 = 10.7.

** Based on 250 working days in 1975.

While the workload in units has been increasing steadily, the average units per working day for the three years recorded appears quite constant. The increasing amounts billed indicate an increase in non-students examined.

Special guidelines for use of the facility by the Health Sciences Centre Psychiatric Unit were drawn up by the former Consultant Psychiatrist for the Health Service. Briefly, they follow the rules of the Vancouver General Hospital Psychiatric Unit whereby no routine admission chest plates are taken and x-rays are ordered only for specific purposes by the physician in charge of the case. Procedures available to the Psychiatric Unit are all straight x-rays, barium series, and I.V.P. Other procedures requested must be discussed with the x-ray technician. Health Service requisition and report forms are utilized.

The guidelines state that, at the appointed time, the patient is transported to the Health Service accompanied by a nurse from the Psychiatric Unit who should remain with the patient throughout the procedure and return with him to the Unit. (Wet films should be returned with the nurse if they have been specifically requested by the physician.) It was noted, however, that patients are frequently escorted to the Health Service by

another patient. This is considered to be an unsafe practice and it is recommended that the guidelines relative to patient transportation be reviewed and reinforced.

A written report of each examination signed by the Consultant Radiologist is filed in the appropriate patient file. Duplicate reports are filed with the x-rays in the department, and also in a numerical file. Another duplicate is forwarded to the source of referral, private doctor or agency. Health Science Centre Psychiatric Unit reports are phoned over immediately when ready; Family Practice Unit reports are sent the same day as the x-ray report is available. Written instructions regarding disposition of each report and copy are available in the department.

A daily log book is kept of all patients referred and examined, and a statistical record is compiled of all x-ray procedures performed. This record is helpful in explaining patterns of use, in providing an indirect measure of the quality of clinical care being provided, and in projecting future needs of the service.

Films are filed numerically in the x-ray department for two years, culled, and stored in proper sequence in a basement file for three years. After five years they are considered obsolete and sold for their silver content. About every two years the oldest films are sold to make

room for new ones. Close surveillance is kept on any films that are borrowed or taken out of the department. A record is kept of film numbers and size, and of where and when they went out; another check is made when films are returned.

The department is staffed by a licensed Registered Technician (Radiography) who received her training at the Vancouver General Hospital and has been employed at the Health Service for several years. She works under the supervision of a private Consultant Radiologist who holds a professorship at the University. It is recognized that the Technician is attempting to keep up-dated in her field and to make improvements in her area, such as more comprehensive statistical record-keeping.

The radiography room is leaded as required by law; the x-ray table is a modern machine having been installed in 1974 at a cost of some \$40,000.00. The developer is also a recent model. X-ray equipment is examined and calibrated at regular intervals, and badge monitoring is done as required by regulation. Details of the physical facility are given in section 6.1, Outpatient Services.

While the Standards suggest that it "is not worthwhile economically to provide radiological services directly if an average of less than ten patients is anticipated daily", the service needs of inpatients and the con-

venience for outpatients in this instance have outweighed the financial considerations. It must also be remembered that U.B.C.'s non-semester system creates heavier peak periods during the winter session and that the department is operated on a year-round basis. Without this valuable service, the care provided by the Health Service would be less than comprehensive.

6.6 PHARMACY (MEDICATION SERVICE)

The Health Service building is directly connected to the Pharmaceutical Sciences Building, and until recent years employed the services of a small dispensary in that location. Presently, only inpatient medications are supplied by the dispensary. The Pharmacy at the Community Health Centre on campus now provides the outpatient service at a reasonable charge. There is also a private drug store on campus which fills prescriptions at approximately the same cost.

Prescriptions for students are kept to a minimum, the major usage being that of birth control pills. Many problems and conditions are treated almost exclusively with samples supplied by the drug houses, for example, antibiotics. This courtesy is extremely helpful to the student patients whose funds are usually limited. It is generally recognized that today's students are quite soph-

isticated in terms of drugs and their effects on the body systems. Both the medical and nursing staffs stated that a remarkable number of students are now refusing to have drugs administered or prescribed for them.

Communication with the pharmacist was reported to be good; his assistance was helpful in developing Hospital policies regarding drugs and medications. It is recommended, however, that a pharmacy committee of the medical staff be organized and charged with periodically reviewing those medications and other therapeutic agents to be dispensed by the pharmacy service or ordered by the physicians for the care and treatment of patients, and with making recommendations to the Health Service Director concerning the addition or deletion of items in the formulary.

Committee functions are to recommend measures for the control of the use and abuse of toxic and dangerous drugs in an attempt to minimize the possibility of improper use, and to establish specific restrictions in the use of particular medications for inpatients and outpatients, for example "stop orders". An additional function may be to initiate programs for the education of the medical and nursing staffs concerning new medications, as well as for patient education on the use or abuse of drugs.

Narcotics and other controlled drugs (Hospital)

are kept under appropriate security consistent with federal and provincial legal standards. In general, the number of persons handling the medications is restricted to those who have legal authority to do so, that is, the pharmacist, and medical and nursing personnel. A recent audit by the Narcotics Control Division, the first in over three years, showed satisfactory results.

The following reference to drug control was extracted from the Health Service Hospital Manual:

Control of Narcotics and Other Drugs

Under the Dominion Opium and Narcotic Drug Act, there is a very rigid control of narcotics. A periodic audit of the books and records of hospitals as to supplies of narcotics is made by specially trained officers of the R.C.M.P.

The Control Regulations state: "A person who is in charge of a hospital shall:

1. Maintain the recorded information in such form as to enable an audit to be made and retain the records for a period of not less than two years from the making thereof.
2. Produce to an inspector any books, records, or documents required by these regulations, to be kept.
3. Permit an inspector to check all stocks of controlled drugs in the hospital."

More information concerning the medication service has been given in section 6.2, Inpatient Services.

6.7 DENTAL SERVICES

The Standards recommend that every college health program should make provision for appropriate dental services, recognizing that teeth, their supporting structures, and other oral tissues should be given appropriate treatment similar to that provided for other body systems. Simple dental and oral problems may be given initial treatment by general medical staff, but it is important that provisions be made for referring serious or continuing problems to staff dentists or to specialists in the same manner that medical problems are referred to appropriate specialists. It is especially important that resources be available through which students, as young adults, may assume responsibility for their dental and oral care.

Those elements of a dental program related to public health and health education should be made available on the campus in the same manner as other essential outpatient services, if the health program is to be truly comprehensive. In establishing the dental health service, provisions should be made first for those services which are most essential and which are within the capability of the staff resources.

It is recommended in the Standards that the following be considered essential dental services and

financed as an integral part of the health program:

- Emergency Treatment
- Diagnosis and Consultation
- Prophylaxis and Preventive Services
- Patient Education (Including Nutrition)
- Protective devices for students participating in contact sports.

Optional services, such as definitive restorative dentistry should be financed by prepaid insurance or on a fee-for-service basis. Desirable services offering comprehensive dental care or benefits beyond the usual level of care, may be made available through participation in a prepayment plan.

In order to promote rapport with the students, consultation with the medical staff, accessibility from the classrooms and residences, and opportunity for patient education, it is recommended that essential services where possible, should be provided in a dental suite which is an integral part of the Health Service. An alternative is to use the clinical facilities of the Faculty of Dentistry to provide clinical services for students, if the interests and needs of the students are given priority over the convenience of the Dental School. Dental students would have the beneficial experience of observing and participating in the public health and educational measures instituted in the dental program.

It is further suggested that a dental examination by a private dentist should be made a part of the University entrance requirements with the necessary forms being mailed to the student prior to registration. Any unusual dental or oral conditions or items of interest to the Health Service staff should be requested in such forms, and incorporated into the written records. Notations of each examination or treatment rendered should be kept in the student's cumulative health record. Statistics concerning the number of patients and utilization of services should be accumulated and reviewed periodically to evaluate the present program and to project more effective future services. Nowhere in the U.B.C. Health Service record is there space for queries relating to dental or oral health, and only up to 1970 were records kept of the number of referrals made to dentists and outside doctors as shown in Table IV, Chapter 4.

The U.B.C. brochure issued to all new applicants, states that the following care is offered by the Faculty of Dentistry to all students of the University who do not have, or cannot attend their family dentist:

- Emergency treatment such as toothache, fractured tooth, or sore gums;
- Hygiene treatment, for example, cleaning of teeth;
- Routine dental examination and treatment such as fillings, extractions, and dentures.

It is stated that these services are offered under certain conditions. One, that the patients requiring hygiene or routine dental care must be screened to establish suitability for student utilization. Two, that the Faculty of Dentistry reserves the right to select only those patients whose treatment requirements are consistent with the needs of its students and compatible with its teaching program. Three, that there is a small defraying charge for all forms of treatment carried out in the Dental School.

Students interested in obtaining a screening appointment "for routine dental treatment or emergency care" or for dental hygiene, are advised to call in person or to telephone the Dental Sciences Building. This advice appears incongruous in that the urgent nature of "emergency care" would be ruled out by the requirements for screening and making appointments. Furthermore, if students were all to request initial appointments for screening in the event that emergencies might arise, either the Dental School would be deluged with such requests, or screening would become a ritualistic admission procedure.

The condition of selection appears to be contrary to the recommended Standards as outlined above. It was learned by telephoning the Dental School that the selection of cases is made at commencement of the fall

term from a list of names and complaints registered over the spring and summer months, and that the cases selected are those that comply with the teaching needs and requirements of the school. Yet, despite the fact that dental services to students at the institution are virtually non-existent, free dental care was offered to children in the Vancouver area this summer by U.B.C.'s Faculty of Dentistry. A campus bulletin³⁸ reported that for the third summer in succession, the Provincial Health Branch provided money to cover the cost of the service.

The treatment period, from May 3rd until the end of July, was to cover between 1,200 and 1,500 school children from the Vancouver, Richmond and Surrey area selected through their schools by public dental health officials. Treatment was to be provided, under professional supervision, by 28 students entering their fourth and final year in Dentistry, 6 entering third year, and 11 entering the second and final year of the dental hygiene program. In the summer of 1975, more than 1,200 children were given treatment which ranged from partial and full dentures to

education on nutrition and fluorides.

It is recommended that provision for dental screening of students be made within the Health Service and that at least emergency cases be referred for prompt treatment to the Dental School. To achieve these aims, a working relationship must be established between the Health Service and the Dental School with a view to developing a program which will provide all of the essential dental health services. Consultant dentists might be rotated through the Health Service for screening purposes, or a dental hygienist might be employed on a part-time basis. An evening dental clinic for students on campus is also considered to be a concept worthy of investigation.

In any event, the tremendous number of dental and oral needs of college students, presents an obligation for the Health Service to fulfil in providing comprehensive health care. In relation to the dollars spent for athletic facilities, the University's concern for the dental health and hygiene of its students, vital components of physical growth and development, is deplorable.

And yet, one of the specific objectives of the campus Health Sciences Centre, which was planned to be consistent with the broader objectives of the University, was the following:

"To provide a hospital and dental clinic which will set the highest possible standards of care for patients and which will be so staffed and equipped as to provide care for patients with the most complex and serious disorders." ³⁹

This objective has yet to be achieved.

6.8 MENTAL HEALTH

A. OBJECTIVES⁶⁶

In accordance with the Standards, the primary objective of the U.B.C. mental health service is to provide prompt recognition and effective treatment of those members of the insitutional community who are not able to cope effectively with the stresses to which they are subjected. It is not expected that the University assume obligation for long-term therapy of disturbed students. Rather, it is suggested that the estimated 10 - 15% of students needing some professional assistance for emotional difficulties each year, can be helped effectively by brief contact with professionals who have a good understanding of the psycho-dynamics of young adults. Early

recognition and readily available, accessible treatment can prevent the further development of many potentially disabling emotional problems.

Another recommended objective is being achieved through the development of a community preventive mental health program, one that views the entire institutional community as an environment in which unnecessary or irrelevant stresses and crises can be reduced or matched with appropriate adaptations. The prevention of serious long-term disability is considered to be as important to mental health as crisis intervention and treatment.

It is suggested in the Standards that an urban commuter institution, such as U.B.C., may have to direct a disproportionate amount of the health program resources in the area of mental health if real needs are to be met. It has been estimated that 80% of the students treated at the University's Mental Health Unit are commuter students, and the other 20% live in residences on the campus. During 1975-76, 3,360 or 14.6% of the University student population (23,000) lived on campus.¹⁹

B. FACILITIES

The Mental Health Unit was constructed in 1973, adjacent to the Health Service Hospital in the Westbrook Building. The suite consists of four offices and a main

reception/waiting room. The furnishings are new and the decor is bright and pleasant; carpeting throughout aids in soundproofing the facility. Access to the unit is unobtrusive which helps students feel at ease and encourages utilization of the service.

If admitted to the Hospital, patients can usually be accommodated in a single room to provide them with rest and relief from the stresses of school. The close proximity of the Mental Health Unit allows for close observation by the psychiatric staff. More information on the facility is contained in Chapter 8, Physical Plant.

C. SCOPE OF PROGRAM

The Mental Health Unit functions as an integral part of the Health Service although it appears to have a fair amount of autonomy. In order to assure prompt recognition and treatment of students in need of care for emotional problems, the service operates on a 24-hour emergency basis using a pocket-paging system during the hours that the clinic is not open. Most treatment is provided on a short-term basis, currently moving toward crises intervention and prevention. No treatment is provided to faculty or staff members.

The referral system to the Mental Health Unit is open and diverse. 32% of the students are self-referred;

4.11% are referred by the Student Services' Counselling Office and the Dean of Women; most are referred by the medical staff of the Health Service. Generally, more older students attend the Unit. This reflects the view that younger students have more problems but are more inhibited and, therefore, more reluctant to present themselves for treatment.

Patients are hospitalized only when absolutely necessary. Occasionally, a seriously disturbed student has been admitted to the Health Sciences Centre Psychiatric Unit but the psychiatrists prefer to use the Health Service Hospital because of the stigma which is attached to the Psychiatric Unit by other students, families, and friends. The Hospital is used for short-term stays where relief from environmental pressures such as examinations, is necessary. Some students have continued to attend classes during the day while remaining in the Hospital overnight; some have written examinations on the Hospital ward.

New programs being planned include an Outreach service in campus residences. Regular meetings have been held this year with residence advisors to make arrangements for the service to begin in the fall of 1976.

Much of the following information was gleaned from a questionnaire prepared for a recent survey¹⁹ of campus facilities offering assistance to students with

mental health problems. The survey found that a significant number (42.6%) of the student population sampled, indicated that they had experienced life problems while at the University. (An epidemiological study of the incidence of psychiatric problems among the U.B.C. student population from July 1975 to June 1976 is being prepared by a Psychiatric Resident and should be available by the fall of 1976.) Some presenting problems are associated with major mental illness, for example, voices, hallucination or other psychotic symptomatology. Other problems relate to loneliness, accomodation, over-eating, sexual impotence, anxiety and tension, and somatic complaints that are actually psychogenic in origin. Problems are dealt with personally by the mental health staff, but referrals are made to other resources as well.

Other resources used for referrals by the Mental Health Unit include: private practitioners, psychologists and psychiatrists; the Health Service O.P.D.; the Health Sciences Centre Psychiatric Unit; and the Student Services (eg. Counselling). Students who miss or cancel a series of appointments after presenting themselves for service, are followed up by letter.

No known assessment of the services provided by the facility has ever been carried out by the students who use them and no formal evaluation has been done from within

the Health Service. Letters to patients and consumer questionnaires are two methods that prove useful to programs in determining whether or not they are fulfilling the needs and demands of the population they serve.

Another method is student representation on a University health council, discussed later in this Chapter. Some concern was expressed that the mental health program is unable to reach all of the students needing help. One of the reasons is assumed to be that students are afraid of being labelled mentally ill if they seek out the services of a psychiatrist.

Among a host of facilities and services that were considered by the survey to be the most needed on the U.B.C. campus in assisting students with mental health problems were, one, a psychiatric service located in a non-medical setting and, two, greater co-ordination of existing facilities. The first is extant, the second is recommended.

Utilizing the rich clinical and educational experience of the Mental Health Unit, research is currently being carried out by a Psychiatric Resident. The up-date of an earlier study¹⁶ prepared by a former Health Service Consultant Psychiatrist is in process. It is hoped that an up-date of all of the student mental health services will be accomplished. Unofficial findings to date indicate

that about 1.5% of the student population is seen in the Mental Health Unit each year. More female students than male students are seen which is thought to be due to the fact that female students seek psychiatric treatment at an earlier age than male students (an average of two years' younger), probably because females are more ready to seek help for their problems.

An estimated service census for a typical year is shown in the following table:

<p style="text-align: center;"><u>TABLE X</u> <u>PSYCHIATRIC SERVICE CENSUS* BY SEX</u></p>			
	<u>Number of Patients</u>	<u>Number of Students</u>	<u>Percentage Seen</u>
MALE	152	12,939	1.174
FEMALE	188	8,985	2.092
TOTAL	340	21,924	1.551

SOURCE: Dr. M. Kwan, Psychiatric Resident.

Foreign students make up a higher risk group as seen in Table XI, but more American students present themselves for service. It is considered that this aspect might be due to cultural and social differences.

<u>TABLE XI</u> <u>PSYCHIATRIC SERVICE CENSUS* BY COUNTRY OF BIRTH</u>			
	Number of Patients	Number of Students	Percentage Seen
CANADA	204	18,035	1.131
FOREIGN	136	3,889	3.497
U.S.	58	806	7.196
OTHER THAN U.S.	78	3,083	2.530

SOURCE: Dr. M. Kwan, Psychiatric Resident

* The figures quoted in the above two tables are only unofficial estimates of a typical year.

Further breakdown of statistics into the following categories is being considered: foreign, e.g. into countries; marital status; sibling rank; number of children; stresses; life breakdown; complaints; and severity of illness. This ambitious project should provide thoughtful insights into the psychodynamics of young adults and other students.

D. RECORDS

Appropriate records are kept separate from the general health folder but visits to the Mental Health Unit and prescribed medications are noted in the outpatient record. As recommended, and discussed in other sections of this paper, all records are kept strictly confidential. If requested by the student, a statement is forwarded regarding treatment rendered or recommended by the psychiatrist, or a student may review his record if he requests to do so. Students must sign consent forms for the release of information to a private physician or another agency. Parents are not notified of therapy administered to a student unless specifically requested by the student concerned.

Indexing of charts is presently being undertaken in order to replace the log-book system. Indexing of all charts is recommended for the Health Service, the reasons for which are cited in section 6.3, Records. The work is being carried out by the Hospital Ward Clerk who is responsible for admissions and medical records. As recommended in other sections of this paper, the assistance of a Medical Record Librarian either on a part-time or consultant basis would be of great benefit to the service.

E. PERSONNEL

Limited psychiatric service has been provided at the University since 1938 when a Consultant Psychiatrist

conducted assessments on a half-day a week basis. Patients were usually seen for one visit only. When the consultant time was increased to two half-days a week in 1956, a limited number of students were provided with psychotherapy. The need for a full-time service was thus demonstrated by the evidence of the extent of emotional problems among students. This awareness brought about by a slight expansion of the service resulted in the appointment of a full-time Resident from the Department of Psychiatry in September 1959, and year-round service has been available since that time. Since January 1965, there have been two Psychiatric Residents in addition to the full-time Consultant Psychiatrist and one part-time Consultant.

The full-time Consultant is a Professor of Psychiatry. As the Chief Psychiatrist, he divides his time between supervising the Resident program, including research activities, conducting his own assessment and treatment of students, and planning new programs to expand the service. The Residents are senior medical personnel, usually in their third year of residency, and have generally had a tour of duty through the Health Sciences Centre Psychiatric Unit before being assigned to the Health Service where they each spend one year working in the Mental Health Unit.

Current negotiations are taking place with the School of Social Work with a view to incorporating supervised social work training into the mental health program. It is

anticipated that a supervisor from the School would accompany students rotating through the Unit, although some instruction would be offered by the medical staff. Achievement of this extension of the service should be commended. Further expansion should be encouraged to include the strength and perspectives of other disciplines, such as psychiatric nursing and clinical psychology through which an effective program of teamwork can be developed. It is recommended in the Standards that support be given to the concept of a team of psychiatrists, psychologists, psychiatric social workers, and psychiatric nurses to provide a broader spectrum of resources and to meet a wider variety of needs than any single discipline alone.

Other personnel include the Unit Secretary and the Hospital Ward Clerk who attends to admissions and medical records for the psychiatric service.

F. ADMINISTRATIVE RELATIONSHIPS

The Mental Health Unit functions as an area of special interest within the Health Service with the Consultant Psychiatrist in charge of the program responsible to the Director of the Health Service.

As recommended, the source of referrals to the service is as open and diverse as possible with approximately one-third of the students being self-referred. It

is interesting that there has never been a known referral from or to a religious advisor; a campus survey¹⁹ has revealed that students do not use the chaplaincy services on the campus. Although mention has been made of the Unit's liaison with other resources such as the Dean of Women and residence advisors, it is recommended that greater co-ordination of existing services be promoted.

G. ETHICAL AND PROFESSIONAL RELATIONSHIPS

The recommended scrupulous observance of the principles of confidentiality and the rare circumstances under which they may be breached are discussed in detail in section 6.3, Records.

Specifically, the Standards recommend that information about diagnosis and treatment should only be given to professional personnel under the following circumstances:

- "(a) With the student's written permission (as well as that of his parents or legal guardian if he is a minor).
 - (b) If the student's illness has been severe enough to require his withdrawal from school.
 - (c) Only after sharing with the student, or his parents, the information which is to be transmitted."
- (6. - p.59)

It is recommended that, when possible, statements relating to psychiatric treatment be submitted directly to the student (or former student) involved and that he be requested to forward the statement to the appropriate agency or source himself.

6.9 ATHLETIC MEDICINE

A. OBJECTIVES

The Standards state that the Health Service should be responsible for providing medical supervision of the physical education and athletic programs, specifically including:

- "(a) Supervision of the physical qualifications for all participants in the physical education and athletic programs.
- (b) Provision for treatment and rehabilitation of students injured during participation..
- (c) Provision of medical guidance for training activities.
- (d) Supervision of record keeping for all accidents and injuries, including adherence to standard terminology for classification of accidents and injuries.
- (e) Co-operation with the physical education or athletic department in developing a program for injury prevention.
- (f) Co-operation with the physical education or athletic department in the training of personnel involved in the care and rehabilitation of injured athletes." (6. - p.21)

B. THE ATHLETIC MEDICINE PROGRAM

The total program of care and its financial support appear to be arranged co-operatively by the Health Service and the Department of Athletics as recommended in the Standards. Physical examinations for admission to U.B.C. are no longer mandatory, although the student brochure still advises that

"students enrolling for a B.P.E. degree, or B.Ed. degree with a major in Physical Education, are required to have a supplementary medical examination relevant to participation in their activity courses" by the Health Service physicians. Initially all Physical Education students were examined yearly; later only first year students were seen. At the present time physicals are performed only in special circumstances, or if the student or faculty requests that an examination be carried out.

Candidates for the sports programs are given physical examinations on an individual basis, for instance, if there is a known health problem. A review is made of the health information submitted for each incoming student who intends to participate and clearance is granted to those whose records show no clear contraindications to unrestricted activities. However, participants in heavy contact or high-risk sports are examined annually. Three physicians are usually employed for an afternoon at the beginning of the fall term to conduct physical examinations on candidates for the football teams. Other high-risk sports requiring special consideration are hockey, rugby, scuba-diving and sky-diving. Appendix X is the guideline used for a Health Assessment of the Basic Scuba Diver. Appendix XI provides instructions to the medical examiner relating to the Medical Examination for Evaluation of Physical Fitness to Participate in Sport Parachuting.

The University's athletic program was reported by the Health Service Assistant Director, who functions as the team physician, to include the following activities:

Badminton	Field Hockey	Soccer
Baseball	Golf	Squash
Basketball	Gymnastics	Swimming
Bowling	Ice Hockey	Tennis
Cricket	Judo	Track & Field
Curling	Rowing	Volleyball
Cycling	Rugby	Weightlifting
Cross Country	Sailing	Wrestling
Football	Skiing	

Other activities reported by the Physiotherapist are figure-skating, fencing, trampoline, and diving. The extremely busy nature of the athletic program is indeed apparent.

The Standards recommend that there be organized medical supervision of both intramural and intercollegiate sports programs by physicians and other personnel who have special interest and skill in this area of medical care. Such supervision is stated to be important for the prevention of possible injury to those with physical limitations, the prevention of exacerbation of known existing health problems, and the provision of prompt care for those who are injured.

Medical supervision of sports programs at U.B.C. is not organized by the Health Service, although a triage

of three physicians is in attendance at the center on weekends for home games. At one time the University paid \$25.00 per game for a physician to be in attendance. Currently, the School of Physical Education and Recreation has a budget for game coverage by an Orthopedic Resident or some other person of similar qualifications. An occasional complaint has been registered if an injury has occurred at a weekend game with no doctor in attendance, but Conference Rules require that a physician be present for heavy contact sports such as football or ice hockey. The Physiotherapist is also in attendance at many of the weekend sports events and is well trained in handling the injured. All news releases concerning the nature and extent of injuries to athletes are made by the University Information Officer.

The stadium contains press and television facilities and a fully equipped training room in addition to other amenities. Injured athletes who are not transferred directly to the Hospital or to the Physiotherapy Department for treatment, are advised to report to the Health Service at 8:15 the following morning. Appropriate first-aid equipment and means of transportation are reported to be available at all times where athletic events and practices take place. The campus ambulance is available on a 24-hour basis,,staffed by Fire Department personnel who are all experienced First-Aid Attendants.

The Physiotherapy Treatment Centre is located in the Gymnasium (across from the Health Service) which accomodates the Athletic Department, and offices of the School of Physical Education and Recreation. The physiotherapy suite is equipped with treatment tables, various physical therapy modalities, a source of ice, weights, pulleys, and isometric bars. Detailed information is given in the following section 6.10, Rehabilitation/Physical Medicine.

Records of individual patient treatments are maintained in the Physiotherapy Department; visits to the Health Service for clinics and treatment are recorded in the student's health folder. Further information on record-keeping is also given in the next section.

It is recommended that terminology used should be consistent with the Standard Nomenclature of Athletic Injuries, that data be kept concerning the occurrence of injuries, and that periodic joint reviews be made by the Athletic Department and the Health Service with a view to developing programs for injury prevention.

C. PERSONNEL

The Assistant Director of the Health Service does not have the official title of Team Physician but, through his interest and experience, has become most involved in

the provision of medical supervision for athletes. He is a member of both the Canadian Academy of Sport Medicine and the Canadian Association of Sports Sciences. He liaises with the Athletics and Recreation Committee of the B.C. Medical Association, and maintains close co-operation with the Physical Education Department, and the Athletics Trainer and student trainers, as well as the Physiotherapist.

In assuming the responsibility for medical supervision, the Assistant Director takes part in physical examinations of athletes, in the weekend triage unit at the Health Service, attends some, but not all, of the official games, and supervises the care and rehabilitation of injured athletes and other students. In addition, an orthopedic specialist conducts a weekly clinic in which 20 to 25 patients with athletic injuries (mainly knees, shoulders, and ankles) are seen in about a two-hour period.

Athletic trainers, as recommended in the Standards, are subject to supervision by the Health Service Director (in this case the Assistant Director) in all activities relating to the recognition, care, and rehabilitation of injured athletes and other students. In general, the recommended responsibilities of the Head Trainer are the following:

- (1) Assisting in the conditioning and training of athletes.
- (2) Advising in the purchase and proper use of protective equipment.
- (3) Fitting and applying protective equipment.
- (4) Supervising the recognition and care of injured athletes by the training staff.

As recommended, these functions are performed by the trainers at U.B.C. The application of protective equipment includes duties such as taping before and after games. No treatments are given by the trainers even though devices for treating are available in the sports areas, for example, the whirlpool bath at the stadium. The Physiotherapist who plays a very vital role in the area of athletic medicine is reported on in the following section.

6.10 REHABILITATION/PHYSICAL MEDICINE

A. OBJECTIVES

The Standards recommend that the University should assure the availability of rehabilitation services for students, faculty, and staff who have suffered impairment of function as a result of illness, accident, work or academic program, and for students with a physical, emotional, or social handicap. It is also considered appropriate for the University to establish specific standards for physical and emotional health as a prerequisite to acceptance in special programs and activities, and to limit acceptance of seriously handicapped students in programs which have special requirements. In general, every handicapped applicant to U.B.C. is considered on an individual basis.

B. PROGRAM

Other than the design or modification of some campus buildings to allow access by the physically handicapped, to expedite travel between floors by elevators or ramps, and to provide accomodating toilet facilities, it is not known whether U.B.C. has a special rehabilitation program for housing, transportation and activities of the handicapped. It would be helpful to have a profile of existing problems and past experiences regarding the type and severity of disabilities among students and others, in order to appropriately plan and create rehabilitation services. In the area of physical medicine, however, there is a good program of physical therapy which aims at providing full restoration of function to all who have suffered illness or disability. The remainder of this section reports on that department.

C. FACILITIES

The Physiotherapy Treatment Centre is located on the lower level of the Gymnasium which was constructed for the 1954 British Empire Games. The department consists of four rooms plus the bathroom with shower, toilet, sink, and saunas. The outer treatment room contains three treatment benches, two ultra-sound machines, a diathermy machine,

various modalities such as weights, pulleys, and Hydro-collator packs, and the therapist's desk. Sports injuries (mostly knees, menisectomies, etc.) and patients with frozen shoulder syndrome are treated here.

A second treatment room has two benches, ultra-violet lamps, head pulley, chair, screen, and weights. Female patients and back problems are usually treated in this room as it is rather more private. Also many students with acne are referred from the Health Service Dermatology Clinic for ultra-violet treatments here. The third treatment room contains a whirlpool bath, a hand/arm bath, a contrast bath (hot/cold), and a fridge and freezer for ice packs, etc.; the fourth room is used for supplies such as crutches, vibrator, hair clipper, and tapes.

Two notable deficiencies are apparent in the physical facility. One is that there are no windows in the department, and the second is the number of stairs that must be managed by injured and disabled students in order to get down to the department for treatment.

D. PERSONNEL

The department is manned by one Registered Technician (Physiotherapy) whose time is divided between the Health Service and the School of Physical Education and Recreation. His salary is budgeted through both departments,

and he reports to both the Health Service Director and the Physical Education Department Head.

The Physiotherapist is very well qualified having trained in Zurich, Switzerland, and taken a Canadian qualifying course followed by both written and oral examinations at U.B.C. He is an active member of the Canadian Association of Physiotherapists, B.C. Division, a reported condition of employment at the University, and of the B.C. Health Sciences Association for paramedical groups. After thirteen years' experience at the Vancouver General Hospital, he joined the Athletic Department in 1965 because of an interest in sports and student medicine.

E. PHYSIOTHERAPY PROGRAM

It was indicated that the University's large intramural and extramural athletic programs are too much for one Physiotherapist. Male sports consist of five rugby, two football, two soccer, two basketball and four volleyball teams. Female sports include figure-skating, a field hockey team, and four volleyball teams. Other activities of concern to the Physiotherapist are wrestling, judo, track and field, swimming, fencing, ice and field hockey, golf, skiing, curling, trampoline, gymnastics, and diving. The football season is a very busy period and from December until spring, ice hockey, trampoline, and other gym activities require first-

aid for injuries. Between 35 to 40 patients may be seen or treated daily in the winter session. The summer session is also reported to be busy with many teachers receiving treatment.

There is no job description for the therapist but the prescribed guidelines of the Canadian Association of Physiotherapists and the B.C. Division are followed. These include the treatment of all referrals, routine sports injuries, and simple first-aid. The responsibility of making a diagnosis or of giving non-prescribed treatment is rejected by the therapist who wishes to remain within the scope and limitations of his profession. Some students are said to resist this stand, either because they are athletes (and therefore "tough"), or impatient and unwilling to wait, for example, for x-rays. The therapist remains firm and refuses to succumb to student demands by taking chances.

The Physiotherapist does provide service to the Health Service Hospital but his main work load is concentrated on the student population. Referrals off campus are generally made to the Vancouver General Hospital but, occasionally, a Physical Education student is referred to a private physiotherapist, primarily as a courtesy. Requests for treatment have been received from the Workers' Compensation Board, but the department is considered strictly athletic. There is no involvement in rehabilitation programs for handicapped students

although treatment is provided for any injuries, and for special conditions like cystic fibrosis. For example, two students with this condition received postural drainage treatments for two years. As previously mentioned, referrals from the Dermatology Clinic are also treated.

Because of the stairs leading down to the department, patients may require assistance in getting there. Emergencies from the Gym or Physical Education Department, such as fractures, are taken down by stretcher. If a fracture is confirmed by a physician, the patient is transferred to the Vancouver General Hospital. First-aid treatment for fractures consists of elevation, compression, and ice. Other first-aid includes: Aspirin for pain (with physician permission) or referral to the Health Service for stronger medication such as Frosst 292; Desenex powder for athlete's foot; and the application of tensors. Cardiac and epileptic patients have also been seen in the department before transfer or release. Other activities of the Physiotherapist include teaching first-aid and sports massage to third and fourth year Physical Education Students, and attending the weekly clinic at the Health Service with the Orthopedic Surgeon. Students seen at the clinic are mostly referrals for physiotherapy.

Discussions have taken place regarding the rotation of Physical Education students through the department as part

of their training. While no plans have been developed to this effect, it is considered to be a worthwhile concept in terms of the valuable aspects of practical training as well as the possible assistance which could be provided for the therapist by students. He would, however, likely require an additional Physiotherapist to carry the present workload, and assistance from the medical staff in the preparation of instructional material. It is recommended that advanced students in the School of Rehabilitation Medicine participate in the physiotherapy program as part of their clinical training.

F. RECORDS AND COMMUNICATIONS

Visits to the department are either by appointment or on a drop-in basis. The appointment timetable is approximate only as the Physiotherapist tries to maintain a flexible schedule. He keeps a daily record of all visits including name, date, and source of referral; individual attendance cards are used to record patient progress notes. Monthly statistical reports are submitted to the Health Service and to the School of Physical Education. A copy of the Monthly Report of Physiotherapy Treatments is shown in Appendix XII.

The number of treatments administered is broken down into referrals from the Health Service and athletic injuries. For example, of the 150 patients treated in April 1976, 48 were referred from the Health Service and 35 were

athletic injuries. These relatively low figures reflect spring examination time at the University. In addition, the breakdown of treatments into the various sports categories is considered helpful in indicating areas of concern for injury prevention. Table IV in Chapter 4 shows the annual number of physiotherapy treatments rendered from 1954 to 1975. The marked increase in 1965-66 reflects the employment of the Physiotherapist and the provision of a full service.

No collections or billing of patients are necessary; medical insurance collections are made through the Health Service, and attendance records provide a picture of costs for the School of Physical Education. Involvement of the Physiotherapist in budget preparations consists of pre-audit discussions with the Directors of the two departments concerned, and arrangements for purchasing supplies and equipment.

Communication with all physicians, specialists, trainers and coaches, was reported to be good. Requests for the Physiotherapist's opinion regarding a player's readiness for a game are respected, and the co-operation of the Health Service Director and staff is appreciated. In all, it appears that this department is operating at a very high level.

6.11 HEALTH PROMOTION/PREVENTIVE MEDICINE

A. OBJECTIVES

The Standards recognize that the promotion of health and the prevention of illness are the essential elements of any comprehensive community health program. To be effective, there must be coordination and integration of programs for personal health services, environmental control, epidemiological investigation, community education for health, systems developments, and others. While all of these areas of professional interest are embodied in the University's programs, there is no known central division for coordinating them into an active general health program.

B. PROGRAM

As reported in other sections of this paper, every student is asked to have an evaluation of his health status prior to admission to the University. After acceptance he is expected to provide detailed and confidential information concerning his past medical history and his present health status to the Health Service. All information is kept confidential and is used to help meet the academic and personal needs of the student and to prevent the development of circumstances which might compromise the health

of the student or other members of the institutional community.

The following preventive services are offered by the Health Service in compliance with the recommended Standards:

1. Periodic health evaluation of individual or specialized groups where indicated, including athletes and those where medical histories make such examinations advisable.
2. The provision of immunizations for the prevention of specific diseases.
3. Tuberculin tests and Schick tests throughout the year.
4. Control of epidemic diseases on the campus as advised by the Board of Health of the Province of British Columbia.
5. Mental health facilities to cope with maladjustments and emotional problems, which, if not corrected early, may give rise to more serious disturbances in the future.

U.B.C. entrance requirements specify a chest x-ray or negative tuberculin test within six months of admission. The Division of T.B. Control provides special facilities for tuberculosis detection for a two-week period during the winter session and all students are advised to avail themselves of the facility. Tuberculin tests are available at the Health Service during the special clinic hours. Through review of entrance health records, those students with a positive tuberculin test can be identified

and their health status reviewed on an individual basis. A follow-up tuberculosis screening program (weekly chest x-ray clinic) is provided for all students, the interval being variable for those subject to special risk, for example, nursing and medical students. With the installation of a new x-ray machine in 1974, the survey chest unit was removed. Thus the mobile T.B. testing unit is on campus once or twice a year for T.B. skin testings and x-raying of positive reactors. A recent press release issued by the Sanatorium Board of B.C. stated that T.B. x-ray screening programs would soon be discontinued because of their diseconomy in relation to their relative value.

The requirements for smallpox vaccinations within five years prior to admission, is still stated in the student brochure, but they are no longer being given by the Provincial Health Department. At the present time, there appears to be a dichotomy in all medical circles concerning vaccination for smallpox.

Cholera and typhus vaccines are not given free of charge but may be purchased at the Health Service or at any pharmacy. While preparations are being made everywhere in defense of the threatening swine flu pandemic in the fall of 1976, no preparatory steps have yet been taken by the University. The Health Service has been advised that an allotment of vaccine will be made available for high-risk

groups of students and staff, but no other information is known and no directives have been given.

It is considered unwise for the health professions to relax their vigilance in protecting the community against known health hazards and a concerted effort should be continued in an attempt to eradicate them. The Standards recommend that each institution should survey its academic and extracurricular activities to determine those for which special requirements may be appropriate, for example, health professions, education, athletics, oceanography, and forestry. Both academic and research programs should be reviewed to determine the presence of health hazards for which preventive measures, such as immunization, should be instituted. It is urgently recommended, therefore, that preparations begin immediately to combat the possible wide-spread outbreak of the disease known as swine flu.

It is further recommended that special programs be developed for surveillance and education to prevent complications of known existing diseases such as diabetes, epilepsy, and chronic cardiovascular or pulmonary disease. Periodic screening or detection programs are also advised to identify students and others with chronic or locally endemic diseases, such as subclinical diabetes and dental diseases. The relationship of diet and exercise to cardiovascular disability, of smoking to cardiopulmonary disease,

and of drug abuse to emotional health, are some of the areas being researched in which the Health Service can promote positive efforts toward future community health.

6.12 OCCUPATIONAL HEALTH

The recommended objectives of an occupational health program are cited in the Standards as the following:

1. To identify previously unrecognized illness, disability, or other limitation.
2. To assist in placing staff in work situations consistent with their physical and emotional capacities or limitations.
3. To provide emergency or definitive care for work-connected injuries and illness.
4. To establish a preventive program, including immunization, and standards for safe use of equipment.
5. To present an educational program concerning occupational hazards and stresses and the means for avoiding or coping with them.

While it is agreed that occupational health should be recognized as an integral part of the institution's health program, this component is designed to protect and promote the health of the faculty and staff and is, therefore, considered to be beyond the scope of the student's Health Service. It is assumed, however, that certain essential elements of an occupational health program do indeed apply to the staff of the Health Service if they are to effectively participate

in the provision of health care to the student body.

For example, it is assumed that the members of the Health Service staff are motivated to avail themselves of preventive health practices for personal health maintenance, and to participate actively in the development of an environment which promotes healthful living.

Other elements of an occupational health program, such as the control of environmental health hazards which benefit the community as a whole, are considered to be the responsibility of the institution in general and are discussed in detail in the following section and elsewhere in this paper.

6.13 ENVIRONMENTAL HEALTH AND SAFETY

A. OBJECTIVES

If the University is to make good use of its personal and physical resources in reaching its academic goal, it is recommended that the institution assures continuing close and critical surveillance and effective control of all environmental factors which may influence the health and safety of members of the institutional community. Among the factors considered to be subject to control are those related to the community as a whole, such as sanitation (food preparation and waste disposal), those involving

spectacular hazards or contaminants, those related to physical disasters (fire), and those related to a variety of occupational health and safety problems. A multitude of less obvious problems, such as noise and crowding, also have an impact upon human ecology.

A combination of resources from the University, from local, provincial, and federal health departments, and from industry can be used effectively to provide necessary services, consultation, and support. It is recommended, however, that the University should co-ordinate and direct the program of surveillance and control to meet its needs effectively and efficiently.

B. PROGRAM

Because of the plurality of departments concerned with the control of environmental health and safety hazards, the scope of such a program, and the fact that the authority to make related policies rests with the central administration as an agent of the governing body, this section, as recommended in the Standards, is beyond the realm of the Health Service as such. It is, however, incumbent upon those responsible for the Health Service to seek and observe policy statements regarding areas of concern in this department such as standards and codes relating to radiological health, industrial health, safety and injury control, fire

protection, sanitation, and general environmental control of the working conditions. Further, it is the responsibility of the department to report to the proper authority any suspect hazards before they become clinically important, all complaints of illness which may possibly relate to inadequate standards (eg. food handling, control of radiation), any known or suspected outbreak of communicable or reportable disease, and an analysis of all treated accidents with periodic statistical summaries and recommendations for preventive measures.

Presently at U.B.C. there is one committee, appointed by the President, which is concerned with the above-mentioned factors. It is the Safety, Security, and Fire Prevention Committee comprised of representatives from various campus departments and unions including Housing, Food Services, Physical Plant, Trades, Truck Drivers, Traffic and Security, Patrol, Radiation Protection and Pollution Control, Health Care and Epidemiology, the Health Service, Administration, Faculty and Student Representatives. The Health Service Nursing Supervisor and the campus Medical Health Officer are special advisors to the Committee. Monthly meetings are held for the purposes of discussing concerns of environmental health and safety and of recommending changes or improvements to the President's office. The Committee was described as nominal, the meetings as unenthusiastic

and the issues as trivial.

It is, however, considered that the mechanism for a dynamic program of environmental health and safety exists within the Committee, albeit the number of members render it cumbersome. The function of such a Committee is to investigate, report, and recommend; enforcement of recommendations is the responsibility of the central administration. It is important, too that environmental health and safety activities be closely coordinated with other program components in health education and health service.

The campus Medical Health Officer, who is attached to the Department of Health Care and Epidemiology, operates within the provincial statutory requirements to maintain a healthy environment. These pertain to sewage, water, waste disposal, and so forth. A Public Health Inspector, seconded from the Boundary Health Unit, visits the campus twice weekly to inspect the food establishments and other required areas. Meetings of the Medical Health Officer's Council are attended twice a year with recommendations being made to the Health Minister. The topic of swine flu immunizations has not been discussed by this committee to date.

Only minimal information could be obtained from the Physical Plant. Briefly, in the past few years, all

buildings on the campus have been inspected and upgraded, with an emphasis on safety. An emergency lighting system has been implemented for disaster areas, stairwells, corridors, and other such areas in accordance with the Provincial Building Code. Ceiling sprinkling systems have been installed in all required areas including waste disposal rooms. A campus disaster plan was presumed to exist.

6.14 PROVISIONS FOR EMERGENCIES/DISASTERS

It is recommended that every college health program should include specific written provisions for meeting a wide variety of emergencies such as injuries to individuals and groups, sudden epidemic illness (including required bed care), multiple or mass casualties, evacuation of buildings (including the Health Service), local community disasters, and general civil defence problems. It is important therefore, that disaster plans be drawn up to provide detailed instructions regarding the deployment of facilities, equipment, and personnel, arrangements for transportation of patients and casualties, and the involvement of outside agencies or resources for each of the contingencies indicated above. Such disaster plans should be widely circulated, practiced periodically, and updated regularly. All personnel involved, such as doctors, nurses and fire marshalls, must be prepared for the unexpected and

know what is expected of them. Institutional emergency plans should be co-ordinated with those of the community and the province, for example the Emergency Measures Organization or civil defence.

It appears that no formal disaster plan exists for U.B.C. General knowledge of any such plan by the Health Service, Medical Health Officer, Physical Plant, and Fire Department personnel is minimal, although it is assumed by most of those interviewed that a plan has been in the developmental process for some years. The campus Fire Prevention Officer reported that, while having little input into the plan, he has received requests from various departments for disaster plans or information regarding fire and safety rules and regulations. These have come from the Family Practice Unit and the Health Service but have not been followed up. The Faculty of Dentistry was claimed to require action in this area as well. It would appear that more action is expected of the Fire Prevention Officer but it is suspected that bureaucratic constraints are responsible for the delay in production and implementation of any plans or policies relating to disasters and/or emergencies.

It was revealed by the Fire Prevention Officer that insofar as the U.B.C. Endowment Lands comprise a regional district, municipal zoning regulations are not

applicable and there are, therefore, no fire bylaws.

In place thereof, the University Senate has given direction for the use of the Provincial Fire and Safety Regulations. Two other manuals are also used to provide guidelines for fire and safety. They are the 1975 National Fire Code of Canada and the 1975 National Building Code of Canada.

No University directorate exists to provide the Fire Department with rules and regulations regarding its authority and responsibilities. It was reported that while the University is responsible to the Department of Education, the Fire Department is under the authority of the Department of the Environment.

While the jurisdiction of the campus Fire Department includes approximately 22,000 day students, the total population for which it is responsible is reported to be in the range of 35,000. In addition to all of the institutional buildings, structures and residences, the jurisdiction includes 435 homes located outside the perimeter of the campus, two schools (one elementary and one secondary), three campus churches with day-care centres, the University Golf Club, fourteen apartment blocks/high rise buildings, and twenty-two retail outlets located in the University Village Shopping Centre.

The staff of the Fire Department are all first, second or third class first-aid attendants; there are

generally thirteen men on duty during the day shift including the three executive officers; the Fire Chief, Assistant Fire Chief and Fire Prevention Officer. Two executive officers are on call evenings and weekends when there are considerably fewer men on duty. All have been given some form of orientation (fire safety films, etc.) but since the staff turnover is low, continuing inservice education has not been given a high priority.

Although the University population and workload have increased over the years, the Fire Department space and staff have not increased proportionately. A new firehall is being planned, however, but the date of completion is not known. It was suggested that the location of the new facility would be 16th Avenue and Wesbrook Place, which is peripheral to the main campus but considered more efficacious in terms of moving firemen and equipment toward the center core as opposed to moving outward from it. Furthermore, the suggested site is close to the athletic fields, stadium and arena, and within easy reach of the campus Hospital.

The firehall houses two fire engines and the campus ambulance, an Econoline van with resuscitation equipment. Back, head and spinal injuries are transported directly to the Vancouver General Hospital unless St. Paul's Hospital has been specified. Only minor injuries are taken

to the Health Service. It was noted that the Fire Department views the Health Service in terms of "band-aids and first-aid". There would appear to be a great need either for communication between the two departments or for the Health Service to reshape its image.

The following notice from a May 1976 issue of U.B.C. Reports explains the current status of the city's new emergency number relative to the University campus.

"U.B.C. RETAINS OWN EMERGENCY NUMBERS

The City of Vancouver's new emergency telephone number - 911 - went into operation on May 1 but it does not apply on the U.B.C. campus or in the University Endowment Lands.

In case of fire or a major emergency involving injury on campus or in the U.E.L., call the University Endowment Lands Fire Department, 228-4567. They will notify the U.B.C. Health Service and the campus Traffic and Security department, if necessary.

The U.E.L. Fire Department also operates an ambulance service 24 hours a day. There is a \$5. charge for its use.

If you can't get to a phone, ring in a fire alarm at the nearest fire alarm box. This will bring a fire truck to the scene and an ambulance will follow in about three minutes. The U.E.L. Fire Department also provides inhalator and rescue services.

Minor emergencies and first-aid are handled by the University patrol - 228-4721 - or the persons involved can be directed to the University Health Service in the Westbrook Building at the corner of University Boulevard and the East Mall. You can alert the Health Service in advance by calling 228-2525.

The University detachment of the RCMP will also respond in case of emergencies. Their number is 224-1322 from 8 a.m. to 5 p.m. At other hours⁴⁰ call 666-3198."

It is recommended that an area-wide disaster plan be developed poste haste; if a plan has already been initiated, its approval by the University Senate should be expedited for immediate implementation. The plan must include coordinated efforts by the fire safety and environmental personnel, R.C.M.P., and other concerned groups or individuals on campus as well as the medical, nursing and Hospital staffs. Liaison with other agencies and resources, such as the Emergency Measures Organization, Red Cross, and Vancouver General Hospital, is necessary and important. While highly improbable, the hypothetical event of a 747 jet crashing on or near the U.B.C. campus is not an impossibility. Preparation for any event should be the key word in any disaster plan.

It is further recommended that the Inservice Education coordinator request assistance from the Fire Prevention Officer in developing a program of films, talks and demonstrations of fire fighting equipment, etc., to teach safety consciousness to all personnel in the Health Service.

6.15 HEALTH EDUCATION

A. OBJECTIVES

One of the most important objectives of a health program is the development of a resource for influencing the

health behavior of students (and others) both as individuals and as active participants in the community. It is consistent with the goals of higher education for the University to support a program of health education for all members of the institutional community, faculty and staff as well as students. Such a program should differ from other areas of the curriculum in that, rather than just presenting facts for the acquisition of information which may have little or no impact upon life patterns, it should create an attitude of interest and curiosity toward health.

The U.B.C.'s courses of instruction in various faculties and departments include many courses pertaining to concepts of health and health education relating to children, those with learning disabilities, the handicapped, the aged, families, and other special groups. Nevertheless, not one general course of health education appears to be offered in any program outlined in the U.B.C. Calendar.

B. PROGRAM

The Standards suggest the following inclusions in a University health education program:

- "-Formal health teaching through organized courses.
- Informal learning experiences through health services and a wide variety of other informal associations.
- Programmed development and research into the means for creating a greater impact upon health behavior."

It is recommended that the University should have a course or courses in personal and community health, available to all faculties, through which students can attain basic information about personal health and through which their health behavior may be influenced positively. As pointed out previously in this paper, today's students are knowledgeable and interested in the area of human ecology and, therefore, it is considered that not only are they receptive to health education but they expect it to be provided.

Recommended objectives of a basic formal health course are:

- "(1) To develop understanding of the functions of all parts of the human organism and their inter-relationship with the environment.
- (2) To develop attitudes which will motivate the individual to cooperate with the community in group programs for health protection.
- (3) To induce behavior which promotes optimum health.
- (4) To help the individual become an intelligent consumer of health information and services.
- (5) To create in the individual a continuing desire to learn more about health.
- (6) To help develop skill in defining and solving health problems." (6. - p. 33)

Responsibility for the health course may be delegated to any academic department best suited in terms of qualified professional staff and commitment to providing high-level instruction in personal and community health. However, to be effective, planning and coordination of the

course (or courses) require an appropriate allocation of staff time for defining needs, establishing objectives, and planning course content, methodology and evaluation. Health instruction may be correlated with the curricula of areas such as biology, education, home economics, physical education, political science, psychology, sociology, and urban planning, as well as the health sciences, to provide valuable insight into the dynamics of individual and community living.

It is recommended that a basic personal health course include concepts relating to the total health of the college student, physical, mental, and emotional; motivation for positive health behavior; development of attitudes to personal and community health; deviations from normal health; social problems; controversial issues; relationships between the family, school, and community; environmental health and safety; public health resources; and even world health organizations serving the universal community. It is considered that only through consumer education beginning at the student level will the spiralling escalation of health care costs be curtailed.

Reference is made in other areas of this paper relative to the opportunities for informal health education presented at each student contact with the Health Service. Every effort must be made to provide professional counsel

and to help the student understand his health problem; this should be a criterion upon which professional staff are appointed. Health Service personnel should also be able to make valuable contributions to formal health courses. In addition, certain professionals, for example the Mental Health Unit staff, are in a strategic position to promote informal health-oriented sessions in dormitories, fraternities, sororities, or other special groups such as preprofessional student organizations. The Mental Health Unit is currently planning similar outreach programs, as mentioned in section 6.8, Mental Health.

Effective informal health instruction can also be achieved through inservice education of staff members such as food handlers, counselors, health instructors, faculty advisors, administrators, and residence advisors. But again, there should be overall coordination of all facets of health education.

It is recommended that a student/faculty University health council composed of representatives from all departments concerned with student health be organized to define and recommend solutions for college health problems, and to further institution-wide interest and participation in the promotion of health. Extramural health organizations may also have representation on the council. Many recommendations of a recent campus survey¹⁹ regarding student health

needs relate to the area of informal health education. More details are discussed in section 6.17, Communications.

Health Service records should be used to provide data for a continuing evaluation of the health education opportunities in the department, and also for determining needed emphasis in the inservice education program. Research into the means for creating a greater impact upon health behavior is discussed in section 6.16, Research.

C. INSERVICE EDUCATION

Because the Health Service inservice education function is recognized as having broader scope than the presentation of information to nurses only, it is included in this section concerning health education. Until the present time, this function has been the responsibility of one Registered Nurse in addition to her regular duties in the O.P.D. The full-time general practitioner who is also a Clinical Instructor in the Division of Family Practice, Faculty of Medicine, performs the (informal) inservice education function for the medical staff. The Head Nurse of the Hospital carries that responsibility for her unit. There is some sharing of certain inservice information and activities, but more development of a sound educational program is needed to improve the working relationships within

the entire Health Service.

A regular one-hour period has been allotted each week during the winter session for inservice education in the O.P.D. Some of the topics covered in the past year included the following:

- Clinical Areas - allergies, acne, diabetes (insulin, and urine-testing), V.D. Control, ammenorrhoea, cardiopulmonary resuscitation, trauma, psychiatry, warts, common eye diseases, diagnosis and management of cervical erosions, nutrition, and death and dying.
- General Areas - problem-oriented medical records, sexual communication, team approach (C.A.R.S.), legal aspects of nursing, communications, interviewing, and a street clinic.
- Departmental Tours - physiotherapy, radiology, and laboratory with a demonstration of routine procedures.
- Meetings - one general meeting of all the staff (the first session of the 1975-76 winter term), and one nurses' meeting (near the end of the 1976 spring term).
- Special Talks and Reports - China (School of Nursing), and Health Service attendance at conventions in Seattle (Emergency Care), and Hawaii (Pacific Coast College Health Association).

In all of the above inservice meetings, appropriate resource speakers, video tapes, or films were used. The R.N. responsible for making such arrangements tried to be present at all sessions in order to be of the same mind as the other staff in attendance. The Hospital staff is not involved in regularly scheduled talks or films because, it was explained, they have their own orientation.

It was learned that the inservice function is to be shared in future by all of the nurses in the O.P.D. While it is recognized that input into the program from all personnel should be encouraged, it is recommended that the assignment of responsibility for staff development through inservice education be given to one member, appropriately prepared and personally interested in this area. In order to properly develop a suitable program of education, he/she must keep abreast of new developments in the content and methods of the health sciences and health instruction, particularly as they pertain to students. More discussion on this subject is found in section 6.1, Outpatient Services.

It is also recommended that a continuing close working relationship be maintained with other departments, units, or resources involved in health education, formal or informal, for example the Inservice Education Committee of the R.N.A.B.C.

6.16 RESEARCH

While the Health Service exists primarily to meet the health needs of young adults, including both physical and emotional health problems, it offers a unique opportunity to study disease patterns in addition to the dynamics of development under relatively well-controlled conditions. Opportunities for research which will contribute to the physical welfare, emotional health, and educational potential of students, is recommended as being consistent with the primary purpose of the Health Service.

Certain research projects concerning the health program have been discussed elsewhere in this paper, but it is recommended that plans be formulated for continuing research projects in other areas of the program requiring study and that these plans be supported by the Health Service and the central administration. It is reiterated that more integration and coordination of research projects being undertaken by various departments throughout the University, are required. It is important, therefore, that future plans for research in the Health Service be verified with other concerned departments in order to avoid possible duplication and to gain any assistance available. Furthermore, if research is to be accepted as an important function of the health program and is to be realistic, time and personnel adjustments must be made and financial allotments invested in the departmental budget.

As recommended in the Standards, the University has a statement of policy concerning the involvement of humans in research. All clinical research and investigations involving human subjects must be duly approved by an established committee which assures that the conditions of the policy have been met prior to the start of the projects.

6.17 COMMUNICATIONS

The Standards consider that one of the most important determinants of the overall success of the health program in meeting the needs of its subscribers is the effectiveness of communications within, among, and beyond the various units of the program. In nearly all areas of the Health Service reviewed, there was an expressed need for improved communications. The following suggestions are put forth to achieve this aim:

A. INTERNAL COMMUNICATIONS

Personal meetings of department heads, supervisors, and others who share responsibility for Health Service activities, should be held at regular, if only periodic, intervals. The Director and Supervisor should gain advice from various unit personnel before establishing basic policy decisions or announcing operational or procedural changes. Regular nursing staff meetings, including the Hospital staff, should be held and include educational information and professional association (eg. R.N.A.B.C.) activities and announcements. Medical staff meetings should be planned to include the Mental Health Unit and periodic representation from the Faculty of Dentistry, the Family Practice Unit, the Department of Health Care and Epidemiology, the Division of

Public Health Practice, and the six divisions of the Health Sciences Centre, particularly the Division of Health Services Research and Development. Developments or information resulting from these meetings should be shared with the nursing and support personnel. The importance of communications with the office staff is discussed in Chapter 7, Health Personnel. Minutes or tapes kept of meetings are valuable as a record of deliberations and for the information of those unable to attend.

An up-date of the Health Service brochure which is provided to all new applicants is required. Expenses incurred in the publication of such informational bulletins are justified in dividends paid through increased utilization of the service. Supplemental to the information circulated through the student brochure, should be increased attendance at University registration by the Health Service staff. While one nurse is already responsible for checking medical and hospital insurance coverage, etc., during registration, this would seem to be an ideal opportunity for more staff members to meet the students informally as well as to promote fuller exposure of the available health services to an increasing student population.

Employee performance evaluations discussed elsewhere in this paper provide a vehicle for two-way communication. While not always a pleasant procedure, evaluations

may often be used as an opportunity to review a staff grievance or complaint. Positive evaluations, however, can give employees a sense of productive involvement in the service.

In the area of inservice education, a four-week communications workshop was conducted in April/May of 1976 by an Educational Psychologist in the Faculty of Education. While some internal resistance to the proposal of the workshop was first encountered, there was almost complete attendance of all Health Service personnel, including the doctors, the Hospital staff, and off-duty employees. Since attendance was voluntary, the turnout indicated a general felt need for improving communications in the Health Service. Such use of available campus resources and the planning of the workshop are innovative and commendable. It is recommended that a follow-up review be done by the Health Service to determine positive influences brought about by the sessions in the area of internal communications.

A student/faculty health council, as discussed in section 6.15, Health Education, can help to determine the direction of the health program. It is considered appropriate for the consumers of care to have a significant voice in determining the services which are to be provided and to indicate the level of support which they are willing

to provide. Informed, responsible consumers can be very helpful in shaping programs which actually meet their needs and which will justify their support.

B. EXTERNAL COMMUNICATIONS

The image and effectiveness of the Health Service will be considerably enhanced through channels of sharing information between its staff and the academic, administrative, and personnel service areas of the University. It is recommended, therefore, that as many members of the Health Service staff as possible be involved in campus-wide committees as well as informal gatherings. This is especially important for responsible professional employees.

An aggressive effort is required to achieve a measure of coordination with other campus facilities which offer student services. The recent survey¹⁹ of mental health and related facilities on the campus found that problems in offering services are mainly related to a lack of communication between facilities and with students, and that a lack of communication between services appears to result in ignorance of specific services offered by each facility.

Every facility surveyed, including the Health Service, felt that they provide adequate direct and indirect information regarding their services; this was

contradicted by the students' suggestion for improved advertisement of present facilities. Students also indicated little referral between facilities whereas the facilities stated that they do refer. Facilities surveyed for the study included:

- The Health Service
- The Health Sciences Centre Psychiatric Unit
- Community Health Centre (Family Practice Unit)
- The Dean of Women
- Student Services
- Ombudsman
- Residence Advisors
- Chaplaincy Services
- Women's Office
- Psychology Department
- International House
- Speakeasy

The study concluded that campus facilities must take a more active and responsible part in identifying types of problems, causes, and prevention, and that the effectiveness of specific programs is of secondary importance to total needs being met.

Extramural communications are discussed in the next section.

6.18 EXTRAMURAL RESOURCES

The Standards advise that continuing efforts should be made to coordinate and integrate on and off-

campus resources with a view to creating a network of complementary services which will result in a comprehensive health program, with a minimum of duplication of effort (and expense) and no absence of some services.

A large institution with well-developed health programs, such as U.B.C., is in a position to share many of its services with the off-campus community and requires few outside agencies to contribute to its Health Service. Health professionals, however, will benefit through close contact with professional associations and close working relationships with outside doctors, dentists, nurses, psychologists, social workers, and business leaders, to exchange information and evaluate the effectiveness of present or planned services. In addition, both the off-campus community and the Health Service may receive assistance from the institution's specialized programs, for example in the areas of psychological testing, child guidance, or environmental health.

Although certain professional and educational conferences are attended by the Health Service staff, for example the Pacific Coast College Health Association meetings, the service in general appears to be professionally isolated in terms of common involvement in program development, research, and other activities which can provide strength and new perspectives to the program. It is re-

commended, therefore, that cooperative activity be undertaken with the health services of other Universities and Colleges in British Columbia, particularly the lower mainland, to share resources and information and to improve public relations. To give an example, the recent production of Recommended Standards and Practice for University Mental Health Services, prepared by the Director of the Simon Fraser University Health Service, for the Canadian Psychiatric Association's Professional Standards and Practice Council, were unknown to the Mental Health Unit staff at U.B.C. Professional communication in similar situations would be fruitful to staff and students alike.

It is further recommended that the Health Service use every opportunity to learn what public, voluntary, and industrial resources are available for use by the University community as well as by the general community. For example, active involvement is required for the staff to follow-up students who are referred off-campus for abortions. This is an area of research that can be carried on by nursing personnel, under medical direction, and would provide a challenging change of activity for nurses now spending valuable professional time on housekeeping functions.

Other resource agencies can be visited or invited to visit the Health Service for a first-hand orientation and to discuss common problems of students and young adults. For example, the Women's Collective or similar clinics,

the Vancouver Chilbirth Association and the Vancouver General Hospital's abortion facility, would all provide new insight into the problems of young women today. Communication with the campus Family Practice Unit will further reveal problems of the children or spouse of a student which may be the underlying cause of his health problem. In all matters of communication or consultation, the confidentiality of information must, of course, be maintained.

Whenever possible, Health Service staff members should participate in the activities of extramural community agencies, planning councils, and the like. Such involvement not only enhances professional knowledge for the improvement of practice, but serves to generate new ideas, to stimulate interest, and to renew institutional pride.

It is finally suggested that the consultant and management engineering services of the B.C.H.I.S. be requested to assist the Health Service in areas of concern or uncertainty, such as the closing of the Hospital. It is the purpose of that resource agency to serve the health programs of British Columbia in need of assistance or advice.

6.19 SPECIAL PROBLEMS

The only concern discussed in the Standards under this heading relates to international students. The requirements for foreign students applying to U.B.C. are outlined

in Chapter 9, Business Management, as pertains to hospital and medical insurance coverage. Other entrance requirements are the same as those for all other students. No special statistics are kept of foreign students attending the Health Service, although mention has been made of plans to do statistical accounting of various categories of students, including foreign students, who receive treatment at the Mental Health Unit. Similar statistical accounting in the O.P.D. would provide useful information for future planning of health needs, and is recommended.

It is also recommended in the Standards that all professionals of the Health Service should learn the cultural and religious backgrounds of international students in order to appreciate how these influence their attitudes toward physicians, medicine, and health. Initial health evaluations provide the Health Service staff with an opportunity to become familiar with some of the problems of social acceptance, climatic change, and other sources of apprehension or insecurity which handicap many new foreign students.

Information pertaining to the campus agency most concerned with international students is contained in the U.B.C. Calendar. It states that the International House provides a social and cultural centre for both students and members of the greater world community, one of its major concerns involving the reception and orientation

of new students to campus life. The International Students' Program Committee is most important in articulating student requests; the Board of Directors has equal representation from faculty, student and community social systems. It is recommended that the Health Service utilize the international information centre and other of its resources in the planning and provision of health services for large groups of foreign students, as mentioned in an earlier section of this paper.

CHAPTER 7HEALTH PERSONNEL: QUALIFICATIONS,
DUTIES, AND EDUCATION

The following list of Health Service personnel and their qualifications is an extract from the 1976 U.B.C. Calendar:

The University Health Service:

A.M. Johnson, M.D., F.R.C.P.(C), Director of University Health Service and Health Service Hospital.
 C.A. Brumwell, M.D. (Brit. Col.), Assistant Director.
 D.J. Farquhar, M.D. (Brit. Col.), Physician, part-time.
 D. Goresky, M.D. (Alta.), Physician.
 R.K.L. Percival-Smith, M.B., B.S. (Cantab.), Physician.
 R. Ree, M.D. (Brit. Col.), Physician.
 M. Beiser, M.D. (Brit. Col.), Diploma (A.B.P.N.), Consultant Psychiatrist.
 S. Miller, M.D., C.M., M.Sc., D.R.T. (McGill), C.R.C.P.(C), Consultant Radiologist.
 J.R. McIver, M.B., Ch.B. (Glasgow), C.R.C.P. (C), Consultant Radiologist.
 D.J. Dundee, M.D., Consultant Radiologist.
 K. Boyle, R.N., Nursing Supervisor.
 P. Jones, R.N., Head Nurse, Hospital.
 M. Harrison, R.T. (X-Ray).
 J. Sutton, R.T. (Lab.)
 H. Tumaitis, R.T. (Physio.).

In addition, all specialty clinics are attended by physicians duly qualified and licensed in their particular field and whose appointments have been approved by the governing body. The total employed staff in numbers is given under the head-

ings of Medical Staff, Outpatient Department Staff and Hospital Staff. Abbreviations used are F.T., meaning full-time, and P.T., meaning part-time.

7.1 MEDICAL STAFF

DIRECTOR - 1/4 Time - Hospital
- 3/4 Time - O.P.D.

ASSISTANT DIRECTOR - 8/10 Time - Health Service
- Private Part-Time - Extended-Care

GENERAL PRACTITIONERS - 1 F.T.
- 2 - 7/10 Time
- 1 - 1/2 Time, Winter Session
Only (Sept. 1 - May 1)

CONSULTANT PSYCHIATRISTS - 1 - 8/10 Time
- 1 - 2/10 Time

PSYCHIATRIC RESIDENTS - 2 F.T. (Varies each year but generally 2.)

All are members of the Faculty of Medicine at U.B.C. They are remunerated by salary which is paid to the University by the B.C. Medical Plan. Details of remuneration and perquisites as outlined in the Standards were not obtained.

The regulations governing the Health Service Director and medical staff are contained in the Bylaws of the University Health Service Hospital and read as follows:

SECTION 5 ARTICLE 1

The administration of the hospital shall be the responsibility of the Director who shall be appointed by the Board.

SECTION 5 ARTICLE 11

The Director shall be given sufficient authority to carry out the duties imposed on him by the Board and he shall be in complete charge of all departments and activities of the hospital subject to the direction and control of the Board and the Administrative Committee.

SECTION 7 ARTICLE 1

The Board shall appoint a Medical Staff composed of members of the College of Physicians and Surgeons of British Columbia and shall ensure that a proper medical staff organization is set up and maintained.

SECTION 7 ARTICLE 11

In medico-administrative matters, the Medical Staff shall act in an advisory capacity through its representation on the Joint Advisory Committee.

SECTION 7 ARTICLE 111

Appointments to the Medical Staff may be made only by the Board and for a term not exceeding one year or for a portion of a year when a member is so appointed in the interim of regular annual appointments.

SECTION 7 ARTICLE IV

Rules or regulations governing the method of appointment and organization and activities of the Medical Staff shall be promulgated by the Board from time to time and shall not become effective until they have been approved by the Lieutenant-Governor in Council.

(See "Bylaws" - Appendix VI)

There would appear to be no formal written policies pertaining to the medical staff as outlined in the Standards. These would include job descriptions defining the primary

responsibilities and collateral duties of each member; a description of the work schedule for full and part-time staff; and statements regarding supervision, evaluation of performance, terms of reappointment and job security, promotion or advancement, and outside employment. Notices regarding night, weekend and vacation coverage, are posted in both the Hospital and the O.P.D.

The nucleus of full or near full-time medical staff members whose primary orientation and responsibility are to the University, provides the continuity of care required to avoid a fragmented service. Consideration is given to the individual interests and capabilities of each staff member which is apparent in the clinical areas over which each presides, and in acknowledged staff satisfaction. Teamwork appears to be in effect as the work-load is generally conducted on a shared basis until completion. For example, students admitted to the Hospital come under the care of the physician who attended the patient in the O.P.D., and the Director also carries a full patient work-load.

In terms of professional improvement, every opportunity in this direction would seem to be available to the staff members. Clinical research is conducted in special interest areas, such as birth control; attendance at outside professional programs is permitted; and informal peer review is promoted through staff discussions, review of

clinical problems, and inservice education. Staff members have access to the Woodward Biomedical Library which houses all of the recent texts, periodicals, and other educational aids currently available.

While the Standards include dental staff under this section, no comment can be made since any dental service offered is in the Dental School and is not a composite part of the Health Service. Discussion and recommendations on this subject are contained in Chapter 6, section 6.7, Dental Services.

7.2 OUTPATIENT DEPARTMENT STAFF

NURSING SUPERVISOR	- 1/2 Time	
REGISTERED NURSES	- 3 F.T.	
	- 2 Sessional (ie F.T.	
	Sept. 1 - May 1)	
NURSES' AIDE	- 1 F.T.	
(Housekeeping Assistant I)		
REGISTERED TECHNICIAN	- 1 F.T.	Supposedly shared
(Radiology)		$\frac{1}{2}$ time with the
REGISTERED TECHNICIAN	- 1 F.T.	Hospital but its
(Laboratory)		requirements are
		minimal.
REGISTERED TECHNICIAN	- 1/2 Time (1/2 Time Depart-	
(Physiotherapy)	ment of Physical Education	
	and Recreation)	
CLERK I	- 1 F.T. (Medical Billing &	
	Switchboard)	
	- 2 Sessional (Miscellaneous	
	Duties)	

CLERK II - 2 F.T.

CLERK IV - 1 F.T. (Secretary to
the Director)

SECRETARY III - 1 F.T. (Attached to the
Mental Health Unit but
budgeted through O.P.D.)

There had previously been a part-time nutritionist on a volunteer basis in the department. Currently, however, if nutritional advice or counseling is requested or required, the student is referred to the Home Economics Department or to the Food Service staff of his respective residence, for instance, regarding a special diabetic or reducing diet.

At her own request, a student in the U.B.C. School of Nursing was doing field work in the department at the time of the review.

7.3 HOSPITAL STAFF

NURSING SUPERVISOR - 1/2 Time

REGISTERED NURSES - 5 F.T. (Includes Head Nurse & permanent Night Nurse)
- 2 P.T. casual night relief

L.P.N.'s - 3 F.T. (Days & Evenings Only)
- Occasional P.T. - Shift Relief

NURSES' AIDE - 1 F.T. - Night Shift
- P.T. Casual Relief

JANITOR - 1 F.T.
- Student relief on weekends
and holidays.

HOUSEKEEPING ASSISTANT II - 1 F.T.

DIETARY AIDES - 1 F.T.

- 1 - 1/2 Time, plus relief.

(This service is leased
from the Campus Food
Services Department.)

ADMITTING CLERK - 1 F.T. - Shared with the
Mental Health Unit.

All professional or certified personnel have been appropriately trained and are licensed according to their respective provincial or jurisdictional regulatory bodies.

While the Standards suggest that University trained nurses gain special insight into vital student problems through their own experience with a rigorous academic program, it is considered here that knowledge of (public) health and a keen interest in the institutional community are sufficient for good student health care. In terms of extra-preparation, both the Health Service Supervisor and the Hospital Head Nurse have successfully completed the Nursing Unit Administration Extension Course offered through the Canadian Hospital Association. In addition, nearly all staff members have had the opportunity to attend conferences and seminars pertaining to college health. At the time of the review the O.P.D. Nurses' Aide was reported to be attending a four-week communications workshop. Other than as an incentive bonus, the value of such a seminar for this category of employee is questionable. The nursing staff

also has access to the texts, journals, and other professional references contained in the Biomedical Library.

7.4 NURSING

Recommended objectives and opportunities for the nursing service in the health program are the following:

"To participate in policy and program development for the health service and to interpret the policies and programs to the health service staff, students, faculty, and other members of the college community

To participate in interpreting to the college community the extent and limitations of service available at the health center

To recruit and provide orientation for new members of the nursing service; to provide continuing education and evaluation of performance for all members of the nursing staff

To provide patient care on the basis of medical diagnosis and treatment directed by the physicians

To evaluate nursing practices and to seek new and more effective ways of utilizing the talents of nursing personnel

To participate in liaison between the college health service and health agencies in the community

To initiate and implement programs for nursing personnel development

To participate in the development of inservice educational opportunities for the entire health service staff and to encourage all members of the nursing staff to participate in program planning

To participate in planning for emergency/disaster care

To participate in informal health counseling and education for personal and community health."

(6. - p.41)

In addition to providing traditional nursing services in the Health Service, nurses are in a position to positively influence the health attitudes and behavior of students and other members of the community. It cannot be stressed strongly enough what a great opportunity lies in their daily patient contacts to turn health care into an educational experience which can have a lasting impact upon the lives of students and others with whom they are in contact. The valuable resource and unique contribution of the nursing personnel must be recognized both by those responsible for the service and by the nurses themselves. So important is the nurse's position of influence to the student welfare, that to consider it lightly or not at all is to abdicate responsibility. Every nurse in the department should, therefore, through education, experience, or special interest in the health problems of young adults, attempt to develop improved clinical skills and to become a more effective model for health education.

While job descriptions and tools for evaluating individual performance are said to be in the developmental stages, these are considered a priori guidelines for the nursing staff. Written statements of nursing responsibilities within the Health Service and college community, of details of the work schedule, of lines of authority, and of personnel policies, job security and criteria for

evaluation and promotion should be clearly defined and regularly updated. Such instruments of organization and management contribute not only to the fulfilment of the above stated objectives but to staff satisfaction and the overcoming of unnecessary misunderstandings.

It was observed that a great number of non-nursing custodial functions are performed by the professional nursing staff. While it is recognized that the "peak and valley" type of demand on the service will result in periods of idle time, care must be taken to avoid using highly qualified personnel for tasks which can be delegated to the Nurses' Aides, housekeeping assistant, or clerical staff. For this reason, each member should be directly involved in the development of his/her own job description and specifications, with a view to seeking new and more effective ways of utilizing the talents of nursing personnel.

7.5 OTHER PROFESSIONALS

Included in the professional staff are the three R.T.'s (x-ray, lab, and physiotherapy). The R.N. responsible for the inservice education program might be considered as the health educator, albeit more outreach programs are needed to promote campus-wide health education. For these other professional staff members, as for medical and nursing, there should be written job descriptions defining their primary

responsibilities and any collateral duties, statements of the supervision which each can expect to receive, and the means for evaluating their performance, the terms of appointment, and personnel policies. Remuneration is thought to be competitive with other opportunities for similarly trained professionals, and opportunities for continuing professional improvement are made available. It is recommended that each member should be encouraged to maintain contact with his/her professional organization and to subscribe to the literature pertaining to each respective area of interest or activity.

It is recommended that the Health Service would achieve benefit from the assistance of a dentist or dental hygienist, and a medical record librarian, even on a part-time or consultant basis. The first is considered vitally important to student well-being, and the second to correct use and maintenance of medical information.

As the periods of adolescence and young adulthood are described as the "forgotten-age" relative to nutrition and the formulation of good eating habits, the concept of a consultant nutritionist or dietitian in the department is extremely worthwhile. The reestablishment of such a service should be given due consideration.

As the health program increases in scope and complexity, and particularly in the advent of a new Hospital,

it is recommended that an assistant to the Director, experienced in hospital or medical administration, be appointed. Some of the major responsibilities and projects of the Director that can be delegated or shared by such an assistant are in the areas of policy development, program planning, budgeting, and direction of the professional staff. The Standards recommend the establishment of this position for a health program which is responsible for 7,500 or more subscribers and which attempts to provide a comprehensive health service.

7.6 SECRETARIAL/CLERICAL STAFF

Because of their critical position in the communication system, it is recommended that all members of the secretarial/clerical staff receive careful and detailed orientation concerning all facets of the Health Service. The turnover of clerical employees appears high, which might be due to the sessional employment of two, or to some conflict in the main office area. Interpersonal communications are said to need improving. If staff satisfaction and work performance are to be promoted, the staff must be kept informed as promptly as possible of all personnel, program, or procedural changes and other matters for which they are expected to have accurate information. It is important that the urgency of maintaining strict confidentiality of information be under-

stood, that the reception of patients and telephone inquiries be handled in an alert and courteous manner, and that discussion of even common patient problems be discouraged at all times. The Standards suggest that the need for continuing inservice education is more imperative for this group than for any other group of the staff.

While there would appear to be an adequate number of secretarial/clerical staff, as mentioned previously a medical record librarian would be an invaluable asset to the service in terms of coding, filing, storing, and retrieving medical information, and instituting a unit record filing system to replace the present alphabetical system. Such information is necessary not only for statistical purposes, but for future planning and research. The magnitude of the responsibility of properly maintained files, therefore, requires a person who is competently and appropriately trained for the task.

Again, there is an observed need for clearly defined job descriptions, including primary responsibilities and ancillary duties, as well as the means of performance evaluation and opportunities for advancement. A manual of procedures relating to communications and other matters of concern to the clerical staff is required.

7.7 SUPPORT STAFF

The standard of housekeeping, sanitation, and maintenance appears high in all areas of the Health Service. The number of personnel in this area therefore is considered to be satisfactory.

The only two job descriptions found in the department were those for the Nurses' Aide (Housekeeping Assistant I) in the O.P.D., and the Housekeeping Assistant II in the Hospital. These two employees are long-term and their functions are fairly interchangeable. It is suggested that the Nurses' Aide's function of recording data on requisitions and labels before delivering specimens to the lab, be deleted from her specification of duties as it would not appear to be consistent with her position, nor safe in terms of possible errors of recording. Rather, certain custodial activities now performed by the nursing staff might be traded off for the responsibility of labeling specimens.

It is not understood why the Nurses' Aide was attending a four-week communications seminar at the time of the on-site review of the Health Service. This type of educational activity would have better benefited one of the secretarial/clerical or professional members of the staff. It is recommended, however, that maintenance personnel should be well informed concerning the measures they must observe to assist in the prevention and control of infectious and communicable diseases.

It is, therefore, essential that they have both an initial and a continuing course of inservice instruction.

CHAPTER 8

PHYSICAL PLANT

8.1 LOCATION

The Health Service is conveniently located in the West Wing of the Westbrook Building near the center of the campus where it is readily accessible from both academic and residential areas. It comprises the up-to-date Out-patient Department on the main floor together with the twenty-six bed Hospital and Mental Health Unit on the third floor. The offices of the Director and Assistant Director are located immediately adjacent to the O.P.D. Nearly all facilities used for direct patient care are found in the same building or within areas easily accessible from the service as recommended in the Standards.

8.2 DESIGN AND CONSTRUCTION

The present Health Service evolved slowly through various locations on the campus until 1951 when the Health Service Hospital was incorporated into the program and the present facilities were initiated. The diagrams in Appendices VIII and IX provide visual layouts of the O.P.D. and the Hospital. Although some measure of psychiatric service has been

provided for students since 1938, the separate Mental Health Unit was opened in 1973 adjacent to the Hospital on the third floor. This space was made available by the relocation of the Department of Health Care and Epidemiology to the new James Mather Building in December 1972.

As noted earlier there are 6,500 square feet of space on each of the two floors of the service, excluding the Mental Health Unit. If the anticipated political decision is made to construct a new 230-bed acute care hospital on the University campus, the speculation is that the Health Service will be relocated in that facility. The rationale for building a new hospital is to double the enrolment of the medical school from 80 to 160 students in order to meet the growing shortage of Canadian trained doctors. In planning for this event, the Health Service Director has requested a space allotment of 10,000 square feet for transfer of the O.P.D. functions only, an increase of 3,500 square feet over the present outpatient facility. In reality, the increase would amount to greater than that amount as the lab and x-ray functions would be performed by those departments of the new hospital. The Director anticipates that a bed allocation would be made for the exclusive use by students, but an exact number is difficult to forecast since the Hospital is so poorly utilized. In any case, the University has indicated that it can use the space in the Wesbrook Building for other purposes.

A transfer of the Mental Health Unit would seem illogical in economic terms as it is relatively new, conveniently located, comfortably furnished, satisfactory in size, and apparently well utilized by the students. Other than the need for free communication between staff members of the different divisions of the Health Service, the functions and activities of the Mental Health Unit seem fairly autonomous and would not likely suffer a marked decrease in student use if the location remained constant. Furthermore, the present plans to decentralize the psychiatric service through outreach programs in the various residences and dorms give additional support to this argument.

If and when a decision is announced relative to a new hospital and transfer of the Health Service, planning should begin immediately for the student health program. Basic decisions must be made concerning those services which will be provided, the subscribers to be served, and other resources available. Detailed projections must be made of service loads, staffing patterns, supporting services and personnel, and receipt, storage, and flow of supplies. Functional design must be given first priority in order to encourage optimum use of services and to promote the efficient use of resources. It is recommended that such important planning will require a full-time appointee from the Health Service to the Hospital Building Committee if the needs of this department are to be satisfactorily represented. This

position might well be combined with that of an assistant to the Director, as recommended in the last chapter.

8.3 MAINTENANCE

It would appear that the present facilities meet the standards approved for the purposes for which they are used. Recommended auxiliary fire protection is provided by automatic sprinklers, appropriate fire extinguishers properly placed and maintained, and an internal alarm system. Trash and other combustibles are removed promptly; corridors and stairways are observed to be unobstructed at all times. One real hazard observed during the inspection was the storage of oxygen tanks in the open Janitor's closet within the Hospital ward on the third floor. The warm and sometimes sunny location of the tanks and the probability of bumping them with floor-washing equipment, make the tanks subject to explosion or combustion and, therefore, extremely hazardous even though they are properly chained to the wall. It is recommended that the regulations for safe storage of combustibles and explosives be followed, that is, a cool, dark, metal-lined and locked storage compartment accessible from the exterior of the building.

It is assumed that refrigeration, ventilation, emergency power, fire equipment, and other support systems

are subject to regular maintenance, inspections and trials. All work is requisitioned to the Campus Physical Plant and carried out by the various trades as indicated. These in turn are subject to the rules and regulations of their respective unions. In the event of a power failure, the emergency power system should be able to maintain adequate lighting in an emergency treatment room, the corridors and stairways, nursing station, and the medical records, x-ray and laboratory areas.

The budget for building maintenance such as floors, walls, windows, plumbing, and elevators, is submitted through the Physical Plant. Maintenance of articles installed or purchased by the O.P.D. or Hospital is the financial responsibility of the department. Per diem financing is provided for the Hospital by the B.C.H.I.S. Additional information regarding safety and maintenance, has been given in Chapter 6 under Environmental Health and Safety and Provisions for Emergencies/Disasters.

CHAPTER 9BUSINESS MANAGEMENT9.1 FINANCING

The Health Service Hospital is owned and operated by the University. It is financed primarily by the British Columbia Hospital Insurance Service through the standard per diem rate established on the basis of the annual budget, and in a small way by the daily co-insurance paid by the patients. Donations and bequests made to the University also assist in financing the health program.

The one dollar-a-day co-insurance has been paid by private patients personally, but the University has subsidized student patients by making the payment on their behalf. In the spring of this year, 1976, however, the Provincial Government introduced an increase of the co-insurance to four dollars-a-day and it has not as yet been announced whether the University intends to meet the increased subsidy. This decision is expected to be part of the overall consideration being given to closing the Hospital since the increase will likely discourage its use for rehabilitation of long-stay patients as well as for students.

Before the introduction of B.C.H.I.S. and Medicare, the source of funds for the health program was part of the

composite fee levied by the University for several purposes, for example student dormitories, the Health Service Hospital, and the ambulatory services. Now, however, students are expected to carry insurance coverage or they are billed for services provided. The following information is provided in the current U.B.C. Calendar.³⁶

(a) Hospital Insurance

- (i) Students who are classified as residents of B.C. are entitled to B.C. Hospital Insurance benefits.
- (ii) Students who are not classified as residents of B.C. are not eligible for payment of hospital costs under the British Columbia Hospital Service.

Enquiries regarding eligibility for residence may be made during University registration, at the Health Service office, or by telephoning the B.C.H.I.S. office.

All Canadian provinces accept responsibility for hospital costs for their students attending the University of British Columbia provided the hospital insurance premiums (where required) have been paid, or until the student is accepted as a permanent resident of B.C.

Students who attend U.B.C. and are not residents of Canada are required to produce evidence of adequate sickness and hospital insurance before registration can be considered complete. Non-resident students can purchase a Medical and Hospital Plan at the time of registration. This provides acceptable sickness and hospital insurance with no Deductible. The rates for 1975-76 were \$110.00 for a single student and \$225.00 for a married student for 12-month coverage. These rates are subject to yearly change.

(b) Sickness Insurance

It is advisable for all B.C. residents to have coverage under the Medical Services Plan of B.C.

Unmarried students whose parents are enrolled in the M.S.P.B.C. are insured as dependents until their 21st birthday. The coverage may be continued if the student is in full-time attendance at university and mainly dependent on his parents, but the Plan must be notified of these facts, otherwise coverage ceases on the 21st birthday.

For students who are not covered by their parents' medical insurance plan, the following plans are available:-

- (i) Medical Services Plan of B.C.: Students covered by this Plan as individual subscribers may be eligible for a subsidy.

Students who have not established residency ... are not able to purchase this plan. Coverage should be maintained in the home Province.

Further details may be obtained at the Health Service office or from the M.S.P.B.C. (Medical Services Plan of B.C.).

- (ii) Non-Canadian Resident Hospital-Medical Plan:
... Students covered by an approved insurance plan with a non-Canadian carrier will be billed directly for services received. Receipts should then be submitted by the student to the insurance company for reimbursement. Students who allow their insurance to lapse will be billed directly.

Out-of-Canada students are required to have coverage for both hospital and physician care. They may purchase combined hospital and medical insurance through a private plan, if other adequate coverage is not carried. A brochure outlining benefits of the plan and the current year's premium rates may be obtained at the Health Service. Students are advised to attend to this early so that the insurance can commence as soon as possible after their arrival in B.C. In general it is considered that prepayment of direct personal services encourages optimum use of services at the time that they are needed.

9.2 BUDGET PLANNING

A. OUTPATIENT DEPARTMENT

This department is financed by an allocation from the general funds of the university. The departmental budget is determined each year by the previous year's budget, changing salaries, operating expenses, and the need to replace or update existing equipment. The budget review is carried out by representatives of the President's office, the Finance Department, and the Health Service.

The last available annual operating budget was for the fiscal year 1974-75, determined in 1973. It is as follows:

Salaries and Wages	\$279,422.00
Drugs	1,800.00
Medical and Surgical Supplies	4,080.00
X-ray Supplies	4,320.00
Laboratory Supplies	1,680.00
Housekeeping Supplies	360.00
Laundry	2,640.00
Office Supplies, Printing, etc.	4,800.00
Travel	1,180.00
Travel - Staff Training	500.00
Repairs & Maintenance	1,080.00
	<hr/>
TOTAL	<u>\$301,862.00</u>

The cost of unbudgeted items, such as salary increases and fringe benefits brought in by new contract negotiations, was borne by the general University budget until the following fiscal year.

It appears that salaries and wages make up roughly 92.5% of the total operating budget. This disproportionate figure may be due to several reasons. One, the B.C.M.P. is billed through the University which receives the payments and in turn reimburses the medical staff on a salaried basis, reflected in the figure for salaries and wages. Two, no physical plant maintenance such as heat, lights, water, etc. is shown in the budget. Three, no administrative costs on behalf of the employees are shown, such as W.C.B., life insurance and M.S.A.; and four, no food costs are necessary in an outpatient service. In any case, when the actual costs for direct patient services, that is, drugs, medical and surgical supplies, and lab and x-ray supplies, add up to only a fraction of the total budget (3.9%) the figure for salaries and wages appears to be an overwhelmingly large percentage.

B. HOSPITAL

The funds for this budget, as previously reported, are derived from the B.C.H.I.S. per diem payments. All Hospital beds are classified as public and therefore only the standard per diem rate is paid. These funds are administered by the University with budget deficits being made up from the general University funds. For example, in the fiscal year ending March 31, 1974, the Health Service Hospital incurred

a deficit of \$12,878. that had to be subsidized out of general University revenues. The information in Table XII, copied from the October 30, 1974 issue of the U.B.C. Reports indicates that the Health Service Hospital deficit accounted for 57.7% of the total deficit from all U.B.C. ancillary enterprise sources. No other statements were obtainable for other years' operations but it is assumed that the Hospital has had an operating deficit for some time.

TABLE XII
STATEMENT OF U.B.C.'S ANCILLARY OPERATIONS
FOR THE YEAR ENDED MARCH 31, 1974

	<u>HEALTH SERVICE HOSPITAL</u>	<u>TOTAL ALL SOURCES</u>
<u>REVENUE</u>		
Sales	\$ -	\$4,184,040.
Rentals and Meal Passes	-	3,838,727.
Hospital Revenue	230,898.	230,898.
	<u>\$230,898.</u>	<u>\$8,253,665.</u>
<u>EXPENDITURE</u>		
Cost of Merchandise Sold	\$ -	\$2,758,658.
Salaries and Wages	154,533.	2,410,009.
Fringe Benefits (including Board Allowance)	7,082.	132,466.
Dietary Service	29,314.	29,314.
Utilities	4,051.	326,640.
Other Operating Expenditures	19,833.	786,458.
Development of Facilities	28,963.	66,105.
Debt Repayment, including Interest	-	1,799,452.
	<u>\$243,776.</u>	<u>\$8,309,102.</u>
Net Operating Margin for Year	<u>(\$12,878.)</u>	<u>(\$55,437.)</u>
Reserved for Future Debt Repayment	\$ -	\$ -
Accumulated Reserve from Previous Years	-	156,005.
Reserved for Future Development	-	122,877.
Excess of Income over Expenditure for the Year Ended March 31, 1974	<u>(\$12,878.)</u>	<u>(\$22,309.)</u>

SOURCE: U.B.C. Reports, October 30, 1974.

Budget reviews are conducted in the same manner as are those for the Outpatient Department. Figures available for this report were also taken from the 1974-75 Health Service operating budget.

Salaries and Wages	\$176,954.00
General Expenditure:	
Medical & Surgical Supplies	1,460.00
Drugs	2,614.00
X-ray Supplies	1,540.00
Medical Records & Library	300.00
Laboratory Supplies	1,100.00
Administration:	
Postage	175.00
Office Supplies, Printing, etc.	550.00
Telephone & Telegraph	450.00
Workmens Compensation Board	200.00
Travel	500.00
Liability Insurance	96.00
Life Insurance & M.S.A.	7,850.00
Membership - B.C. Hospital Association	500.00
Short-Term Training Courses	75.00
Collection Fees	50.00
Co-Insurance for Students	1,400.00
General Service:	
Dietary-Food	7,254.00
-Central Kitchen Charges	2,392.00
-Other Expenses	300.00
Laundry	3,000.00
Bedding & Linen	1,000.00
Housekeeping Supplies	500.00
Physical Plant:	
Fuel	1,200.00
Electricity	1,650.00
Fire Insurance Premium	250.00
Maintenance - Building & Grounds	1,000.00
Water	750.00
Equipment Replacement:	
Equipment & Furnishings	1,000.00
	<hr/>
TOTAL	\$216,110.00
	<hr/>

While there are many more items making up the Hospital budget than the O.P.D. budget, the figure for salaries and wages which approximates 81.9% of the total budget, is still thought to be high compared to the average public hospital in which salaries and wages are estimated at approximately 70% of the operating budget, particularly when several other items shown are staff benefits such as life insurance. In terms of direct patient care, that is, general expenditures (minus medical records and library expense) and general services, the budget expenditures are estimated to be \$21,160.00, again only a fraction (9.79%) of the total budget.

It is assumed that any trimming of expenses or required budget-cutting would have to be done in the area of salaries and wages. Since the University's 1976-77 operating budget increase was recently announced in the Vancouver Sun to be about one-third of the amount it originally requested and about one-half the amount of its revised request, it is anticipated that all existing programs will be asked to curtail expenses. This will require a concerted effort of all staff members of the health program if a high standard of service is to be maintained.

The Standards recommend that program and budget preparation should be a responsibility of the Health Service Director, working closely with his staff at all levels. It

has been recommended throughout this report that members of the Health Service staff should be involved in the planning and preparation of their various areas of the departmental budget, for example, lab and x-ray, and that statistical information relating to utilization of services should be used as a basis for budget projections as well as for developing sound program models. Only after program and budget estimates have been determined at the departmental level, should discussions take place with the central administration or finance office of the University.

9.3 BUSINESS PROCEDURES

Section 2 Article 2 of the Health Service Hospital Bylaws states that:

"Full control of the receipts and expenditures of the Hospital shall be vested in the Board."

Section 6 Article 1 states that:

"The accounts of the hospital shall be deemed to be "accounts of the Board" as specified in Section 43 of the "British Columbia University Act" and shall be audited in the manner provided therein."

Although little information could be obtained in this area, it is recommended in the Standards that all activities of the health program should be organized and their business affairs conducted according to accepted principles of business management. While it is recognized that the quality of patient care, teaching, community service, or

research must never be sacrificed for economy, it is stated that a concern for health should never be justification for waste, inefficiency, or mismanagement. It is recommended that guidelines for business procedures in the Health Service, including the Hospital be prepared, defining how the following functions should be performed:

- Preparation of Budgets
- Maintenance of Accounts
- Procurement, Storage, and Distribution of Supplies and Equipment
- Maintenance of Building and Equipment
- Custody, Loan, and Charges for Equipment
- Decision-making processes involving supervisors, employees or others, in the formulation and recommendation of business policies and procedures.
- Operational statements such as salary status of each employee for whom the business office maintains a record.

9.4 PERSONNEL POLICIES AND PROCEDURES

The Standards recommend that all units of the health program establish and observe a high standard for personnel policies and procedures. It is recommended in other sections of this paper that every position on the professional and non-professional staffs should have a job description outlining qualifications, responsibilities and duties, manner of supervision or line of authority, and opportunities for advancement, if any. It is further recommended that clearly understood procedures for periodic (at least

annual) performance evaluation of each employee, professional and non-professional, be developed and implemented. Written evaluations should be discussed with the staff member concerned following his personal review of the evaluation, with a view to encouraging staff growth and development, improved communications, and job satisfaction.

While it is recommended that there should be readily available information for all staff members concerning the perquisites and/or limitations for each position, the Health Service personnel are generally guided by their professional or union contracts. The following are the guidelines consulted:

Registered Nurses	RNABC Contract
Licensed Practical Nurses	Union 116 Contract
Nurses' Aides	Union 116 Contract
Housekeeping Staff	Union 116 Contract
Service Workers	Union 116 Contract
Registered Technicians	Health Sciences Association Contract
Clerical Staff	AUCE Contract (Association of University Clerical Employees)

It is finally recommended that the Health Service develop written departmental policies regarding payment of professional association fees, payment of expenses to meetings and conferences, and inservice education opportunities.

PART III

CONCLUSIONS OF THE STUDY

CHAPTER 10SUMMARY AND RECOMMENDATIONS10.1 SUMMARY OF SERVICES

The Standards recommend that the health program of every college and university, regardless of size, should comprise services in three broad program areas: medical and other health services, including community-oriented preventive services; environmental health and safety; and education for healthful personal and community living.

The primary emphasis of the U.B.C. Health Service is on the medical and other health services, with some community-oriented preventive services. A program for environmental health and safety is not a composite part of the Health Service although it does have representation on an institutional committee concerned with that area. Education for healthful personal and community living is not formalized, but informal health education, advice, and counseling, are made possible through direct student contact during Health Service visits and special purpose clinics.

The range of medical and other health services includes diagnostic, therapeutic, and some rehabilitative services; all clinical services either provided or prescribed by the Health Service appear to be of the highest quality.

Provision is made for meeting emergencies on an individual basis, while group emergencies are generally referred off-campus. Outpatient and inpatient services are well provided for and give recognition to the integration of care for emotional and physical illness.

The effectiveness of both outpatient and inpatient personal health services is supported by such other services as laboratory, radiology, pharmacy, and physical therapy. Athletic medicine is provided for and mental health care is a major element of the overall program. Dental medicine is considered to be a severe deficiency in the provision of comprehensive health services to the students, staff and other personnel in this large institution. Preventive health services are given special consideration, but the promotion of health and the prevention of disability should be broadened through a structured campus-wide health education program.

Although an institutional plan for meeting emergencies and disasters is reported to be in the developmental process, no evidence of such planning is apparent. While an institutional committee does exist in concern of environmental surveillance to control those factors which may compromise physical and emotional health, a dynamic plan of action is required to implement and evaluate this broad program area. Responsibility for the program, however, rests with the University administration and not the Health Service.

The same is true for the third broad program area, the promotion of education for healthful individual and community living. There is an observed need for a discrete, well-coordinated, and well-supported program of health education for all members of the institutional community. Planning for such a program is required on both a departmental and an administrative level.

In addition to the above major elements of the Health Service, research into the dynamics of the health of young adults and of the complex interrelationships of students, faculty, and staff, is recommended as an integral part of a health program which purports to be comprehensive or progressive, as described in the Standards.

In general, it is concluded that the U.B.C. Health Service meets the standards and practices recommended for a college health program as set down by the American College Health Association, and that the Standards can appropriately be applied to Canadian, as well as to American, student health services. Where non-applicability of the Standards was found to exist in the conduct of the study, explanations have been given in the text or recommendations have been adapted to suit the Canadian context.

10.2 SUMMARY OF RECOMMENDATIONS

One of the operational goals of this study was to recommend ways to more effectively or efficiently coordinate the planning and provision of health services at U.B.C., including their coordination with other services. Recommendations, some of which may now be in effect, are made in a concern for greater utilization of the services available, increased efficiency in the disposition of materiel and manpower resources, and the advancement of professional knowledge and practice. The ultimate objective is to further patient and personnel satisfaction through improved health programs.

Statements of recommendation and suggestions for change have been discussed in some detail throughout the principal text of the study. The following recommendations, developed on the basis of the findings and conclusions of the study and presented in a summarized form for ease of reading and reference, either originate from the recommended Standards used to evaluate the Health Service or are adaptations to accepted Canadian standards.

IT IS RECOMMENDED THAT:

ADMINISTRATION AND PLANNING

1. The University reevaluate the importance of student health services in view of its objectives in providing health care to students, of universal insurance and

rising health care costs, of changing political philosophies, and of changes which have evolved around the Health Service in recent years.

2. The organization and functions of the services be reviewed regularly and changed accordingly in order to keep them effective, timely, and up-to-date.
3. Census data relating to the composition of the student enrolment, from the Office of Academic Planning, ^{be} reviewed annually in order to project trends of increase or decrease in the number and type (e.g. age and sex) of students, and to identify possible areas requiring the planning or expansion of new or existing services.
4. The International House information center and other of its resources be used to plan and provide special services, such as screening or disease detection, for large groups of foreign students where indicated.
5. The Health Service Hospital be closed and the space be used for other purposes; students requiring acute inpatient care be referred to community hospitals; outreach programs be developed in campus residences to include infirmery beds for students not requiring acute hospital care.
6. The Bylaws of the University Health Service Hospital be reviewed and revised as necessary.

7. Statements of policy be developed in support of the medical care and treatment provided for students, and of the Health Service responsibility for environmental surveillance and control, and health education.
8. In the event of future relocation of the Health Service, planning for new facilities be undertaken to include a detailed analysis of the functions and services to be provided, projected patient loads, estimated patterns of use, traffic flow, and staffing patterns for both regular and special services.
9. A full-time appointee to the Hospital Building Committee be made from the Health Service to satisfactorily represent its needs; such a planning position possibly being combined with that of an assistant to the Director experienced in hospital or medical administration.

BUSINESS MANAGEMENT

10. Regular reports of activities and services be produced and circulated to all departments of the institution concerned with the health of the campus community.
11. Program budget preparation be a responsibility of the Director working closely with his staff to determine budget estimates at the departmental level, before discussions with the University administration or finance office.

12. Staff members be involved in the planning and preparation of their various areas of the departmental budget to promote cost-consciousness; statistical information relating to utilization of services be used as a basis for budget projections as well as for developing sound program models.
13. Guidelines be developed to define how the business functions of the Health Service, including the Hospital, should be performed.
14. Job descriptions be developed for every staff position, outlining qualifications, responsibilities and duties, manner of supervision or line of authority, and opportunities for advancement, if any; each staff member be involved in the development of his/her own job description and specifications with a view to seeking new and more effective ways of utilizing personnel talents and capabilities; custodial functions currently performed by the professional nursing staff be delegated to the nursing assistants.
15. Clearly understood procedures for periodic (at least annual) performance evaluation of each staff member be developed and implemented; written evaluations be discussed with staff members after personal review of their individual evaluation, with a view to encouraging staff

growth, and development, improved communications, and job satisfaction.

16. Written departmental policies be developed regarding payment of professional association fees, payment of expenses to meetings and conferences, and inservice educational opportunities.
17. Statistical reports of all services including Hospital utilization be kept for periodic evaluations to analyze the effectiveness of services, to determine budget requirements, and to plan future services.

OUTPATIENT SERVICE

18. The Health Service and University administration develop plans to encourage greater utilization of primary care services to students.
19. The outpatient services be extended to include evening clinics and weekend coverage for the provision of emergency care, special clinics and increased counseling, to better utilize the space available during periods of heavy traffic flow and institutional growth, and to allow new programs to be introduced into the service as considered appropriate by the staff and by student demands.
20. Statistics be computed and analyzed relative to the number of patients now seen after clinic hours, the

types of complaints, and the treatment given, with a view to planning extended service hours or special evening clinics as indicated.

21. Preventive programs be developed and publicized well in advance of predictable problems or occurrences in order to meet the demands for service with manpower and other resources, for example, influenza immunization clinics.
22. A concerted effort be continued to eradicate known or suspected health hazards to the community; preparations be made immediately to combat the possible wide-spread outbreak of the disease known as swine flu.
23. Special programs be developed for surveillance and education to prevent complications of known existing diseases such as diabetes, epilepsy, and chronic cardiovascular or pulmonary disease; periodic screening or detection programs be developed to identify students (and others) with chronic or locally endemic diseases, such as subclinical diabetes or dental diseases.
24. The scope of the existing health appraisal program be increased through an emphasis on health education.
25. Students who present themselves for service be followed-up in the manner used by the Community Health Centre,

i.e. by checking on referrals made to other sources and by checking patients attending the service for unrelated problems; all referrals to community resources be followed-up within a reasonable period of time in order to record outcomes or to take further appropriate action if necessary; a proper form be developed to promote two-way communication with referral sources.

26. Because of the increasing competition for clinical teaching facilities for students in the health professions, the Health Service be used to provide valuable clinical experience in public health and preventive medicine, mental health, birth control, disease control, injury prevention, and health counseling.
27. Consideration be given to the employment of an L.P.N. or an additional Nurses' Aide when a position on the nursing staff becomes vacant, the development and review of position job descriptions providing evidence of the need for change; a list of prescribed approved duties be obtained from the L.P.N. Association.
28. Room 134 in the outpatient clinic be fumigated after treatment of all "dirty" cases, and supplies and other items subject to contamination be kept to a minimum in the room.

HOSPITAL

29. Subject to the Hospital remaining open, clean and dirty supply rooms be separated; the room designated for flower-arranging be considered for use as a "dirty" utility room; sterilized bundles and equipment in the "clean" supply room be carefully stored, dated, and periodically tested for maintenance of sterility.
30. Portable oxygen tanks be properly stored according to authorized safety regulations such as those followed by the Health Sciences Centre; the present storage of tanks in the Hospital is considered dangerous in terms of the possibility of combustion or explosion.
31. Disposable shower curtains be used in the single rooms for patients on isolation technique.
32. A dishwasher be obtained (by purchase or donation) for the ward kitchen, a domestic machine being considered suitable in view of the low patient census.
33. Written guidelines of isolation techniques for specific contagious diseases be produced with the assistance of the Inservice Education Coordinator; the work already done to prepare medical and procedure manuals be commended.

SUPPORTING SERVICES

34. The guidelines relative to patient transportation from the Health Sciences Centre Psychiatric Unit to the x-ray service be reviewed and reinforced.
35. The efforts of the X-Ray Technician to participate in educational developments in her field be recognized.
36. A Pharmacy Committee of the medical staff be organized to review the prescribing and use of medications and other therapeutic agents in the care and treatment of students, and to recommend additions or deletions in the drug formulary.
37. The provision of dental screening be made available to students and at least emergency cases be referred for prompt treatment to the Dental School; consideration be given to retaining a consultant dentist and/or dental hygienist, and to providing an evening dental clinic for students.
38. The number of referrals made to dentists and outside doctors be recorded as a basis for planning future services.
39. The undertaking by the Mental Health Unit of outreach programs and research into the psychodynamics of college students be commended.

40. Expansion of the psychiatric service to include other disciplines such as psychiatric nursing, social work, and clinical psychology, be encouraged to develop the team concept and a broader spectrum of resources.
41. Periodic reviews of recorded data be made jointly with the Athletic Department for the purpose of developing programs of injury prevention.
42. Advanced students in the School of Rehabilitation Medicine be encouraged to participate in the physiotherapy program as part of their clinical training.
43. The Physiotherapy Treatment Centre be recognized as operating at a high level of performance.
44. The services of a consultant or part-time dietitian be considered to supervise the Hospital food service and the special nutritional needs of both inpatients and outpatients.

MEDICAL RECORDS

45. Written histories, physical examinations, signed orders, discharge summaries and final diagnoses, be required for all patients admitted to the Hospital.
46. A unit record system be developed and indexing of charts be undertaken.

47. Medical records now stored in the staff lounge be kept in a secure location to which access is controlled and from which unauthorized personnel are excluded.
48. Written directions be produced specifying the method by which records are processed, to whom they may be made available, and the conditions under which information from them may be communicated to third parties.
49. Clearly defined policies be established regarding possible contentious areas such as psychiatric treatment, birth control, abortion, surgical procedures, hospital admission, legal consent for underage patients, confidentiality of records, privilege of communications, reportable conditions, and the administration of drugs.
50. Periodic chart reviews be made to provide an indirect measure of the quality of clinical care being provided.
51. A system for the retrieval of data from all clinical records, for example, lab. and x-ray reports, be developed for reviewing the overall work of the service, for supporting the review of clinical performance, and for conducting research.
52. A more detailed method of statistical accounting be reinstated; statistical reports of Hospital utilization be continued, summarizing any special predominance of student illness or causes of disability; presenting

problems or complaints be broken down and categorized by disease classifications for future research and planning.

53. Automatic processing of medical information be investigated in advance of the possible relocation of the Health Service to a new campus hospital with a centralized data bank.
54. A consultant or part-time Medical Record Librarian be retained.

ENVIRONMENTAL HEALTH AND SAFETY

55. The Health Service seek and observe policy statements regarding standards and codes relating to fire protection, safety and injury control, radiological health, industrial health, sanitation, and general environmental control of working conditions.
56. An area-wide disaster plan be developed and implemented without further delay; coordinated efforts of the fire safety and environmental personnel, R.C.M.P., medical, nursing and Hospital personnel, other concerned groups on campus, and off campus resources such as the Emergency Measures Organization, Red Cross, and Vancouver General Hospital be included.

(Sample emergency/disaster plans are available from the American College Health Association.)

HEALTH EDUCATION

57. Every patient contact be recognized and used as an opportunity for education of the student concerning the implications of his particular problem, physical or emotional, for personal and community health; consumer education at the student level be regarded as a means of curtailing the escalation of health care costs.
58. Every nurse in the department, through education, experience, or special interest in the health problems of young adults, attempt to develop improved clinical skills and to become a more effective model for health education.
59. A course (or courses) be developed in personal and community health and hygiene through which students in all faculties can attain basic health information and through which their health behavior may be influenced positively.
60. A student/faculty health council be organized to define and recommend solutions for University health problems and to further campus-wide interest and participation in the promotion of health; consideration be given to resurrecting the President's Committee on Student Health Service and Health Education.

61. Health Service records be used to provide data for continuing evaluation of health education opportunities and for determining inservice education programs.
62. The responsibility for staff development through effective inservice education be delegated to one staff member, appropriately trained and personally committed to this area of interest.
63. The maintenance personnel receive both an initial and a continuing course of inservice instruction in order to be well informed concerning the measures they must observe to assist in the prevention and control of infectious and communicable diseases.
64. Assistance be requested from the Fire Prevention Officer to develop an inservice education program of fire and safety consciousness for all Health Service personnel; the clinical resources of the Pharmacy be used for education on new medications.
65. Other health-related campus resources be utilized, such as the Dental School, the Community Health Centre, and the School of Nursing to gain valuable assistance in developing policies and procedures, and in short courses of inservice instruction, for example psychiatry for Health Service nurses interested in participating in the mental health outreach programs.

66. A working relationship be maintained with other departments or resources involved in health education, such as the inservice education committee of the R.N.A.B.C.

COMMUNICATIONS

67. Because of their critical position in the communication system, all members of the secretarial/clerical staff receive careful and detailed orientation concerning all facets of the Health Service for which they are expected to have information; a manual of procedures relating to communications and other matters of concern to the clerical staff be developed.
68. Meetings of department heads, supervisors, and others who share responsibility for Health Service activities be held at regular, if only periodic, intervals.
69. Regular nursing staff meetings, including the Hospital staff, be held and include educational and professional association activities and announcements.
70. Medical staff meetings be planned to include the Mental Health Unit and periodic representation from other campus health-related departments, with developments or information resulting from these meetings shared with the nursing and support personnel.

71. Minutes or tapes of meetings be kept for the information of those unable to attend.
72. The Health Service brochure provided to all new registrants be updated; the A.C.H.A.'s Health Information Series comprised of eight brochures be considered for distribution to patients and members of the campus community.
73. Health Service staff attendance at annual registration be increased to promote fuller exposure of the available health services to the increasing student population.
74. Employee performance evaluations be used as a means for two-way communication.
75. The planning and attendance of the recent communications workshop be commended; a follow-up review of the workshop be done to determine positive influences brought about in the area of internal communications.
76. Health Service staff be involved in campus-wide committees and informal gatherings as far as possible in an effort to promote recognition of the services available.
77. Investigation be made into the possible production of a short audio-visual film of the Health Service by the University T.V. or photographic department, to be used by health education staff and during the orientation of new students to the campus.

EXTRAMURAL RESOURCES

78. Working relationships be established with community health-related agencies and individuals to assist the students to make maximum use of such resources; for example, liaison with Planned Parenthood and similar agencies be sought for birth control and pregnancy counseling.
79. Every opportunity be used to learn what public, voluntary, and industrial resources are available for use by the University community as well as by the general community.
80. Staff members participate in the activities of extramural community agencies and planning councils whenever possible, to stimulate professional activity.
81. Each professional staff member be encouraged to maintain contact with his/her professional organization and to subscribe to the literature pertaining to each respective area of interest or activity.
82. Cooperative activity be undertaken with the health services of other universities and colleges in British Columbia to share resources and information, and to promote public relations.

83. Active participation in the Canadian Association of College Health Services be used to develop the depth and breadth of health programs at the University.
84. The consultation and management engineering services of the B.C.H.I.S. be requested to assist or advise in areas of uncertainty or concern to the Health Service, for example, medical records and nutritional counseling.

EVALUATION AND RESEARCH

85. Periodic evaluation of existing Health Service programs be conducted in an attempt to upgrade the quality of the programs; evaluative studies be carried out to determine the effectiveness of specific services; continuous monitoring of the level of student health be done through record-keeping and data analysis.
86. Plans be formulated for continuing research projects in areas of the Health Service requiring study and the plans be supported and financed by the University administration.
87. Consideration be given to continuing internal audits using the A.C.H.A. self-evaluation guide.

10.3 IMPLICATIONS FOR PLANNING

The goal of any health service is the improvement of levels of health in the community. A fundamental issue is whether and to what degree coordination and integration of activities should be achieved. In other words, we need to know how a rational system of planning and administration of health programs can be attained in order to achieve its goals. But changes in the nature of social problems, in the character of medical technology, in the structure and function of health services, and in the needs and expectations of the public have pressured organizations into planning and developing programs much broader than the traditional health services. This enlargement of scope has created a complexity of problems in organization and resources which demand continuous evaluation and reformulation.

Planning and evaluation are inseparable concepts and yet it is only in recent years that serious attention has been given to the evaluation of health services, to measuring the progress of plans and programs and the achievement of their goals. While health regulatory agencies have identified standards as a basis for planning and evaluating programs, their guaranteed continued quality and the greater accountability demanded can only be provided with major support through more advanced evaluative research. When an evaluative study is conducted it can lead to further research questions

which may yield new insights of real importance to the advancement of professional theory and practice.

The U.B.C. Health Service, as an old established program, has the traditional support of both the University administration and a public which has become accustomed to its services. In order to make the services relevant to student needs and demands, they must be carefully planned and evaluated before they are put into effect or before resources are allocated. Scientific health planning, prediction of changing health needs, and evaluation, all require a baseline description of health problems and their magnitude, and of groups which have high rates of such problems and are, therefore, in the greatest need of health care. Thus, support of the University is required in establishing a mechanism for continuing feedback of both the changing needs and the constraints of the institutional community, that is in planning an effective organization for the delivery of health services.

This study is intended as a planning document for utilization by the U.B.C. Health Service and for future research in other college health programs.

LITERATURE CITED

1. Evans, Robert G., and Walker, Hugh D. Public Policy Problems in the Canadian Health Services Industry. Discussion Paper No. 41, Department of Economics, University of British Columbia, June 1970.
2. Fuchs, V.F. "Why Health Economics", Mount Sinai Journal of Medicine. Volume XL, Number 4, July - August 1972.
3. Klarman, H. The Economics of Health. Columbia University Press, New York, 1965.
4. Suchman, Edward A. Evaluative Research: Principles and Practice in Public Service and Social Action Programs. Russell Sage Foundation, New York, N.Y., 1967, p. 2.
5. Kohn, Robert The Health of The Canadian People. Royal Commission on Health Services. Queen's Printer, Ottawa, 1965.
6. "Recommended Standards and Practices for a College Health Program, Including a Statement on Ethical and Professional Relationships", American College Health Association, Revised 1969, in The Journal of the American College Health Association, Vol. 18, October, 1969, p.p. 1 - 66.
7. Knutson, Andie L. "Evaluation for What?" Program Evaluation in the Health Fields. H. Schulberg et al, editors. Behavioral Publications, New York, N.Y., 1969, p.p. 42 - 50.
8. Mair, A. Student Health Services in Great Britain and Northern Ireland. Pergamon Press, Toronto, 1967.
9. Ralph, I.F. Student Health and Student Health Services. Dissertation, University of Edinburgh, Scotland, 1959. (quoted in Mair, p. 4)

10. Canuteson, R.I. "Looking Ahead in College Health", Proceedings of the Twenty-Fourth Annual Meeting, American Student Health Association, Minneapolis, Minnesota, May 1946, Bulletin No. 27, Cumulative Index. The Journal-Lancet, Minneapolis, Minnesota, p.p. 7 - 8.
11. Goodenough, Sir Wm. Macnamara, Report of the Inter-departmental Committee on Medical Schools, 1944. Interdepartmental Committee on Medical Schools, Great Britain and Scotland, London, H.M. Stationery Office, 1944.
12. Proceedings of the Twenty-Fourth Annual Meeting, American Student Health Association, Minneapolis, Minnesota, May 1946, Bulletin No. 27, Cumulative Index. The Journal-Lancet, Minneapolis, Minnesota, p. 95.
13. Boynton, Ruth E. "The First Fifty Years: A History of the American College Health Association", The Journal of the American College Health Association. Volume 19, June 1971, p.p. 269 - 285.
14. "Constitution and By-Laws Of The Pacific Coast College Health Association As Amended 19 October 1974", Proceedings of the Thirty-Eighth Annual Meeting of the Pacific Coast College Health Association, an Affiliate of the American College Health Association. Vancouver, B.C., 1974, p. xlv.
15. Gold, J.H. "Utilization of the Student Health Clinic", The Journal of the American College Health Association. Volume 21, June 1973, p.p. 477 - 482.
16. Schwarz, Conrad J. Report on Health and Psychiatric Services on Canadian Campuses. Prepared for The Canadian Union of Students, January 1967.
17. Kissner, R.F., and Murdoch, W.D. A Report on University Health Needs. Simon Fraser University Project, 1971.
18. Tunner, Alex "Student Perceptions of Need for College Health Services", Proceedings of the Thirty-Eighth Annual Meeting of the Pacific Coast College Health Association, an Affiliate of the American College Health Association, Vancouver, B.C., 1974, p.p. 28 - 34.

19. McKee, W.; Nickason, M.; and Stalker, A. A Diagnostic Reconnaissance Survey of Existing U.B.C. Mental Health Facilities and Related Services and of Student Knowledge, Use, and Evaluation of Existing Services. A Course Paper in Community Psychology 420, U.B.C., 1975-76.
20. Deniston, O.L.; Rosenstock, I.M.; and Getting, V.A. "Evaluation of Program Effectiveness", Public Health Reports, Vol. 83, No. 4, April 1968, p.p. 323 - 335.
21. Deniston, O.L.; Rosenstock, I.M.; Welch, W.; and Getting, V.A. "Evaluation of Program Efficiency", Public Health Reports, Vol. 83, No. 7, July 1968, p.p. 603 - 610.
22. Roemer, M.I. "Evaluation of Health Service Programs and Levels of Measurement", Public Health Reports, Vol. 82, July 1968.
23. MacMahon, B. et al. "Principles in the Evaluation of Community Mental Health Programs", in H.C. Schulberg et al., 1969.
24. Levey, Samuel and Loomba, N. Paul Health Care Administration: A Managerial Perspective. J.B. Lippincott Company, Toronto, 1973.
25. James, George "Evaluation in Public Health Practice", American Journal of Public Health, Vol. 52, 1962, p.p. 1145 - 1154.
26. Methods of Health Care Evaluation, 2nd edition. Readings and exercises developed for the National Health Grant Health Care Evaluation Seminars, edited by David L. Sackett and Marjorie S. Baskin. Published at McMaster University, Hamilton, Ontario, 1973.
27. Schulberg, Herbert C.; Sheldon, Alan; and Baker, Frank Program Evaluation in the Health Fields, Behavioral Publications, New York, N.Y., 1969.
28. Etzioni, Amitai "Two Approaches to Organizational Analysis: A Critique and a Suggestion", in H.C. Schulberg et al, p.p. 101 - 120.

29. Schulberg, H.C. and Baker, F. "Program Evaluation Models and the Implementation of Research Findings", in H.C. Schulberg et al, p.p. 562 - 572.
30. Herzog, Elizabeth Some Guidelines for Evaluative Research. U.S. Department of Health, Education, and Welfare, Social Security Administration, Children's Bureau, 1959.
31. Tripodi, Tony; Fellin, Phillip; and Meyer, Henry J. The Assessment of Social Research: Guidelines for the Use of Research in Social Work and Social Science. F.E. Peacock Publishers, Inc., Itasca, Illinois, 1969.
32. Reinke, Wm. A. Health Planning: Qualitative Aspects and Quantitative Techniques. The Johns Hopkins University, School of Hygiene and Public Health, Department of International Health, Baltimore, Maryland, 1972.
33. Wessen, A.F. "On the Scope and Methodology of Research in Public Health Practice", Social Science and Medicine, Vol. 6, 1972, p.p. 469 - 490.
34. Upshall, E.M. Historical Reports and Papers on the U.B.C. Health Service dating back to 1936, obtained in personal interview with Miss Upshall.
35. Annual Reports of the U.B.C. Health Service, 1955-56 to 1974-75, from the Health Service Director, Wesbrook Building, and the Woodward Biomedical Library (Medical Morgue).
36. U.B.C. Calendar 1976/77, Vancouver.
37. Policy and Procedure Manual. University Health Service Hospital and Student Health Service, Wesbrook Building, University of British Columbia, Vancouver, B.C.
38. U.B.C. Reports. Vol. 22, No. 17, May 5, 1976, Vancouver.
39. Detwiller, L.F. "New Health Sciences Centre for B.C.", Canadian Hospital. February 1963.
40. U.B.C. Reports. Vol. 22, No. 17, May 5, 1976, Vancouver.

APPENDIX Ia

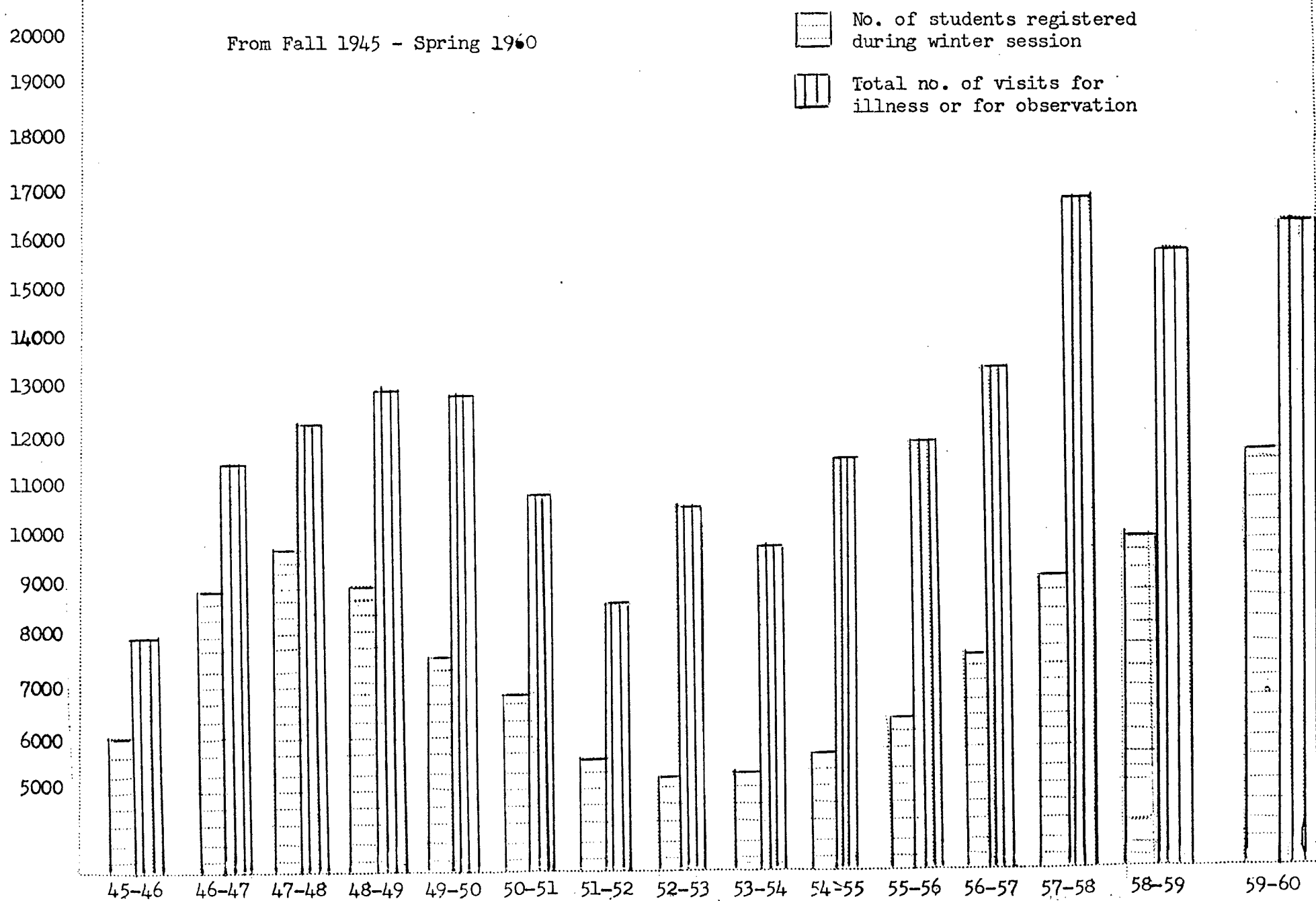
COMPARATIVE CHART OF STUDENT REGISTRATIONS:

TOTAL VISITS FOR ILLNESS OR FOR OBSERVATION

1945 - 1960

CHART I

COMPARATIVE CHART OF STUDENT REGISTRATIONS: TOTAL VISITS FOR ILLNESS OR FOR OBSERVATION



APPENDIX 1b

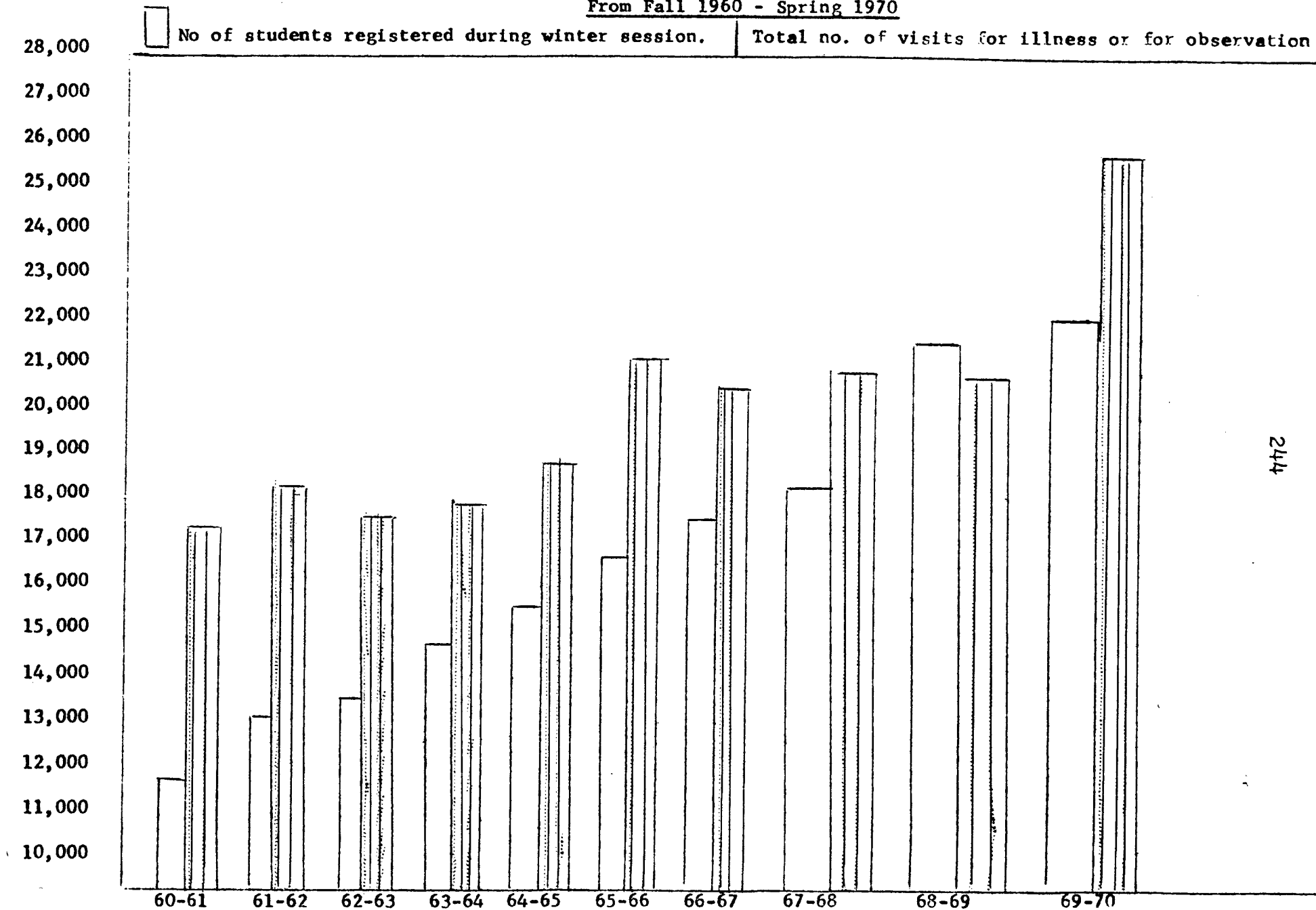
COMPARATIVE CHART OF STUDENT REGISTRATIONS:

TOTAL VISITS FOR ILLNESS OR FOR OBSERVATION

1960 - 1970

COMPARATIVE CHART OF STUDENT REGISTRATIONS: TOTAL VISITS FOR ILLNESS OR FOR OBSERVATION

From Fall 1960 - Spring 1970



APPENDIX IIa

CHART SHOWING NO. OF STUDENTS RECEIVING

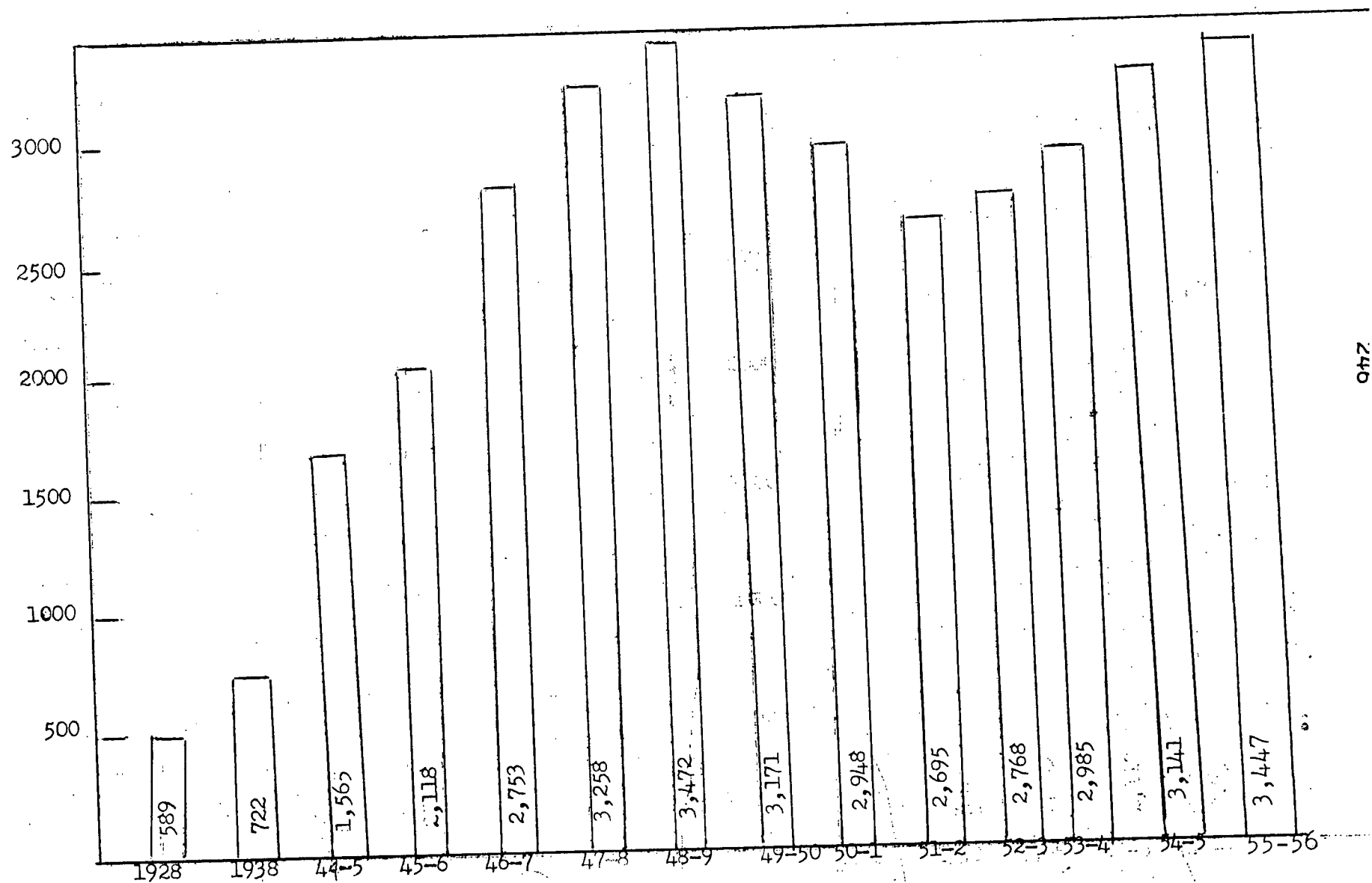
MEDICAL EXAMINATIONS

1928 - 1955

CHART II

CHART SHOWING NO. OF STUDENTS RECEIVING MEDICAL EXAMINATIONS.

FALL 1928 - SPRING 1955.



APPENDIX IIb

CHART SHOWING NO. OF STUDENTS RECEIVING

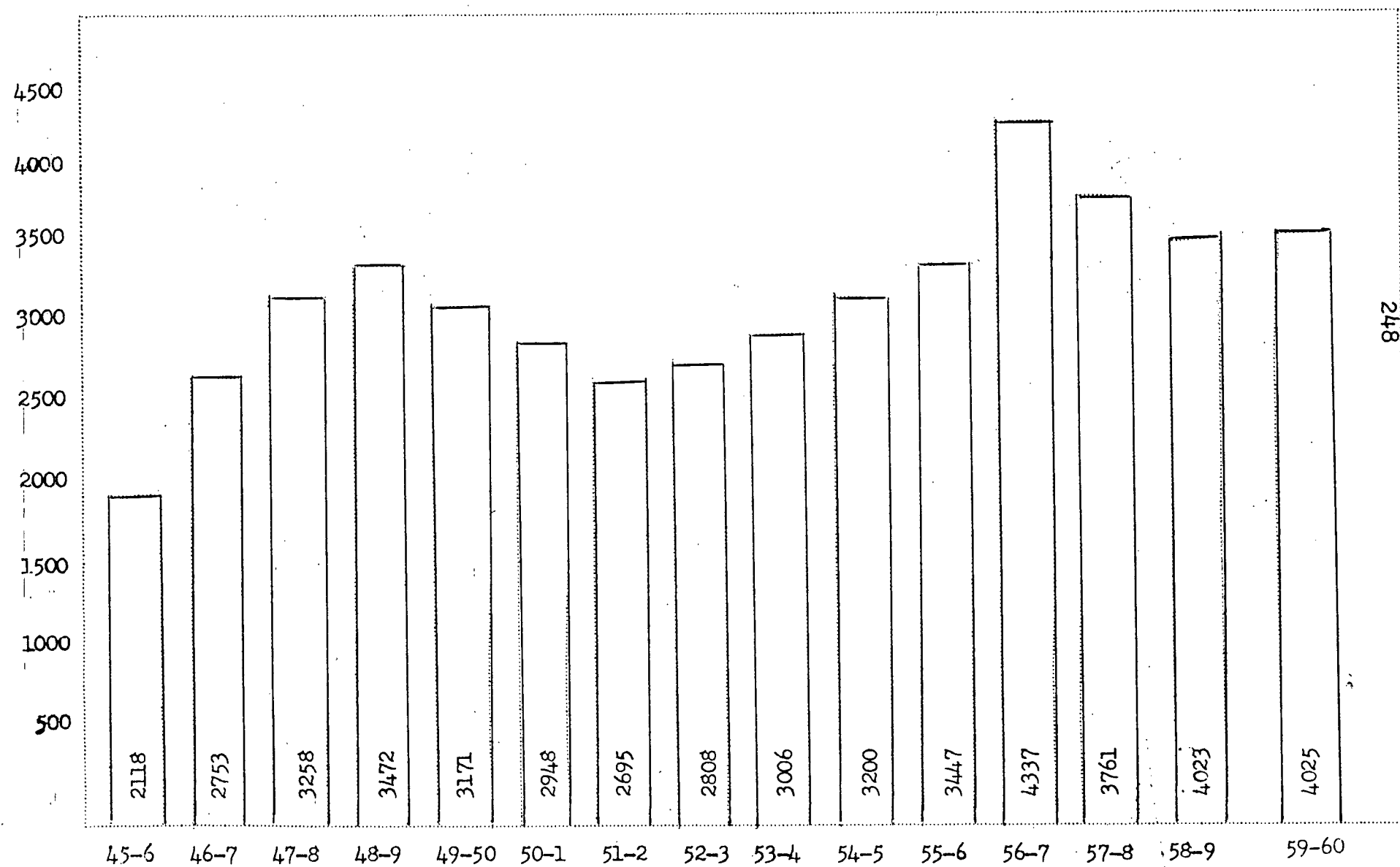
MEDICAL EXAMINATIONS

1945 - 1960

CHART II

CHART SHOWING NO. OF STUDENTS RECEIVING MEDICAL EXAMINATIONS

FALL 1945 - SPRING 1960



APPENDIX III




CHART SHOWING NO.OF NEW STUDENTS WHO
SUBMITTED REQUIRED MEDICAL FOLDERS

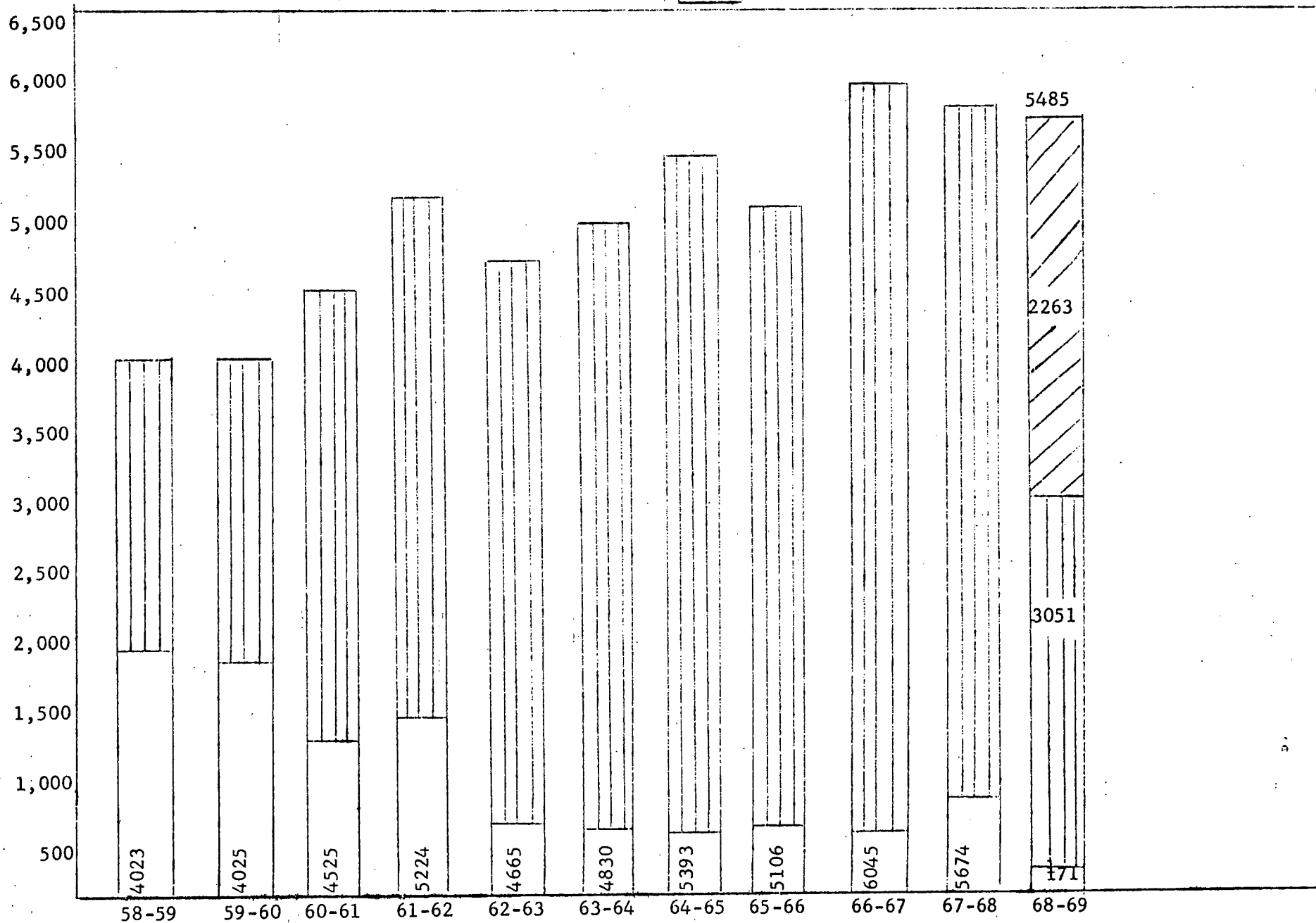
1958 - 1969

CHART II

CHART SHOWING NO. OF NEW STUDENTS WHO SUBMITTED REQUIRED MEDICAL FOLDERS

FALL 1958 - SPRING 1969

Examinations: H.S.  P.D.  Folder Only 



APPENDIX IV

THREE YEAR SUMMARY OF AGE OF ALL STUDENTS
AND PERCENT OF TOTAL

THE UNIVERSITY OF BRITISH COLUMBIA

Three year summary of age of all students
and percent of total

<u>Age</u>	<u>1973-74</u>	<u>Percent of Total</u>	<u>1974-75</u>	<u>Percent of Total</u>	<u>1975-76</u>	<u>Percent of Total</u>
15 years and under	35	.2%	36	.2%	-	-
16 years of age ---	21	.1	11	.05	5	.02%
17 years -----	242	1.2	243	1.1	214	.9
18 years -----	2,331	11.6	2,514	11.5	2,453	10.7
19 years -----	2,559	12.7	2,688	12.3	2,890	12.6
20 years -----	2,620	13.0	2,666	12.2	2,798	12.2
21 years -----	2,592	12.9	2,781	12.7	2,769	12.1
22 years -----	2,084	10.4	2,239	10.2	2,389	10.4
23 years -----	1,580	7.9	1,559	7.1	1,743	7.6
24 years -----	1,182	5.9	1,267	5.8	1,267	5.5
25 years -----	879	4.4	1,093	5.0	1,037	4.5
26 years -----	784	3.8	797	3.6	877	3.8
27 years -----	529	2.6	759	3.4	715	3.1
28 years -----	421	2.1	548	2.5	644	2.8
29 years -----	339	1.7	409	1.9	502	2.2
30 years -----	279	1.4	328	1.5	347	1.5
31-35 years of age	775	3.9	962	4.4	1,063	4.6
36-40 years of age	338	1.7	369	1.7	419	1.8
41-45 years of age	233	1.2	247	1.1	251	1.1
46-50 years of age	142	.7	161	.7	163	.7
51-55 years of age	73	.4	102	.5	95	.4
56-60 years of age	36	.2	47	.2	37	.2
61 years and over	15		63	.3	171	.7
not known ----	11		35	.1	130	.6
Total	20,100	100.0%	21,924	100.0%	22,979	100.0%
Men	12,050	60.0%	12,939	59.0%	13,253	57.7%
Women	8,050	40.0	8,985	41.0	9,726	42.3
	20,100	100.0%	21,924*	100.0%	22,979	100.0%

*Excluding 111 Medical Residents for which data is not available.

Data back to 1963-64 available.

May 18, 1976

DH/dc

APPENDIX V

AGE OF STUDENTS ENTERING FOR THE FIRST TIME

1975 - 1976

THE UNIVERSITY OF BRITISH COLUMBIA

Age of Students Entering for the First Time
1975/76

<u>Present Age</u>	<u>Male</u>	<u>Female</u>	<u>Sex Not Known</u>	<u>Total</u>	<u>Percent Female</u>
Under 16 years -----	3	3	-	6	50.0%
16 years -----	3	2	-	5	40.0
17 years -----	92	113	1	206	54.9
18 years -----	<u>1,203</u>	<u>1,067</u>	1	<u>2,271</u>	47.0
19 years -----	548	425	1	974	43.6
20 years -----	328	255	-	583	43.7
21 years -----	214	163	-	377	43.2
22 years -----	204	152	1	357	42.6
23 years -----	199	126	-	325	38.8
24 years -----	144	111	-	255	43.5
25 years -----	153	86	-	239	36.0
26 years -----	126	91	-	217	41.9
27 years -----	97	64	2	163	39.3
28 years -----	100	79	1	180	43.9
29 years -----	82	59	3	144	41.0
30 years -----	43	47	1	91	51.6
31 years -----	50	35	-	85	41.2
32 years -----	31	30	-	61	49.2
33 years -----	29	24	-	53	45.3
34 years -----	28	14	-	42	33.3
35 years -----	18	22	-	40	55.0
36 years -----	15	17	-	32	53.1
37 years -----	9	9	1	19	47.4
38 years -----	10	8	-	18	44.4
39 years -----	11	9	-	20	45.0
40 years -----	6	11	-	17	64.7
41 years -----	4	9	-	13	69.2
42 years -----	7	8	-	15	53.3
43 years -----	5	10	-	15	66.7
44 years -----	4	10	-	14	71.4
45 years -----	5	5	-	10	50.0
46 years -----	6	7	-	13	53.8
47 years -----	2	2	-	4	50.0
48 years -----	1	5	-	6	83.3
49 years -----	2	7	-	9	77.8

1975/76

<u>Present Age</u>	<u>Male</u>	<u>Female</u>	<u>Sex Not Known</u>	<u>Total</u>	<u>Percent Female</u>
50 - 55 years -----	8	24	-	32	75.0%
56 years and over -----	7	12	-	19	63.2
Not Known -----	19	10	14	43	23.3
Total	3,816	3,131	26	6,973	44.9%

Data back to 1963/64 also available
 June 3, 1976
 DH/mw

APPENDIX VI

BY-LAWS OF THE

UNIVERSITY HEALTH SERVICE HOSPITAL, VANCOUVER, B.C.

451

BY-LAWS

OF THE

UNIVERSITY HEALTH SERVICE HOSPITAL, VANCOUVER, B. C.

Whereas the University of British Columbia was incorporated under the "British Columbia University Act" which provides that the management, administration and control of the property, revenue, business and affairs of the said University shall be vested in the Board of Governors.

And whereas the said Board of Governors deems it necessary and advisable to establish a hospital on the grounds of the said University, to be known as the "University Health Service Hospital", for the purposes of treating and caring for persons suffering from illness or disabilities or other conditions which require that they receive acute hospital care, to carry on educational activities related to the care of sick and injured persons and to promote and carry on scientific research in the treatment of disease.

And whereas it is necessary to constitute a Board of Management and to prescribe by-laws for the proper carrying out of the administration and operation of the said hospital pursuant to the provisions of the Hospital Act.

Therefore, by virtue of the powers vested in it under the "British Columbia University Act" the Board of Governors of the University of British Columbia hereby enacts the following by-laws for the administration and operation of the University Health Service Hospital.

BY-LAWS

Definitions

1-1 In these by-laws, unless the context otherwise requires:-

"Administrative Committee" means the committee appointed pursuant to these by-laws to administer the affairs of the hospital under the direction of the Board of Management.

"Board of Governors" means the Board of Governors of the University of British Columbia constituted under and appointed pursuant to the provisions of the "British Columbia University Act."

"Hospital" means the University Health Service Hospital, Vancouver, B. C.

"University" means the University of British Columbia.

Board of Management

2-1 The hospital shall be operated and administered by a Board of Management, hereinafter called the "Board", comprising the following persons:

(a) The members of the Board of Governors.

(b) The Dean of the Faculty of Medicine of the University of British Columbia.

(c) A representative of the Provincial Government of British Columbia appointed pursuant to the provisions of the Hospital Act who may be a member of the Board of Governors.

2-2 Full control of the receipts and expenditures of the hospital shall be vested in the Board.

- 2-3 Regular meetings of the Board shall be held once each month and the annual meeting of the Board shall be held in the month of February each year. The date and place of such meetings shall be fixed by the Chairman of the Board and shall be notified to every member thereof as provided herein.
- 2-4 In addition to the regular meetings herein provided, special meetings of the Board may be called at any time by the Chairman and shall be called by him upon receipt of the written request of any 3 members of the Board. No business other than that stated in the notice of meeting shall be transacted at any special meeting of the Board.
- 2-5 Written notice of all meetings of the Board shall be delivered or mailed to each member thereof at least seven days before the date of the meeting and any notice regarding a special meeting of the Board shall state the business for which the meeting is called.
- 2-6 At any meeting of the Board five members shall constitute a quorum.
- 2-7 Notwithstanding any other provision contained herein the Board shall hold its first meeting after the approval of these by-laws by the Lieutenant-Governor in Council at a time and place fixed by the Chairman of the Board of Governors. Notice of the time and place at which the first meeting is to be held shall be delivered or mailed to each member of the Board at least 7 days prior to the date of the meeting.

Officers of the Board

- 3-1 The Board shall, at its first meeting, elect or appoint a Chairman and such other officers as are deemed necessary to conduct the meetings of the Board and properly carry out its business. The Officers so elected shall serve until the conclusion of the first annual meeting of the Board.
- 3-2 At every annual meeting of the Board the members shall elect or appoint a new slate of officers to serve until the conclusion of the next annual meeting and any officer whose term is about to expire may be re-elected as an officer of the Board for a further term.
- 3-3 Vacancies occurring among the officers may be filled for the unexpired term by the Board.

Committees of the Board

- 4-1 The Board may appoint an Administrative Committee to attend to the day to day management and operation of the hospital. The membership of the Administrative Committee shall be comprised of a Chairman, who shall be the Dean of the Faculty of Medicine of the University; a Secretary, who shall be the Director of the University Health Service Hospital and 3 other persons appointed by the Board. The Administrative Committee shall meet at the call of the Chairman.
- 4-2 There shall be a Joint Advisory Committee consisting of an equal number of members appointed by the Board and the Medical Staff. The Chairman of the Administrative Committee shall be one of the Board's appointees and he shall be ex officio the Chairman of the Joint Advisory Committee.
- 4-3 The Board may from time to time appoint such other committees as are deemed necessary and advisable.
- 4-4 The Board shall delegate to each committee appointed pursuant to these by-laws such powers as it deems necessary for the proper carrying out of the purposes for which the committee was established, save and except the control of the receipts and expenditures of the hospital which shall remain vested solely in the Board.

Director

- 5-1 The administration of the hospital shall be the responsibility of the Director who shall be appointed by the Board.

APPENDIX VII

STUDENT HEALTH SERVICE

MEDICAL RECORD

THE UNIVERSITY OF BRITISH COLUMBIA
STUDENT HEALTH SERVICE

PLEASE READ CAREFULLY, COMPLETE, AND SIGN WHERE INDICATED

THE INFORMATION REQUESTED HEREIN IS REQUIRED OF ALL STUDENTS ENROLLED FOR 3 UNITS OR MORE, AS PART OF THE REGISTRATION PROCEDURE. THIS INFORMATION IS CONFIDENTIAL. IT CANNOT BE RELEASED FROM THE STUDENT HEALTH SERVICE WITHOUT WRITTEN PERMISSION OF THE STUDENT CONCERNED. THE INFORMATION GIVEN IS FREQUENTLY USED TO AID THE STUDENT IN SOLVING HEALTH PROBLEMS. NO STUDENT IS REFUSED ADMISSION TO U.B.C. BECAUSE OF A PHYSICAL OR EMOTIONAL HANDICAP, PROVIDED THE CONDITION IS UNDER ADEQUATE MEDICAL CARE. EXAMINATION BY A PHYSICIAN IS NOT COMPULSORY FOR UNIVERSITY ENTRANCE BUT IS STRONGLY RECOMMENDED. (SEE CALENDAR FOR FACULTY EXCEPTIONS.)

PERMISSION FOR TREATMENT. IN CASE OF ROUTINE HEALTH EXAMINATIONS, IMMUNIZATIONS, DIAGNOSTIC PROCEDURES, TREATMENT OF ILLNESSES AND/OR INJURIES, PERMISSION IS HEREBY GRANTED TO TREAT THE STUDENT NAMED ABOVE AT THE STUDENT HEALTH SERVICE AND TO MAKE NECESSARY REFERRALS TO PRIVATE PHYSICIANS AND OTHER COMMUNITY FACILITIES.

DATE _____ SIGNATURE OF STUDENT _____

PARENTAL ENDORSEMENT _____ SIGNATURE OF PARENT OR LEGAL GUARDIAN _____

MEDICAL INSURANCE

YES ☐

FILL IN DETAILS

NO ☐ HAVE YOU APPLIED? YES ☐ NO ☐

PLAN NAME	GROUP NO.	IDENTIFICATION NO.	DEP.

ALL STUDENTS WHO ARE NOT COVERED BY MEDICAL INSURANCE ARE ADVISED TO ENROL IN UNIVERSITY APPROVED MEDICAL PLAN. STUDENTS WHO HAVE LIVED IN B. C. FOR ONE YEAR MAY BE ELIGIBLE FOR A SUBSIDY OF THEIR PREMIUMS IN THE B. C. MEDICAL PLAN. AN APPROVED PLAN FOR MEDICAL AND HOSPITAL INSURANCE IS COMPULSORY FOR ALL STUDENTS FROM OUT OF CANADA. N. B. SEE CALENDAR OR HEALTH SERVICE BROCHURE FOR FURTHER DETAILS. AFTER INSURANCE IS PURCHASED EITHER SEND OR TAKE THE ABOVE MEDICAL INSURANCE INFORMATION TO THE HEALTH SERVICE.

FOR HEALTH SERVICE USE: DATE RECEIVED

RECALLED FOR

BY

DATE REPORTED

[illegible]

FOR DEPARTMENTAL USE ONLY

FOR DEPARTMENTAL USE: DATE _____ NEG. _____ SEE ENCLOSURES _____ DATE _____ NEG. _____ SEE ENCLOSURE _____

CHEST X-RAY: DATE OF LAST ONE	PLACE	RESULT

HAVE YOU BEEN A CLOSE CONTACT OF A CASE OF ACTIVE TUBERCULOSIS? NO ☐ YES ☐ RELATIONSHIP _____

OTHER: _____

TUBERCULOSIS (B.C.G.) VACCINE

TUBERCULIN (T.B.) SKIN TEST NEG. POS. SCHICK (DIPHTHERIA) NEG. POS. _____

OTHER	POS	NEG	POS	NEG	POS	NEG

TYPHOID (TAB) SERIES _____ RE-INDEXED _____

RE-INFORCED TYPHOID & TETANUS (TAB) SERIES RE-INFORCED

RE-INFORCED BY MOUTH

RE-INFORCED TETANUS SERIES

DIPHtheria SERIES RE-INFORCED

ORIGINAL SMALLPOX VACCINATION TAKE? REVACCINATED VACCINE ORIGIN BATCH NO.

TO BE COMPLETED BY THE STUDENT

IMMUNIZATIONS AND TESTS

GIVE APPROX. DATES OF THE FOLLOWING:

SURNAME										INITIALS									

MISS	MR.	MRS.
------	-----	------

DAY	MONTH	YEAR
BIRTH DATE		

STUDENT NUMBER																			

GIVEN NAMES—UNDERLINE ONE USED

MARITAL STATUS S. M. W. D. S.
(CIRCLE)

PLEASE PRINT ALL INFORMATION IN BLOCK LETTERS

COUNTRY OF BIRTH _____

VANCOUVER ADDRESS _____ ZONE _____ TEL. NO. _____

PERMANENT HOME ADDRESS _____ ZONE _____ TEL. NO. _____

ENROLLING IN FACULTY OR SCHOOL- _____ ACADEMIC YEAR: 1,2,3,4,5: M.A., P.H.D. DEPT. _____
(CIRCLE)

LAST SCHOOL OR COLLEGE ATTENDED _____ YEAR _____

HOME PHYSICIAN _____ ADDRESS _____

NAME & ADDRESS OF NEXT OF KIN _____ TEL. NO. _____

FAMILY HISTORY

FATHER

MOTHER

NAME _____

COUNTRY OF BIRTH _____

OCCUPATION _____

IF DECEASED _____

GIVE CAUSE _____

PERSONAL HISTORY HT. _____ FT. _____ INS. _____ WT. _____ LBS.

HAVE YOU EVER HAD (YES OR NO) RHEUMATIC FEVER T.B.

DIABETES EPILEPSY PSYCHIATRIC TREATMENT

OTHER ILLNESS: _____

COMMENTS ON ABOVE: _____

INJURIES: _____

OPERATIONS: _____

WHAT MEDICATION ARE YOU TAKING REGULARLY? _____

N.B. ALLERGIES (ESPECIALLY TO MEDICATIONS) _____

DO YOU HAVE ANY PROBLEMS WITH ANY OF THE FOLLOWING?
(CIRCLE WHICH)

HEADACHE	LUNGS	INDIGESTION
SORE THROAT	HEART	CONSTIPATION
SINUSES	BLOOD PRESSURE	RECTAL BLEEDING
EARS	BODY WEIGHT	URINATION
EYES	EMOTIONS	GYNECOLOGICAL PROBLEMS

COMMENTS ON ABOVE: _____

ARE YOU ABLE TO PARTICIPATE ACTIVELY IN PHYSICAL ACTIVITIES?

IF NOT EXPLAIN. _____

SIGNATURE _____

SEE BACK PAGE AND GIVE DETAILS OF IMMUNIZATION AND TESTS

TO THE EXAMINING DOCTOR:


PLEASE NOTE BELOW ANY CONDITIONS WHICH YOU CONSIDER SIGNIFICANT. WE SHALL BE HAPPY TO HAVE YOUR ADVICE IN THE CARE OF THIS STUDENT WHILE AT UNIVERSITY. YOUR FEE IS THE RESPONSIBILITY OF THE STUDENT. THANK YOU.

DATE _____ 19 _____

HT. _____ INS. _____ WT. _____ LBS. VISION L. 20/ _____ R. 20/ _____

HEARING: NORMAL ☐ ABNORMAL ☐ LENSES L. 20/ _____ R. 20/ _____

	NORMAL	ABNORMAL		NORMAL	ABNORMAL
E.E.N.T.			HERNIA		
LUNGS			G.U. SYSTEM		
SKIN			BONES AND JOINTS		
HEART			FEET		
ABDOMEN			NERVOUS SYSTEM		

B.P.  URINE: PROTEIN _____ GLUCOSE _____

OPTIONAL: VDRL _____ HGB. _____

N.B. ALLERGIES OR SENSITIVITIES, PLEASE STATE

ABNORMALITIES FOR OBSERVATION OR TREATMENT: _____

IF YOU ADVISE SOME LIMITATION OF ACTIVITY, PLEASE NOTE: _____

SIGNATURE _____ M.D.

ADDRESS _____

WILL THE PHYSICIAN PLEASE MAIL IN THE SELF-ADDRESSED ENVELOPE

APPENDIX VIII

DIAGRAM OF HEALTH SERVICE

OUTPATIENT DEPARTMENT



APPENDIX IX

DIAGRAM OF HEALTH SERVICE HOSPITAL



APPENDIX X

HEALTH ASSESSMENT OF THE BASIC SCUBA DIVER

HEALTH ASSESSMENT OF THE BASIC SCUBA DIVER**Absolute Contraindications**

Spontaneous pneumothorax diathesis

Active pulmonary disease

Bronchitis

Bronchiectasis

Asthma

Pneumonia

Air trapping lesions, lung cysts or ball valve lesions on X-ray

Convulsive disorder diathesis, syncope, narcolepsy

Brittle diabetes or insulin shock diathesis

Drug or alcohol addiction

Active sinus or ear disease

Plastic strut in middle ear conductive chain

Inability to clear pressure differences in ears, sinuses, lungs

High Risk Conditions

Impaired pulmonary reserve

Pregnancy

Obesity

History of thoracotomy

History of myocardial infarction

Temporarily Disqualifying Conditions

Sinus and middle ear blockage caused by hay fever or other allergy

Respiratory tract infection with sinus or middle ear blockage or chest infection

Medication or toxic state which interferes with normal diving

Alcoholic intoxication

Miscellaneous Factors

Age

Young

Experience

Old

Arteriosclerosis

Arthritis

Personality

Personal motivation

Appropriate motivation

Accident proneness

Impulsive behavior

Hyperactivity

Learning disabilities

APPENDIX XI

MEDICAL EXAMINATION FOR EVALUATION
OF PHYSICAL FITNESS TO PARTICIPATE
IN SPORT PARACHUTING

APPENDIX XII

MONTHLY REPORT OF PHYSIOTHERAPY
TREATMENTS

**MONTHLY REPORT OF PHYSIOTHERAPY
TREATMENTS**

Period:

During this period treatments
were administered to patients referred by the Student
Health Service.

During the same period treatments were administered
to students suffering athletic injuries.

In addition to the above, the list below shows the number of
students treated for each sport.

Badminton	.....	P.E.	.....
Basketball	.....	Rugby	.....
Field Hockey	.....	Soccer	.....
Football	.....	Track & Field	.....
Gymnastics	.....	Wrestling	.....
Ice Hockey	.....	Other	.....
Judo	.....	

DATE:

PHYSIOTHERAPIST